

Florida State University Libraries

Electronic Theses, Treatises and Dissertations

The Graduate School

2015

Exploring Chinese International Students' Conceptions of Academic Success in an American Graduate School

Yuanyuan Xiang



FLORIDA STATE UNIVERSITY
COLLEGE OF EDUCATION

EXPLORING CHINESE INTERNATIONAL STUDENTS' CONCEPTIONS OF ACADEMIC
SUCCESS IN AN AMERICAN GRADUATE SCHOOL

By

YUANYUAN XIANG

A Dissertation submitted to the
Department of Educational Leadership and Policy Studies
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

2015

Yuanyuan Xiang defended this dissertation on July 14, 2015.

The members of the supervisory committee were:

Helen Boyle

Professor Co-Directing Dissertation

Peter Easton

Professor Co-Directing Dissertation

Tom Ratliffe

University Representative

Jeffrey Milligan

Committee Member

The Graduate School has verified and approved the above-named committee members, and certifies that the dissertation has been approved in accordance with university requirements.

To Mom and Dad: endless thanks for your endless love.

To my God Father: thanks beyond my words.

For all my dear friends.

For all international educators and students.

ACKNOWLEDGMENTS

I would not have completed this dissertation without the contribution of many people. First and foremost, I would like to acknowledge the guidance of my adviser, Dr. Peter Easton. My sincere thanks go to his continuous support over the past five years. His patience, understanding and encouragement have provided me with the confidence to complete this long journey. I would also like to express my sincere thanks to my adviser, Dr. Helen Boyle, for her tremendous feedback, support and enlightenment on my writing and finalizing this dissertation. I also extend my gratitude to the other members in my committee, Drs. Jeffrey Milligan, Shouping Hu, and Tom Ratliffe for their constructive comments and suggestions on this manuscript.

My deep and sincere gratitude goes to all the professors, staff, peers and friends who brought me memorable moments, inspiration, and support during my study in the United States. To the administration team in my department — Dr. Robert Schwartz (the Department Chair), Jimmy Pastrano, Theresa Harrell, and Mary Peterson: thank you for what you have done for me as a doctoral student and thank you for the extra work you put in for me as an international student. I also thank the 19 research participants of this study for their devotion and commitment. Without their voices and stories, I could not have completed this study. Many thanks go to Christa Bard for her patient editing and encouragement at my final stage of completing this manuscript.

Finally, I would like to acknowledge my parents and grandparents: thank you for believing in me and supporting me to pursue my dream of studying abroad. I also wish to express my special gratitude to my God father, Professor Arthur Chiang, whose spiritual inspiration has sustained me throughout my entire journey in the US. I am the luckiest person to have completed my doctoral degree with you all as my loving family!

TABLE OF CONTENTS

List of Tables	vi
ABSTRACT.....	vii
CHAPTER 1 INTRODUCTION	1
CHAPTER 2 LITERATURE REVIEW	13
CHAPTER 3 METHODS.....	42
CHAPTER 4 FINDINGS & DISCUSSIONS.....	59
CHAPTER 5 CONCLUSIONS AND IMPLICATIONS	102
APPENDICES	122
A THE EMAIL TO RECRUIT RESEARCH PARTICIPANTS.....	122
B THE FLYER TO RECRUIT RESEARCH PARTICIPANTS.....	123
C THE CONSENT FORM FOR INTERVIEW I.....	124
D THE CONSENT FORM FOR INTERVIEW II	126
E THE CONSENT FORM FOR A FOCUS GROUP DISCUSSION.....	128
F THE RECEIPT OF RESEARCH COMPENSATION	130
G THE FIRST INTERVIEW PROTOCOL (35 MINUTES).....	131
H THE SECOND INTERVIEW PROTOCOL (60MINS).....	132
I THE FOCUS GROUP GUIDE (60 MINUTES)	136
J IRB APPROVALS	140
References.....	143
Biographical Sketch	153

LIST OF TABLES

Table 1 Doctorates Awarded to the Six Largest Countries of International Student Origin by US Colleges and Universities: 2003–13 (adapted from SED, 2014).....	3
Table 2 Longitudinal Data on International Students in the US.....	15
Table 3 Differences and Commonalities in the Meanings of Academic Success Characterizing American and Chinese Cultures.....	25
Table 4 Conceptual Framework of the Study	40
Table 5 Sampling of Research Participants	49
Table 6 Research Participants Selected for Interview I.....	51
Table 7 Research Participants Selected for Interview II.....	52
Table 8 Research Participants Selected for Focus Group.....	52
Table 9 Composition of Research Sample.....	61
Table 10 Meanings of Academic Success	64
Table 11 Chinese International Students’ Conceptions of Influences on Academic Success	80
Table 12 Conventional, Social and Cultural Strategies for Achieving Academic Success	88
Table 13 Chinese International Students’ Conceptions of Academic Success.....	103

ABSTRACT

In higher education today, international students from various sociocultural backgrounds have contributed to the internationalization of many colleges and universities. The factors that help them succeed academically in a different cultural environment have become an important topic of research designed to improve the quality of higher education in a globalized environment. This qualitative study adopts a sociocultural perspective to explore their conceptions of academic success and their strategies for achieving it, by analyzing cultural factors that impinge on the experience of Chinese international graduate students in the US.

There were three phases in this in-depth qualitative research. In the first phase, using semi-structured interviews, the researcher investigated Chinese students' conceptions of academic success, the factors that they perceived as most influential on their attempts to achieve it, and the strategies that they adopted to optimize their chances. In the second phase, based on results from the first round, a follow-up interview was conducted to probe for further details and to understand the strategies adopted by these students according to their study-abroad experience. In the third phase, new data were collected through a focus group discussion to generate a deeper understanding of the students' perspectives on academic success and its relation to acculturation.

The final results from this study indicated that the conceptions of academic success of these international students and their strategies for attaining it were not only characterized by cultural and socio-institutional values and norms, but were also shaped and reshaped by the international students' individual characteristics and personal acculturative attitudes and experiences. Chinese international graduate students have developed acculturative strategies, characterized as — Americanization, Globalization and Individualization — to achieve their visions of academic success. The findings offer possible answers to help explain how Chinese international STEM students manage to achieve academic success despite the challenges such as

language barrier and acculturation process (dealing with cross-cultural barriers on cultural, institutional and personal levels). They also provide new perspectives on acculturation theories and suggest practical implications for university international student affairs work.

Key words: Academic success, acculturation, American graduate schools, Chinese international students, international higher education, sociocultural perspectives

CHAPTER 1

INTRODUCTION

Background of Study

Academic success in higher education, though increasingly prized in a globalized society, is a rather vague concept that may be understood and achieved in varying ways by people of different cultures or disciplinary backgrounds. Conceptions of academic success may be formed from a variety of factors including: (a) psychological attributes of individuals, (b) values embedded in academic disciplines and institutions and/or (c) an outlook characteristic of an enviroing culture. Strategies adopted to attain this sort of success may likewise emphasize personal behaviors and performances, institutional incentives and expectations or familial and cultural norms. In fact, all are arguably intertwined. For example, the individual's interpretation and behavior with respect to academic success are shaped by concepts built into institutional cultures (procedures, reward structure, milestones etc.), by the views characteristic of the individual and finally by the closest enviroing culture.

American graduate schools are becoming increasingly diverse, thanks both to increasing representation of US minority populations and growing numbers of international students. According to the *Open Doors Report 2013* issued by the Institute of International Education (IIE), the number of international graduate students increased by 3.6% over the previous year to a record high of 311,204 in the 2012/13 school year (IIE, 2013a). International students made up approximately 17.9% out of the total graduate enrollment (1.74 million) in the fall of 2012 (Council of Graduate Schools [CGS], 2013). Moreover, as evident in Table 1 hereafter, the number of doctorates granted by US universities to students from the top six countries grew between 2003 and 2013 by two-thirds (from 6,030 to 10,038 recipients).

It is reasonable to assume that students from different cultures or areas of the world may have conceptions of academic success, and assumptions regarding strategies for achieving it, that differ to some degree from those of American domestic students, even though they share the same learning environment and study in the same institutions (Curtin, Stewart, & Ostrove, 2013). Better understanding these differences should help graduate students and educators, both domestic and international, to understand each other, to optimize their collaboration and to adjust to the realities of today's internationalized academic fields (Altbach & Knight, 2007).

Since the 2009/10 academic year, China has been the leading place of origin among international students coming to the United States, and almost half of these Chinese students study at the graduate level (IIE, 2012a). In the 2010/11 school year, 157,558 Chinese students came to the United States and 76,888 enrolled in graduate schools (IIE, 2011). In the 2011/12 school year, the number increased by nearly one-quarter – 194,029 students from China were enrolled in American education systems, among whom 88,477 were graduate students (IIE, 2012b).

In addition to being the largest group of international students in the US, Chinese students have also accounted for the largest number of received doctorates in US universities over the last ten years – and by a wide margin: for instance, 4,789 doctoral degrees in 2013 – nearly 93% in the Science, Technology, Engineering and Mathematics (STEM) fields – compared to 2,205 for India, the country in second place (Survey of Earned Doctorates [SED], 2014) (See Table 1 below).

Table 1 *Doctorates Awarded to the Six Largest Countries of International Student Origin by US Colleges and Universities: 2003–13* (adapted from SED, 2014)

Country or economy	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
China	2,483	2,995	3,588	4,445	4,719	4,521	4,096	3,738	3,985	4,215	4,789
Science and engineering	2,323	2,769	3,346	4,121	4,317	4,141	3,748	3,452	3,647	3,900	4,439
Non-science and engineering	160	226	242	324	402	380	348	286	338	315	350
India	809	914	1,186	1,606	2,072	2,316	2,265	2,139	2,158	2,246	2,205
Science and engineering	719	832	1,093	1,496	1,921	2,156	2,107	1,991	2,030	2,139	2,073
Non-science and engineering	90	82	93	110	151	160	158	148	128	107	132
South Korea	1,229	1,351	1,442	1,545	1,442	1,440	1,523	1,378	1,444	1,470	1,383
Science and engineering	936	1,030	1,136	1,197	1,129	1,151	1,173	1,076	1,081	1,129	1,012
Non-science and engineering	293	321	306	348	313	289	350	302	363	341	371
Taiwan	669	636	661	668	693	641	733	650	693	719	696
Science and engineering	447	395	443	452	477	462	542	501	570	581	568
Non-science and engineering	222	241	218	216	216	179	191	149	123	138	128
Canada	428	507	463	465	511	499	516	468	455	422	484
Science and engineering	290	356	330	326	352	370	385	339	306	298	330
Non-science and engineering	138	151	133	139	159	129	131	129	149	124	154
Turkey	412	397	390	414	521	559	527	477	493	438	481
Science and engineering	355	324	321	321	409	466	445	404	422	351	394
Non-science and engineering	57	73	69	93	112	93	82	73	71	87	87

Problem Statement

Studies of students' academic success in United States graduate education are mainly focused on domestic American students (e.g. Ampaw & Jaeger, 2012; Bain, Fedynich, & Knight, 2011; Gardener, 2009). Even for that population, they seldom go beyond indicators of academic success such as "degree completion", "time-to-degree/graduation" and "student attrition/retention" (Gansemer-Topf, Ross, & Johnson, 2006; Lydell, 2008; Polson, 1999). However, students' conceptions, strategies and experiences with respect to academic success are understudied (Lovitts, 2001; Lydell, 2008), an absence even more pronounced in the case of international graduate students (Adrian-Taylor, Noels, & Tischler, 2007; Pandit, 2007). This causes us to fall short in understanding the factors that drive the academic careers of a growing proportion of the US graduate student population, and miss the opportunity to explore and compare the role of cultural difference and national origin in higher education (Adran-Taylor et al., 2007).

Ample research has been conducted on Chinese students overseas, mostly in Australia, the United Kingdom and the United States; but it has concentrated on their acculturation/adaptation into host universities and societies (e.g. McClure, 2007; Wang, 2011; Yan & Berliner, 2011; Zhang & Xu, 2007). Due to the large linguistic and cultural distance between China and western countries, Chinese students usually face greater challenges in adapting to American, British and Australian universities than do international students from other areas of the world such as India and Western Europe (Hofstede, 2011). Nonetheless, recent studies (e.g. SED, 2014) suggest that international Chinese students are among the best performing international students in these countries (Yang, 2010; Zhang, 2000). That paradox – greater difficulty of adaptation paired with a higher degree of academic success – further underscores the potential payoff to researching the mindset and the factors underlying Chinese

students' performance. Results may well be of high interest to other international students coping with similar difficulties, to their advisors and to researchers interested in comparative study of academic performance (Pedersen, 1991); and they may contribute new insights to help elaborate acculturation theories (Berry, 2005; Ward, Bochner, & Furnham, 2001) and help overcome the dearth of material on interrelationships among different aspects of the acculturation process (Zhou, Jindal-Snape, Topping, & Todman, 2008).

Purpose of Study

The overall purpose of this study is therefore to better understand the ways in which Chinese graduate students studying in the United States conceive of “academic success” and the ways in which they manage to achieve this sort of success even while they are experiencing acculturation and adaptation into the American culture and society.

Research Questions

To accomplish this purpose, the following research questions are posed:

- 1) What does “academic success” mean to Chinese international students who are studying in an American graduate school?
- 2) What strategies have they found to be most effective to achieve that type of success in an American university setting?
- 3) To what degree do these attitudes and strategies seem to bear the imprint of national, socio-institutional and individual or familial cultures?
- 4) What role do they believe that acculturation or adaptation to American society plays in achieving the goals of those strategies, and to what degree is it manifested within them?

Terms and Constructs

Some terms and concepts used in this study need to be defined or carefully explicated at the outset:

The key concept, “academic success,” will be defined and conceptualized by individual Chinese graduate students participating in the study on the basis of their acculturation experiences in the US. However, in the extant research, multiple dimensions have been used to define, explain or measure the “academic success” of graduate students in the US, including factors like academic program retention, degree completion, professional competencies and socialization (Fedynich & Bain, 2011; Gansemer-Topf, et al., 2006; Garderner, 2009).

The construct “conceptions,” as used in this study, is based on the following definition from Pratt (1992):

Conceptions are specific meanings attached to phenomena which then mediate our response to situations involving those phenomena. We form conceptions of virtually every aspect of our perceived world, and in so doing, use those abstract representations to delimit something from, and relate it to, other aspects of our world. In effect, we view the world through the lenses of our conceptions, interpreting and acting in accordance with our understanding of the world (p. 204).

As a consequence, the “conceptions of academic success” of Chinese international graduate students examined in this study constitute lenses through which we will explore their understandings of academic success and their related behaviors and attitudes.

“Chinese students,” “Chinese international students” or “international Chinese students”, terms used interchangeably in this study, refer to Chinese students who are from mainland China and possess an F-1 student visa enabling them to study in American graduate schools as resident aliens.

“Acculturation” is “the dual process of cultural and psychological *change* that takes place as a result of contact between two or more cultural groups and their individual members” (Berry, 2005, p. 698). In the model developed by Ward and her colleagues (2001), acculturation refers to a *twofold process* of intercultural adaptation, divided into psychological adjustment and sociocultural adaptation.

- “Psychological adjustment” is the process of learning to deal with the stresses and challenges of cross-cultural experience.
- “Sociocultural adaptation,” on the other hand, is the process of developing behaviors and cognitive responses that make it possible to manage the daily tasks of intercultural living and interaction (Ward et al., 2001).

This study draws on the dimensions of psychological change that are emphasized in Berry’s acculturation theory (1997, 2005) and the types of socio-cultural adaptation outlined in the acculturation model of Ward’s team (2001). The terms acculturation, cross-cultural adaptation and sociocultural adaptation are thus used more or less interchangeably in the text hereafter.

Assumptions, Limitations and Delimitations

Assumptions

Based on the research purpose and research design, it is assumed that all the concepts, for instance, “academic success/achievement¹”, can be clearly understood and interpreted well by me as the researcher and all the research participants. I also assume that the verbal and written texts can appropriately and effectively explain the abstract concepts, answer the questions being addressed in the study, and serve the purpose of the study. My final assumption is that when all

¹Academic success and academic achievement are used interchangeably in this study.

the participants respond to interviews and interactions in this study, they are assumed to be honest and candid about their ideas and experiences.

Limitations

As a Chinese international graduate student in the US, I myself am both an insider and outsider with respect to the dissertation research. Therefore, this study is limited by my own culture and experience. I may have biases and language limitations in collecting, translating and interpreting the data. Also, there exist limitations of the sampling. The research participants are all from STEM fields² in one research university. This limited sampling may affect the generalization of research results to the overall graduate students in the USA. Because of various institutional and disciplinary characteristics, the results may not apply well to other universities or other fields of study. In addition, there is limitation inherent in investigating conceptions of academic success on the basis of data from only Chinese international graduate students. Other different sociocultural perspectives from diverse cultural groups of graduate students are left without investigation in this study.

Delimitations

Research participants in this study are delimited to Chinese international students in an American graduate school who are studying in the STEM fields. I have the delimitation because first, the majority of Chinese international graduate students are enrolled in the STEM fields in American research universities (CGS, 2013; IIE, 2013b); second, there are cultural differences between science and humanities. The difference between the “two cultures” of science and the humanities or social sciences best described by Snow (2012) cause me to delimit this study to Chinese students majoring in the STEM disciplines. The study is also delimited to the

² STEM fields refer to academic programs in science, technology, engineering and mathematics.

exploration of the students' perspectives and the US-China sociocultural differences concerning academic success in American graduate schools. Perspectives from others, such as faculty and administrators, are not included in the research; neither are economic or political aspects on the topic.

Significance of Research

The Importance of Studying International Students' Academic Success

At the national level, international students have historically played an important role in advancing America's research competitiveness, especially in the STEM fields (Pandit, 2007). Also, international students and their families make a significant contribution to the US economy. According to NAFSA (Association of International Educators), the 819,644 international students and their families at universities and colleges across the US supported 313,000 jobs and contributed \$24 billion to the US economy during the 2012/13 academic year (NAFSA, 2014).

At the institutional level, there has been an increasing recognition that American graduates will have to compete in an international labor market and need to become comfortable working with people from different parts of the world. International students, with networks in their home countries, serve as excellent conduits to build international learning and working environments (Pandit, 2007). In addition to their financial contributions, international students add diversity to colleges and universities, enriching the experience of other students on campus.

At the departmental level, international students "allow many graduate programs to continue at their current enrollment and research levels. Perhaps more important, international students have the potential to help globalize the learning community by interjecting their varied perspectives and experiences into discussions that take place both inside and outside the

classroom. This is a critical component of the educational process for Americans who are being trained to work in the marketplace of the new millennium” (Trice, 2005, p.62).

International education researchers have always emphasized the importance of researching international students’ academic success:

When an international student has a positive experience abroad, he or she, host country nationals, the educational institution, and the country stand to reap the benefits. ... Because there is much to be gained when international students have a positive educational experience (and so much to be lost when the experience is negative), it is important that every attempt be made to ensure that these students’ academic and nonacademic experiences while overseas are satisfactory. To this end, cross-cultural researchers and practitioners have put considerable effort toward identifying factors that promote international students’ academic success and satisfaction while studying abroad (Adrian-Taylor et al., 2007, p.91).

In this study, understanding the academic success of Chinese international graduate students provides suggestions for institutions, faculty and staff, and other international students to better survive and thrive in today’s globalized and internationalized academic environment. The results generated from this study can also inform policy makers and university leaders of new information to better design and manage graduate programs and services, so as to eventually improve the overall quality of American higher education, both nationwide and worldwide.

Contributions to Acculturation Research

Berry’s four acculturation attitudes and strategies (1997) are widely used in many studies on sojourners. However, the four acculturative attitudes and strategies are too generalized in illustrating complex intercultural contact strategies (Benet-Martinez & Haritatos, 2005).

Therefore, this study exemplifies the generalized strategies by heavily describing Chinese students' acculturation experiences to achieve academic success. Findings from this study propose different acculturation attitudes and strategies of the new generation of Chinese international students, contributing more information to Berry's acculturation theories.

Another well-known theoretical framework of acculturation research is the acculturation process developed by Ward, Bochner and Furnham (2001). This model integrates Berry's acculturation stress theory (1997) with cultural learning perspectives, and distinguishes responses from affective, behavioral and cognitive aspects (also known as the ABC Model accordingly), which leads to psychological and sociocultural adaptations (Ward et al, 2001). Although this model emphasizes the interactions between the three aspects, it is not very clear in explaining how behavioral and cognitive responses interact to complete the sociocultural adaptation (Zhou et al., 2008). For example, how does the model explain an international student who behaves and performs well in the host academic culture, but not that well in the host social culture? This study, however, offers some insights to this theoretical deficit by illustrating how Chinese international students achieve academic success (cognitive aspect) while experiencing sociocultural adaptation (behavioral aspect).

Summary of Introduction

For Chinese international students, what makes them succeed in American graduate schools is becoming an important research inquiry that can provide implications and offer suggestions to the increasingly internationalized American graduate education. Gaining a better understanding of academic success from Chinese international students' perspectives helps this growing population and American international educators to make the best of international education in the US. This study targets the inquiry by exploring ideas of Chinese international

graduate students – their conceptions of academic success and their approaches of achieving academic success while experiencing acculturation.

The second chapter of this dissertation — literature review — provides more detailed research evidence to the importance of this inquiry, and presents the literature that supports this investigation in the following sections: the context and background of the study; the factors influencing conceptions of academic success; the processes and strategies utilized to achieve academic success, and theoretical perspectives of this study.

CHAPTER 2

LITERATURE REVIEW

Introduction

The review of the literature covers three essential topics: 1) the context and background of the study; 2) the factors influencing conceptions of academic success; and 3) the processes and strategies utilized to achieve academic success. The literature presented in this chapter lays a foundation to analyze the data on Chinese international students' experience that will be laid out in Chapter 4.

Context and Background for the Study

The conceptions and strategies of Chinese international graduate students regarding the achievement of academic success cannot be understood or analyzed without careful consideration of the background from which they come and the American educational context in which they study. The first section of the literature review addresses these factors.

The Situation of Chinese Graduate Students in the US

A rapidly growing population.

The increasing number of Chinese students enrolled in institutions of higher education throughout the United States has created a new interest in research that is focused on this phenomenon. One major data resource pertaining to international students in American institutions of higher education is the *Open Doors* report issued by the Institute of International Education (IIE). According to *Open Doors 2012 Fast Facts* (IIE, 2012a), the number of international students attending higher education institutions in the US grew from 582,996 during the 2001/02 school year to 764,495 for the 2011/12 school year, a cumulative increase

over that period exceeding 31% (IIE, 2012a). The report shows that 39.3 % of the international students surveyed in 2011/2012 – 300,430 – were studying at the graduate level (IIE, 2012a).

This trend is further established by another report, *Graduate Enrollment and Degrees: 2001-2011* (CGS, 2012), issued by the Council of Graduate Schools (CGS). The CGS document concludes that most international students in American graduate schools were enrolled in public universities characterized by a very high level of research activity. Moreover, both studies find that a predominant number of international students have chosen to study in the fields of Engineering, Business, and Mathematics & Computer Sciences (CGS, 2012; IIE, 2012a).³

Since the 2009/10 school year, China has been the leading source of foreign students coming to the US to pursue a degree in higher education (IIE, 2010). In 2009/10, there were 127,628 Chinese students studying in the US; a year later the number had grown by over 23% to 157,558; in the 2011/12 academic year that number increased again by over 23% to 194,029 (IIE, 2010; IIE, 2011; IIE, 2012b). The 2012/2013 school year saw another 21.4% increase to 235,597, at which point the group comprised 28.7% of the overall population of international students in the US (IIE, 2013a), significantly ahead of the second- and third-place places of origin (IIE, 2013a). Among those Chinese international students, nearly half were studying at graduate schools (IIE, 2010; IIE, 2011; IIE, 2012b; IIE, 2013b).

Consistent with the major study fields of international students in the US noted above, the four fields of graduate study enrolling the most Chinese students in the US in recent academic years were Business/Management, Engineering, Math/Computer Science, and Physical/Life

³ As further discussed in this Chapter, the research adopts the standard definition of “STEM” fields as consisting of the physical/life sciences, the technology fields, engineering and mathematics. Definitions vary a bit from one source to another, however, and the field of Business is not infrequently associated due to the close connection between STEM professions and business applications. Kagan (2013) in fact asserts, in an edition of *Between the Lines* (<http://www.zdnet.com/article/stem-education-business-schools-need-to-be-joined-at-hip/>) that “STEM education and business schools need to be joined at the hip.”

Sciences (IIE, 2012c; IIE, 2013c). According to the data presented below in Table 2, international students are a growing, and important, part of the graduate student body in the US. As the largest group of international students, Chinese international students have attracted a great deal of research attention in the increasingly internationalized American higher education, particularly in the fields of Science, Technology, Engineering and Mathematics (STEM) (e.g. Le & Gardner, 2010).

Table 2 *Longitudinal Data on International Students in the US*

School Year	Total Int'l Students in the US	Int'l Students from China		Total Int'l Students at Graduate Level in the US	Int'l Students from China at Graduate Level	
		Number	Percentage of Int'l Students in the US		Number	Percentage of Int'l Students at Graduate Level
2001/02	582,996	63,211	10.8%	264,749	N/A	N/A
2009/10 ⁴	690,923	127,628	18.5%	293,885	66,494	25.1%
2010/11	723,277	157,558	21.8%	296,574	76,888	25.9%
2011/12	764,495	194,029	25.4%	300,430	88,477	29.5%
2012/13	819,644	235,597	28.7%	311,204	103,427	33.2%

An increasingly diverse group.

China has experienced an increase in economic, social, and educational diversity throughout the last decade, which has also resulted in a change in the demographics of the students coming from China to study in the US. Unfortunately, it is quite difficult to obtain statistically accurate data regarding the demographic backgrounds of Chinese students who go

⁴ Since the 2009/10 school year, China has been the leading country of origin that has the largest number of international students coming to the US.

abroad to study. This is due to the fact that applications for study-abroad programs in China are either completed and submitted by the students individually or handled by service companies contracted by the students. The data are not centralized anywhere and the service companies do not make any related information available.

However, a rough idea of the evolving situation may be gleaned from unofficial information and anecdotal evidence, and it suggests that the demographics of Chinese international students in the US have changed dramatically since the 1980's. Those studying in the US during the 1980's and 1990's were primarily science and engineering students who had passed the merit-based university examinations in China before applying to US graduate schools. Academically, they were in effect "the cream of the crop" – the top students from the leading Chinese universities. In contrast, Chinese graduate students in the US today, who were born in 1980's and 1990's, are from more diverse backgrounds. There are still a number of elite students in the mix, but an increasing number of students graduating from "regular" Chinese universities and colleges are furthering their education in American graduate schools (ERIC Education, 2013). They are from more diverse academic backgrounds and enroll in a number of academic programs beyond science and engineering.

Regarding economic background, most of the older generation of Chinese international students came from families that had ordinary income and could barely support their living expenses overseas. According to the National Bureau of Statistics of China, in 1995, the annual per capital income available for Chinese urban households was 3,893 RMB, the equivalent that year of less than \$500 (NBSC, 2015). Therefore, Chinese students in the US in the 1990s mainly lived on either Chinese government sponsorship or assistantships from American graduate schools. However, thanks to the booming economy in China, at the present time, the majority of

Chinese international students are from families that have middle to upper level income in China, who can offer better financial support for them. In 2013, 78.6% of families with children studying abroad had an annual income verging on 300,000 RMB (about \$60,000) per year, which is an unofficial threshold of higher-income status in China (ERIC Education, 2013). The budgeted cost of studying abroad at that time was about 200,000 RMB (approximately \$32,000) per year, consuming more than half of the family income (ERIC Education, 2013). Parents in these families often had jobs in education, finance, government or business, and they wanted to invest in their children's education overseas (ERIC Education, 2013).

In terms of sociocultural background, the current generation knows more about the US than previous generations, prior to their study abroad departure. They have obtained information that was disseminated by previous generations of international students, as well as by mass media and the Internet. They have acquired a higher level of English proficiency and knowledge of the culture. They have more social connections both in China and in the US, largely due to online social media. Therefore, compared to prior generations of international students in the US, Chinese international students today come from more diverse academic and socioeconomic backgrounds, enjoy greater financial support, receive more academic advice and have more developed social connections in both China and the US than did their predecessors of a generation ago.

Growing Up in an Increasingly Globalized Culture

China has experienced waves of modernization and globalization since it opened its door to the outside world in the early 1980's (Yu, 2008). Globalization has not only had an impact on China economically and politically, but it has also had social and cultural effects (Makhlouf, 2014; Yu, 2008). "Cultural Globalization" in this study refers to the interaction of national or

local cultures with cultural patterns originating beyond their borders; the debates between cultural unity and diversity; the tensions between foreign influence and existing traditions; and the competition of different cultural models (Makhlouf, 2014). Chinese culture has in fact experienced three phases of cultural globalization in response to the impetus of modernization and globalization that began to appear in the country during the 1980's: Cultural Modernization, Cultural Renaissance, and Cultural Self-consciousness (Yu, 2008). The three are briefly described in the following paragraphs.

In response to China's Reform and Opening Up in 1978, the *Cultural Modernization* challenged Chinese intellectuals to revamp the time honored traditional culture in order to live coherently with a newer and more modern industrialized China. During the 1980's, Cultural Modernization focused on the transformation of the traditional culture. It did this by introducing advanced modern cultural nuances and blending them with the traditional Chinese culture, within the processes of political and economic modernization. In doing so, China's political and economic elite absorbed the merits of Western culture and incorporated them into Chinese culture. One way to further this phenomenological idea was to review and filter what is seen as the traditional Chinese culture in order to highlight its positive elements and reject what is considered by many in western nations as negative aspects of the Chinese culture (Yu, 2008). For example, in education, English language courses were added to the curriculum of middle schools as part of the compulsory education of China in the 1980's.

The second movement that contributed to China's ongoing modernization of cultural transformation is referred to as the *Cultural Renaissance*. This phenomenon includes the resurgence of Confucianism, Chinese cultural revivalism, Chinese national studies, as well as welcoming western cultures to the new and improved China. As a result of this new ideology,

private and public schools in China were not only offering English courses that taught students about western culture, but were also providing classes for National Studies, where students could learn about the classic masterpieces of ancient China, such as Four Books and Five Confucian Classics (Yu, 2008).

Since the 1990's, China has faced ever-greater pressure for globalization. This third phenomenon, *Cultural Self-consciousness*, pushed the Chinese culture into the third cultural movement. Seen as a form of cultural discourse, Cultural Self-Consciousness in China centers on the concepts of globalization versus localization, Sinification versus Westernization, universal culture versus plural culture, and national identity versus global identity (Yu, 2008). Western culture, especially American culture, exerts a sizable influence on Chinese society and people. For example, American brands and chain stores became commonplace in China's larger cities. In Beijing, China's capital city, one can order a cup of coffee from the American chain store *Starbucks* located in a building with traditional Chinese architectural design. In this cultural movement, Chinese students experienced multiple cultural impacts as they grew up together, and developed a mixture of different cultural conceptions.

Chinese students born during the 1980's and 1990's grew up under the concept of "Cultural Globalization" in China and experienced at least the indirect effects of American culture – as well as a sense of cultural transformation and inter-cultural competition – throughout their years of primary, secondary, and higher education. As a consequence, they have in fact been influenced by a new kind of Chinese culture, one born from the contact between different ideas and models. This new Chinese culture has its roots in Chinese tradition, but attempts to absorb the merits of other cultures. It combines tradition and modernity, as well as nationality

and globalism. Growing up in the cultural globalization of China also allowed Chinese students the opportunity to confront and adjust to different cultures.

Factors Influencing Conceptions of Academic Success

Different factors contribute to determining the way in which students understand academic success and the strategies – conscious or unconscious – which they adopt to achieve it. Three types of influences – cultural, institutional and individual – are reviewed in this section along with relevant research on those themes.

Cultural Factors: The “Macro” Level

Geert Hofstede defines culture as, “the collective programming of the mind that distinguishes the members of one group or category of people from others” (Hofstede, Hofstede, & Minkov, 2010, p. 6). From an educational perspective, distinctive cultural values are formed and nurtured in specific educational systems and refer to people’s expectations, attitudes, beliefs and practices regarding how to teach and learn successfully (Fang, Grant, Xu, Stronge, & Ward, 2013). For international students who choose to pursue higher education in another culture, understanding how to negotiate and navigate various cultural values, assumptions, knowledge, and commitments can be beneficial and integral to their success. In essence, this knowledge becomes the foundation of their successful adjustment to a new culture within the school and the host society. Therefore, dealing with cultural conflict, acculturation, and acceptance of new cultural values becomes essential to international students’ academic achievement (Trueba, 1988). This domain will be treated as the “macro” influence on students’ conceptions of academic success and how to attain it, insofar as it is one that effects, though in varying ways, all the citizens of a country.

Chinese culture is Confucian-based and differs in significant ways from American culture or Western culture in general. However, both cultures place a high value on education and academic achievement. Geert Hofstede (Hofstede et al., 2010) details six dimensions of cultural difference that are helpful in analyzing and contrasting the understanding of academic success:

The first theoretical perspective, *Power distance*, represents how the less powerful members of organizations and institutions accept and understand the concept that power is distributed unequally. According to Hofstede's (2010) research, China has a much larger power distance than the US in regards to where people accept and expect equal distribution of power. In China, facing the reality that educational resources are limited and unequally distributed, Chinese students accept and respond to the situation by studying very hard to become competitive. Historically, Chinese students' educational efforts were intrinsically related to his or her pursuit of social mobility. This concept is based firmly in the Chinese belief that education shapes one's place on the social and economic ladders (Gao, 2008), even though they have noticed the inequality of power distribution on the social ladder. In educational arenas, teachers and school administrators have authority and power. Chinese students usually follow these authoritative figures to achieve their goals. However, in the US, it is believed that teachers and school administrators and students are on a more equal platform. It is believed that schools, teachers and school administrators provide elaborate support in order for students to achieve in academics.

The second theoretical perspective in this study is *Individualism versus Collectivism*. This perspective is described as how closely knit are the individuals and groups in a society. The culture in the US is considered to be based on individualism while China is considered more collectivist in nature (Hofstede et al., 2010). From the perspective of collectivism, success is born from harmonious social relations that rest upon defined social roles, ruled obligations of

each role and the fulfillment of the obligation to each person; whereas in an individualistic culture, harmonious social relations depend on satisfaction of individual needs or rights and fairness to all.

Uncertainty Avoidance, the third theoretical perspective, is described as a society's tolerance for uncertainty and ambiguity. Societies choose ways to cope with the inherent uncertainty of living. In the Chinese culture, people have a great need to understand and expect a predictable future. In American culture, people hold a more relaxed attitude toward unpredictable situations. When Chinese international students come to the US to study, they anxiously develop a presupposed picture of their future including academic outcome, graduation, future employment and other expectations. However, the vastly different American culture makes it difficult for these students to predict their futures, which leads to the increase of stress and depression as cited in many studies (e.g. Yan & Berliner, 2013). Conversely, American students are more comfortable with multiple choices and an unpredictable future.

Long-term versus Short-term orientation, the fourth theoretical perspective utilized in this study, refers to the manner in which people accept delayed gratification of their material, social, and emotional needs (Anbari, Khilkhanova, Romanova, & Umpleby, 2004). In the Chinese Confucian-based culture, people attach more importance to the future. This long-term orientation is reflected in the education system through an emphasis on basic knowledge and skills. Chinese teachers and learners tend to believe that basic skills are fundamental to future academic achievement, so higher-order learning in graduate education, such as analysis and evaluation, can be focused on only after establishing a solid foundation (Fang et al., 2013). To some extent, this cultural value explains why Chinese students have mastered good foundational knowledge before they begin their graduate studies. According to Hofstede and his colleagues (2010), long-

term orientation focuses on future consideration and pays attention to saving, which is related to the concepts of will power, persistence, and diligence in the Confucius tradition. Short-term orientation, on the other hand, emphasizes creativity and innovation, which is always stressed in the American education system.

Long-term orientation in the Confucian tradition illuminates why self-determination and effort are considered vital to academic success (Wang, 2004). According to Wang (2004), long-term orientation is often used to understand the theoretical underpinnings where continuous effort and persistent hard work in academic learning are highly valued and often lead to academic success. Chinese students are often characterized as hardworking and diligent; they are willing to sacrifice short-term interests for long-term benefits. In contrast, the short-term oriented American culture concerns itself with immediate interests, and respect for both tradition and social responsibility (Zhang, 2013). The American culture values innovative ideas, creative thinking, and learning by doing, as evidenced in American education system, too (Zhao, 2009).

The fifth perspective, *Masculinity versus Femininity*, refers to two different social cultures. Dimmock and Walker (1998) posit that achievements and competitions are prominent in more masculine societies. People in masculine countries are inclined to work harder to stand out and be the best, while feminine countries are more accepting of an average person (Hofstede et al., 2010). In masculine cultures like China, the academic achievement of students is the essence of learning, and failure at school is unacceptable. Chinese students care a lot about their exam scores and rankings in class, which are considered to be the main criteria for achieving success in school (Zhao, 2007). Conversely, in a more feminine society like the US, people emphasize relationships and negotiation (Hofstede et al. 2010). In American schools, average students are perceived as the norm, and a student's overall achievement is measured by his/her

social skills and adaptations. This academic culture advocates for the learning of critical thinking and problem solving skills. A student's academic achievement is not solely based on grades but on a holistic review of academic performance and social involvement (Zhao, 2009).

The final perspective, *Indulgence versus Restraint*, represents the attitude that societies hold toward basic and natural human desires. Indulgent cultures, like the US, support the pursuit of an enjoyable life, whereas restraining cultures, like China, curb and regulate individuals' desires by instituting strict social norms. This cultural dimension is often attributed to research findings in that Chinese students, compared with American students, are more academically engaged and much less socially engaged on American campuses (Zhao, Kuh, & Carini, 2005). Furthermore, this cultural orientation posits that Western learners' process of learning is mind-oriented and is characterized by active engagement, exploration and inquiry, thinking and critical thinking, and self-expression and communication, while the learning process in East Asian cultures is virtue-oriented and focused on earnestness, diligence, endurance of hardship, perseverance, and concentration (Li, 2012). Therefore, effort, endurance, and hard work are often emphasized in Chinese culture; motivation to achieve academically and other intrinsic personality characteristics, such as docility and industriousness, are seen as the major reasons for academic success (Schneider & Lee, 1990). A potential application of these six cultural dimensions to the interpretation of academic success by American and Chinese cultures is indicated in Table 3 hereafter.

According to Hofstede's six cultural dimensions, China, with its tradition of Confucian values, is a society that accepts inequalities among its people and holds the values of group interests, persistence, and perseverance in high esteem. Chinese people are comfortable with and are willing to accept the task of being persistent in order to achieve future success (Cortazzi &

Jin, 1997). By contrast, the United States tends to be a society that emphasizes equality of personal opportunities and rights, and encourages independent behaviors, individual achievements and personal opinions. The American people are willing to display their success and achievements, and are more tolerant of different ideas and opinions (Wang, 2004).

Table 3 *Differences and Commonalities in the Meanings of Academic Success Characterizing American and Chinese Cultures*

	American Culture	Chinese Culture
Differences	<i>Smaller Power Distance</i> (Schools and teachers provide services helping students to succeed.)	<i>Larger Power Distance</i> (Students have to follow a good teacher/authority to succeed in academics.)
	<i>Individualism</i> (Academic success is to meet individual's satisfaction.)	<i>Collectivism</i> (Academic success comes from harmonious social relations.)
	<i>Lower Level of Uncertainty Avoidance</i> (There are multiple ways to achieve academic success.)	<i>Higher Level of Uncertainty Avoidance</i> (There is a foreseeable path to academic success.)
	<i>Short-term Orientation</i> (Innovative ideas, creative thinking, and learning by doing are valued towards academic success.)	<i>Long-term Orientation</i> (Continuous effort and persistent hard work are valued towards academic success.)
	<i>Femininity</i> (Academic achievement of students is measured by their social skills, adaptations, and grades.)	<i>Masculinity</i> (Academic achievement of students is measured by grades only. Failure in school is unacceptable.)
	<i>Indulgence</i> (To achieve academic success also means to enjoy a happy life.)	<i>Restraint</i> (To achieve academic success needs diligence, endurance of hardship, perseverance, and concentration.)
Commonalities	Highly value academic achievement and success.	

Although there are differences between American and Chinese cultural characteristics along these axes, some common values are emphasized by both cultures as well: respect for authority and parental wishes and duty to community, along with the importance of education and personal achievement. In existing research, Chinese international students have generally been found to possess high educational aspirations, solid foundational knowledge, good learning habits, willingness to study hard, and they have an awareness of the expectations of significant

family members (Zhao, 2007; Lin, 1998; Chen, 2003). At the same time, they manifest a certain degree of what might be called “selective syncretism” (Berk & Galvan, 2009; David & Florea, 2013): that is, an aptitude for merging cultural elements in their strategies and world views, while remaining anchored in their own origin.

Institutional Factors: The Meso Level

Institutional factors, the “meso” level in the scheme adopted for this study, activate mediate and translate the impact of large-scale cultural influences. There is a great variety of institutions within each country or cultural area and their role is particularly important in the field of education, itself a major social institution. Here we examine particular research and analysis concerning organizational routines and the particular institutionalized cultures of different academic disciplines.

Institutional routines.

In American higher education, conceptions of academic success tend to be closely tied to the type of sponsoring institution – community college versus four-year liberal arts colleges, professional schools or research universities, for example. Some institutions focused on undergraduate education sharing a standard of mastering academic skills, achieving the highest level of scholarship, earning a college degree, and attaining career and life goals are considered to be academic success. At the graduate level, however, there are few explicitly stated institutional standards but at most a general consensus that the academic success of graduate students is demonstrated in the students’ coursework, research, mentoring and advising, professional development, and career or employment obtained. Lydell (2008) points out notions of academic success at the graduate level are most often “circumscribed within measuring and disseminating degree completion and time-to-degree rates” (p. 108). In addition, the goal of

producing post-graduate professionals adds into the mixed issues of scholarly productivity and participation in advanced research.

Most research on students' academic success in higher education focuses on the role of conventional, institutional and formal learning (Butler, Leach, & Zepke, 2011). Whether students can successfully fit into new academic and institutional environment is considered as student success. On the other hand, whether institutions can facilitate students' transition largely effects their success. Tinto's interaction model (1993), for example, is among those studies on students' success from institutional perspectives. Other research refers to academic success as students' engagement with formal learning (Hu & Kuh, 2002). The American National Survey of Student Engagement (NSSE) surveyed institutional influences on whether students can effectively engage themselves into successful learning, which covered the "level of academic challenge, active and collaborative learning, student–teacher interaction, enriching educational experiences, supportive campus environments, general educational gains, practical competence gains and personal social gains" (Butler et al., 2011, p. 229).

From institutional perspectives, the academic success of students is to meet the learning goals that institutions have put into place. However, the reality of student' social and economic conditions can create a new relationship between students and institutional routines. For instance, students who work expect academic study to fit around their schedule, which they conceptualize as success; however, the institutions expect that students' lives should fit around their academic study so that they can successfully achieve academic goals (Butler et al., 2011).

Disciplinary norms: the STEM "culture".

The STEM disciplines in US research institutions tend to be male-dominated, highly interdisciplinary and increasingly diverse in faculty, staff and graduate students (Anderson et al.,

2011; Ono & Hardcastle, 2014). In order to achieve success in this diverse academic field, collaboration and teamwork are high priorities (Markert, 1996). For example, Markert remarks (p. 24), “Collaboration with a faculty mentor is especially critical for graduate students — it affects their academic productivity, job placement, future respect in the field, and postdoctoral productivity.” This kind of collaboration should make faculty (academic advisors) and graduate students into colleagues. Meanwhile, faculty advisors also serve as role models to their advisees (Ono & Hardcastle, 2014).

Despite the declared importance of faculty-student collaboration, Christe (2013) finds that faculty members do not connect with STEM students to an adequate degree and seem generally unaware of the benefits of doing so. The professor-student relationship in the STEM fields has been characterized as chilly, hostile and uncaring (Seymour & Hewitt, 1997). The problem can be explained in more than one way. For example, STEM educators mostly received their education or earned their degrees in academic cultures where there was a large power distance between students and faculty and where the professors were considered unwavering authorities. Yet positive faculty-student relationships that contribute to students’ academic success necessarily manifest qualities like approachability, respect for students and effective role-modeling by faculty (Micari & Pazos, 2012).

In addition, cross-disciplinary cooperation is also important in STEM cultures (Anderson et al., 2011) – that is, collaboration among researchers, faculty and students in different, but related fields. In the hard sciences, researchers require a variety of laboratory facilities, financial resources, equipment and technical knowledge that frequently spans across different disciplines (Markert, 1996). Networking to connect with people with diverse backgrounds and skills is necessary for one to succeed in the STEM field. “For both men and women in scientific,

technological or medical research, networks matter today more than ever. They matter not just for a researcher's individual career, but also for all of us if we want to maximize scientific collaboration to bring about the best advancements that science can offer. In an age of cross-disciplinary investigation, networks are the force that powers innovation and discovery" (Ono & Hardcastle, 2014, paragraph 9).

From a cognitive perspective, in order to succeed in the STEM disciplines, it is important for students to have very good scientific reasoning and argumentation skills (Lee & Buxton, 2011). From a cross-cultural perspective, given the diversity of STEM personnel in the US, it is imperative, particularly for non-mainstream students, to have "the ability to shift competently between different cultural contexts, belief systems, and communication styles" (Lee & Buxton, 2011, p. 280). Although Chinese students generally have a solid foundation of knowledge in the STEM fields, when they pursue success in American graduate education they have to strengthen *both* their cognitive skills and cross-cultural communicative aptitudes.

Individual Factors: The Micro Level

Individuals develop their own partly idiosyncratic versions of academic success and optimal tactics for attaining it from very local and personal influences; family milieu, personal development and prior learning experiences, for example. This last section on factors influencing students' conceptions and strategies examines these "micro" factors.

Family influences.

Family and local environment are one evident source of patterns and frameworks for viewing and pursuing academic success. There will be some natural variations in this regard, even among those from the exact same background. A great deal of research on the academic success of students worldwide is based on theories explaining the relationship between variations

in socio-cultural and economic circumstances that are particular to families and localities on one hand, and student performance on the other. For example, Ablard's research found that mothers and fathers, who had different education levels and ethnic backgrounds, had different internal and external standards on which to define the academic success of their children (Ablard, 1996). In terms of ethnicity, Asian parents focused less on the intrinsic components of achievement than Caucasian parents, and they were more likely than Caucasian parents to focus on aspects of academic success that were neither internally nor externally represented (Ablard, 1996). Accordingly, academic success for Asian parents is more related to fulfilling their expectations of their children.

Kao's study (2000), which examined the relationship between ethnic group images and their impact on the students' academic success, showed that prevalent stereotypes/conceptions formed the reference point for the construction of success among ethnic youth, including more academically successful Caucasian and Chinese students. Schneider and Lee's research (1990) stated that the academic success of East Asian students was attributed to the values and aspirations they shared with their parents.

With respect to the family's influence on conceptions of academic success, the related literature, as listed above, shows that (a) Chinese students generally have higher academic achievement than other ethnic student groups; (b) their sociocultural backgrounds have impacted the society, the communities, the faculties, the families, and even themselves to have different conceptions of academic success; and (c) those varied conceptions of academic success, in turn, influence the ideas of and the approaches to academic success. However, a lack of data on these characteristics of Chinese graduate students in the United States limits the amount of this

analysis that can be done as part of the present research, but we should not disregard such “micro” factors.

Student development and adult learning patterns.

In some research on higher education in the US, student development theories have been used to explore undergraduate students’ academic performance and achievement (e.g. Pascarella & Terenzini, 2005). Theories from sociocultural perspectives, such as the cultural/social capital theory (Bourdieu, 1973, 1986) and the culture learning theory (Furnham & Bochner, 1986) were adopted to inquire into the academic learning of immigrant and minority students.

Graduate students, on the other hand, are considered as adult learners and adult development theories are therefore frequently applied to research on that group (e.g., Gansemer-Topf, et al., 2006). Adult development theories are based on research from psychology, sociology, and education and assist in better understanding the itineraries and motivations of graduate students, because a perspective relevant to that population necessarily “encompasses student development theory and includes populations beyond traditional-aged college students” (Gansemer-Topf et al., 2006, p. 23).

Gansemer-Topf et al. suggest four theoretical approaches to adult education and development that speak to the situation of graduate students: the contextual/sociocultural perspective, the life span perspective, the developmental perspective, and the transition perspective. These theories highlight the ways in which becoming a successful graduate student requires adjusting to different contexts and cultures (sociocultural perspective), juggling multiple individual roles as student, teacher, and researcher (lifespan perspective), mastering academic knowledge and skills (developmental perspective), and simultaneously attending to personal relationships and changes (transition perspective).

Some studies have explored personal variations in concepts of academic success in graduate schools – among faculty as well as among students. Gardener (2009) notes that faculty members from different graduate disciplines and departmental cultures have divergent definitions and understandings of achievement in their environment. Some perceive their doctoral students' academic success as dependent on and tantamount to manifest mastery of professional competencies, while others define it as degree completion (Gardner, 2009). Graduate students are therefore likely to mirror these differences to a certain extent.

Other studies point out that the academic success of graduate students is most often assessed retrospectively on the basis of their future careers. Among doctoral students in particular, it often hinges on whether or not the student was able to obtain a faculty position (Bieber & Worley, 2006). Yet the variant individual perspectives and meanings of graduate students themselves have not received much research attention (Bieber & Worley, 2006; Lydell, 2008), and even less has been devoted to international graduate students.

Most studies that have specifically researched academic success of Chinese international graduate students are found in dissertation research conducted by Chinese researchers. In a recent study, all five Chinese doctoral participants defined academic success as being a professional by developing professional skills through the doctoral program in an American university (Lin, 2013). For Chinese international doctoral students, academic achievement/success is not only measured by individual academic performance, but also based on the individual's further professional development. Simply stated, success for Chinese international graduate students is measured by two factors: the first is obtaining a high degree of academic performance and the second is obtaining a highly prestigious position that will lead to a socially fulfilling career (Lin, 2013).

Butler, Leach and Zepke (2011) explored non-institutional factors on student success in their study and found that non-institutional influences moderately impact student success. Consistent with other studies, their study confirmed that family support for academic study and personal endeavors while on academic study had exercised a substantial impact on student success. Nevertheless, non-institutional influences or individual influences do need to be taken into account when considering factors that impact student success. In summary, when students are affected by personal and family issues, or by institutional and cultural commitments, they devote less in their academic study and their chances of success are adversely affected.

Achieving Academic Success: Processes and Strategies

Whatever a foreign student's conception of academic success, the proof of the pudding lies in the eating: in short, it is brought to fruition by a strategy to achieve that personal vision, whether the strategy is entirely conscious or more instinctual. In this section of the chapter, we review literature on student strategies for ensuring academic success and the processes involved to put them into action, beginning with the important role of prior preparation and continuing with two key elements in the foreign students' repertoire: networking and acculturation.

Influence of Prior Preparation

Studies on academic strategies among the international student population are relatively few and far between. A certain number have explored external factors supporting academic achievement, including effective advising and mentoring, affordable tuition, financial support, supportive family, job security and available learning resources (Bain et al., 2011; Fedynich & Bain, 2011). Internal factors, on the other hand, like students' academic abilities and aptitudes, motivation, personality, emotions, social integration and peer relationships have received a bit

more attention (Grehan, Flanagan, & Malgady, 2011; Gansemer-Topf, et al., 2006) and throw needed light on successful strategies.

Beginning in the 1970's, scholars sought to understand how factors such as language proficiency, personal characteristics, and relationships with faculty and advisors influence the academic performance and persistence of international students participating in American higher education (Jiang, 2010). Overall, six factors that influence the academic success of Chinese international graduate students stand out in available studies: (a) the sociocultural ones that include maintaining a legal status, making friends with domestic students, maintaining family ties in China, attaching successful significance to themselves and families, and seeking help from academic and social communities; (b) the functional education factors such as prior education in China and differences in the educational systems between China and the host countries; (c) the lingual factors such as English proficiency; (d) the cognitive factors such as critical thinking skills and memorization abilities; (e) the affective factors such as academic anxiety and social isolation; and (f) the financial factors such as insufficient financial support (Lin, 1998; Li, Chen, & Duanmu, 2010; Greer, 2005; Huang & Brown, 2009; Huang & Rinaldo, 2009; Yan & Berliner, 2011; Zhang & Rentz, 1996).

Combinations of these factors determine students' abilities to navigate the new academic system in their initial stages, and to adjust to the roles of a graduate student and a researcher in their advanced stages. Individually speaking, it is challenging for Chinese graduate students to maintain a high GPA, to complete their degrees in a timely fashion (especially at the doctoral level), and to build their reputations as researchers in the host country (Jiang, 2010; Lin, 2013; Yan & Berliner, 2013). Challenges include finding intrinsic motivation for their doctoral studies, becoming an independent learner, building a close relationship with faculty, interacting and

forming relationships with American people, and gaining social recognition and support (Jiang, 2010).

Networking

Among international graduate students, networking and seeking help from different resources is widely considered an effective strategy for achieving academic goals (Ward et al., 2001). Lin (1998), for example, found that Chinese international students put considerable effort into networking with Chinese co-nationals, domestic students, other international students, university faculty, academic advisors, mentors, counselors and other staff on campus. Chinese graduate students at the University of Pittsburg mentioned ten sources of help: (a) self; (b) professors; (c) Chinese friends; (d) Chinese student organizations; (e) Americans in general; (f) other international students; (g) family; (h) church; (i) Office of International Services; and (j) the Internet (Lin, 1998).

A study by Harrington (2003), however, examined the effects of Chinese and Indian graduate students' social networks on their academic progression and found that Chinese males had the most insular networks (Harrington, 2003) whereas Indian graduate students had a more open framework of contacts. The study concluded that Chinese international students' network members were predominately friends and most were students. These data are consistent with the results of a study by Chen (2003, p. 43): Chinese international students "rely more on one another than perhaps any other resource." In Harrington's findings (2003), university faculty and staff were represented in only 12% of Chinese males' networks. Students nonetheless indicated that their networks served to facilitate and accelerate their academic progression.

The relationship with advisers is particularly emphasized in multiple studies on Chinese international graduate students' academic success (Jiang, 2010; Wang, 2004; Greer, 2005).

Cultural values have a strong influence on the formation of the relationships between Chinese graduate students and their professors (Wang, 2004). The respect for and dependence on advisers in the traditional Chinese culture are manifested in an old Chinese saying, “Day as a teacher for lifelong father”. This means, even if a person is your teacher for just one day, you should respect him as a lifelong father and mentor. Therefore, Chinese international students value the importance of building relationships with advisers.

However, related research also shows that Chinese students identify limitations in American faculty-student relationships, which are largely confined to academic interaction. In addition to the adviser-advisee relationship, another relationship that Chinese graduate students have with their advisers is the employment relationship (Wang, 2004). Most Chinese students are employed as research assistants or teaching assistants under their advisors. Due to visa regulations and employment limitations, Chinese students have to maintain this employment relationship with their advisers even if they think the employed work does not benefit their academic or career development, or if the “boss” is not the ideal adviser (Wang, 2004). This employment relationship is sometimes adverse to an open and equal communication and collaboration relationship between advisers and advisees, which is encouraged in the American academic culture.

This equal faculty-student relationship in the US (Greer, 2005) is very different than hierarchical relationship in China (Jiang, 2010). Chinese students have to complete the transition when they interact with their advisers and professors. Through experiencing and developing different faculty-student relationships in the US, Chinese graduate students have expanded their efforts to become more independent and more proactive in their interaction with professors, and

accordingly, have built up new social/cultural capital in the US which is essential for them to achieve academic success (Jiang, 2010).

In addition, participating in international student support programs offered by universities is another potential networking resource. However, in Chen's (2003) research, Chinese international students in community colleges turned out to be less likely than other international student groups to attend such programs or take part in activities like orientation or visiting a counselor. Chen concludes that "utilizing a social support system and socially integrating with significant others in college" may not be a favored approach of Chinese international students (Chen, 2003, p. 218). This leaves a question for us to look for answers: what are Chinese international students' favored approaches to achieve success in the US?

Acculturation

International graduate students in the United States are by definition dealing with a cultural environment that is different than their own, and quite different in the case of those from China. As a result, research literature has given considerable attention to international students' social, cultural and academic adjustments (Ryan & Twibell, 2000). Unlike domestic students who grow up in their American society, international students, who usually lose their prime sources of sociocultural support when they move to the US, have to develop new cultural and social capital once they arrive (Chen, 2003). The academic success of international students is therefore highly dependent on those social, cultural and psychological adjustments (Chen, 2003) – or, in short, on their "acculturation" (Berry, 1997).

John Berry's acculturation theories (1997, 2005) are widely used in cross-cultural studies of international students. According to Berry (2005), there are large variations in how immigrant groups and individuals undergo cultural adjustment, as well as in the "acculturation strategies"

that they develop or adopt. Such strategies consist of two components: “attitudes (an individual’s preference of how to acculturate), and behaviors (a person’s actual activities) that are exhibited in day-to-day intercultural encounters” (Berry, 2005, p.704). Based on the two analytical dimensions of home culture and host culture, Berry defined four acculturative attitudes and strategies describing how a non-dominant group or individual responds to the two poles of the dynamics: to what extent they strive to maintain the home culture and to what extent they seek to interact with and understand the host culture (Berry, 1997).

When individuals from the non-dominant group (take China for example) maintain their home culture while simultaneously maintaining interactions with the host culture (take America for example), *integration* is the adopted acculturation attitude and strategy. When Chinese individuals interact with American culture without maintaining their Chinese culture, *assimilation* is the acculturation attitude and strategy. On the contrary, when Chinese individuals only maintain their home culture without interacting with American host culture, *separation* is the adopted attitude and strategy. The fourth acculturation attitude and strategy is *marginalization*, when there is no preference in either maintaining Chinese home culture or interacting with American host culture (Berry, 1997).

Ogbu (1992) believes that Chinese, as members of a voluntary minority group in the US, tend to “*accommodate*” to, but not to “*assimilate*” into, American culture. They don’t give up their Chinese cultural beliefs and practices, but they are willing to learn American rules and practices, as they believe there will be a payoff in the future. During the acculturation process, Chinese ethnic groups interpret the sociocultural differences as barriers to overcome so that they can achieve long-term goals in American society (Ogbu, 1992). Similar to Chinese minority groups in the US, Chinese international students, as a cultural group, predominantly take the

“integration” acculturation strategy, which maintains Chinese culture and develops relationships with the host culture (Yu & Wang, 2011).

In a 2001 study, Ward et al. found it useful to distinguish between two related dimensions of acculturation: psychological adjustment and sociocultural adaptation. Psychological adjustment refers to the personal well-being and stress-coping capacities during cross-cultural transitions, which is rooted in the affective responses to stressors. Sociocultural adaptation, on the other hand, refers to cultural learning and social skills acquisition, which depends on behavioral and cognitive responses to perceived skill deficits. This “acculturation process model” incorporates at the same time quite a range of micro- and macro-level variables. The macro-level factors are sociocultural characteristics of the society of origin and the society of settlement. The micro-level variables are attributes of the person and characteristics of the situation. The work of Ward et al. offers a valuable development and updating of the basic acculturation framework. (See Ward et al., 2001, p. 44).

Summarizing the Conceptual Framework

The final section of Chapter 2 is devoted to articulating the conclusions that may be drawn from the literature review undertaken above and illustrating the overall conceptual framework that they offer.

Conclusions from the Literature Review

Studies on Chinese international students inevitably “mix academic issues with other issues related to social relations and cultural adjustment” (Jiang, 2010, p.16). Research on the topic is naturally based on the premise – articulated by Chen (2003, p. 6) that “academic achievement is a multidimensional phenomenon. It is the product of a relational process in which a student’s cultural identity and sociocultural background and the norms and expectations of

families, institutions, and the teachers play especially important parts.” Overall, existing studies indicate that Chinese international students’ cross-cultural adaptation (and their attempts to achieve academic success as part and parcel of it) entails a process of re-establishing themselves in new academic, social, and cultural communities. As a result, acculturation and adaptation are necessary for their personal and professional advancement in the US.

An Overall Conceptual Framework

In this chapter, various bodies of literature were reviewed in order to build up a conceptual framework for the study. That framework is presented in Table 4 below and comments are offered thereafter.

Table 4 *Conceptual Framework of the Study*

		FOCI	
		Factors Influencing Conceptions of Academic Success	Strategies for Achieving Academic Success
LEVELS	Cultural (Macro)	Hofstede’s dimensions of culture and cultural difference	Cultural adaptation and syncretism
	Institutional (Meso)	Organizational models Disciplinary norms	Strengthening prior preparation Active networking
	Individual (Micro)	Local/family influences Student development theories Adult learning theories	Selective acculturation
Background and Context		Growing up in an increasingly globalized culture Evolving situation of Chinese graduate students in the US	

Drawn on existing literature, interpretations of academic success and the strategies utilized in order to achieve academic success, based on a group of Chinese international students studying in the US, can be explored from three levels. The first level is the macro level. This level considers perspectives of societal cultures that involve both American and Chinese cultures. The second level is the meso level. This can be seen from perspectives of socio-institutional

cultures that are developed in American higher education institutions and STEM disciplines. Academic preparation and active social networking are the corresponding strategies on this level. The third level is the micro level where the perspectives of families and individual students can be examined based on how their characteristics and experiences shape their formed meanings of academic success. On the micro level, selective acculturation and adaptation are strategies used to reflect how they achieve their perceived academic success in American cultural settings.

The three levels of cultural perspectives are interlinked to each other. Particularly, cultures on the macro and meso levels are manifested on the micro level. Individuals' conceptions of academic success including meanings and strategies have the imprints of cultures where they have lived, learned and gained experience. In this chapter, various bodies of literature are viewed to set up foundational knowledge and build up the conceptual framework for this qualitative study. The following Chapter Three describes the research method designed according to the conceptual framework and research purposes.

CHAPTER 3

METHODS

Revisiting the Research Questions

The research questions posed in Chapter One will guide the accomplishment of this dissertation's purpose, and will also serve to guide the development of its methodology. They were as follows:

- 1) What does "academic success" mean to Chinese international students who are studying in an American graduate school?
- 2) What strategies have they found to be most effective to achieve that type of success in an American university setting?
- 3) To what degree do these attitudes and strategies seem to bear the imprint of national, socio-institutional and individual or familial cultures?
- 4) What role do they believe that acculturation or adaptation to American society plays in achieving the goals of those strategies, and to what degree is it manifested within them?

Proposed Methodology: Qualitative Phenomenological Research

What is Phenomenology?

In the twentieth century, the philosopher Edmund Husserl (1859-1938) developed his phonological philosophy into phenomenology, a qualitative research approach to illuminate and identify phenomena through the ways in which people in a situation perceive them (Lester, 1999). Phenomenology gathers deep information and perceptions through inductive and qualitative methods such as interviews, discussions and participant observations, which represent perspectives of the research participants. Phenomenology is, therefore, concerned with the study

of subjective experience of individuals and emphasizes the importance of personal perspective and interpretation. Phenomenological research has overlaps with other qualitative approaches in human science including ethnography, hermeneutics and grounded theory. However, phenomenological research is particularly effective at presenting experiences and perceptions of individuals from their own perspectives, and therefore it is effective at challenging structural or normative assumptions (Lester, 1999).

A variety of methods can be used in phenomenological research, including interviews, conversations, participant observation, action research, focus groups and analysis of personal narratives (Lester, 1999). Various approaches exist for organizing and analyzing data in a phenomenological qualitative study, as well (Moerer-Urdahl & Creswell, 2004). Among them, transcendental phenomenology is translated into a qualitative method by Moustakas (1994), based on principles identified by Husserl (1931). Moustakas (1994) pointed out the three basic concepts to understand the conceptual framework of transcendental phenomenology: Epoche, Transcendental-Phenomenological Reduction, and Imaginative Variation.

According to Moustakas (1994), Epoche revisits phenomena by setting aside everyday understanding, experience, and judgment, which is the necessary first step in the study of experience. The next step of transcendental-phenomenological reduction transforms the world into mere phenomena by looking at the essential meanings of the experienced world in a fresh and open way. By fully describing the essential constituents of one phenomenon in transcendental-phenomenological reduction, such as people's thoughts and feelings, the researchers can derive a textural description of the meaning and essence of the experience. The aim of the Imaginative Variation, however, is to grasp the structural essence of experience which precipitate the experience and connect with it. In Moustakas' phenomenological model (1994),

the structural essences of the Imaginative Variation and the textural essences of the Transcendental-Phenomenological Reduction are integrated together in order to arrive at a textural-structural synthesis of meaning and essence of the phenomenon or experience being investigated.

Qualitative research examines life experiences in an effort to understand their essence and meanings from them. Phenomenology is one of many types of qualitative research that examines the lived experiences of humans. As a philosophy, phenomenological philosophy believes that knowledge of life can emerge from people's life perspectives and lived experiences. As a methodology, phenomenology links a particular philosophy to an appropriate research method and bridges philosophical views to practical research approaches (Byrne, 2001). For example, Husserl's phenomenology is based on his philosophy that setting aside preconceptions enables one to objectively describe the phenomena under study (Moustakas, 1994); Moustakas (1994) developed transcendental phenomenology based on Husserl's philosophy, contending that "Phenomenology, step by step, attempts to eliminate everything that represents a prejudgment, setting aside presuppositions, and reaching a transcendental state of freshness and openness, a readiness to see in an unfettered way, not threatened by the customs, beliefs, and prejudices of normal science, by the habits of the natural world or by knowledge based on un-reflected everyday experience" (p. 21).

The Rationales of Adopting Phenomenology

"A phenomenological study describes the meaning for several individuals of their lived experiences of a concept or a phenomenon" (Creswell, 2007, p. 57). This study searches for meanings and essences of Chinese international students' conceptions of academic success while they are experiencing the achievement of academic success in American graduate schools. Given

the lack of empirical research examining international students' conceptions of academic success through the lens of their acculturation experiences, this study addresses the issue from an exploratory perspective by using phenomenology to discover meanings and essences of the phenomenon that Chinese international students pursue academic success in American cultural settings. In order to deeply understand what it means to be academically successful in American graduate education as Chinese international students, Moustakas' (1994) transcendental phenomenology is adopted in this study, which focuses less on my interpretations as the researcher and more on the experiences of research participants.

In this transcendental phenomenological inquiry, I tried to transcend or suspend my past knowledge and my experience to understand Chinese international students' conceptions of academic success at a deeper level. Although being a Chinese international student myself, I tried my best to approach other Chinese students' lived experience with a sense of "newness", because the founding principle of transcendental phenomenology is that experience should be examined in the way that it occurs and "goes back to things themselves" (Moustakas, 1994). In order to be more faithful to the phenomenon, I tried to epoche, or bracket, the taken-for-granted perceptions by describing my own conceptions and experiences first and then bracketing them out before proceeding to meet with other Chinese international students in this study.

There were three phases to complete this qualitative inquiry. In the first phase, using semi-structured interviews, general meanings, values, influential factors and strategies for achieving academic success emerged from fifteen Chinese international students who were purposively sampled. In the second phase, based on the data collected from the first-round of interviews, the second round of in-depth interviews were conducted with eight Chinese students. The data produced more detailed data to address research questions. In the third phase, a focus

group of six participants discussed their opinions and experiences with acculturation and academic success which were lacking from previous individual interviews.

The rationale to conduct the research in three phases is based on the research nature of exploration. Without the first step of extensively interviewing fifteen Chinese students, I could not have gotten good access to the research group to build up rapport with potential research participants; neither could I have formed clearer ideas of how to further this study. The first phase was a foundational phase for exploration. The second phase of more intensive interviews of eight Chinese students was built upon the first round of interviews to explore specific conceptions and experiences in terms of academic success and acculturation. This phase offered key information and data to answer the research questions. The third phase of focus group discussion served two functions. One function was to generate new data from the communication of the group that did not come up in the individual interviews; the other was to triangulate data from individual interviews so as to increase the reliability of the collected qualitative data. The third phase was a supplementary and conclusive step of the entire exploration.

My Experiences Related to This Study

My research interests in international students' academic success derive from my personal experience as an international educator in China and an international student in the US. Before the year 2010 when I came to the US and started my doctoral program in international education, I had worked for eight years in China as an English instructor and an advisor preparing students to study abroad. My students' desire to study abroad, their ambition to achieve academic success in overseas educational institutions and my need to advance my professional development together formed my goal to pursue a graduate degree in the US. At the

time I left to attend an American graduate school, academic success for me was to gain experience, knowledge and a doctoral degree in the field of international education.

According to what I learned and experienced in China about success in studying abroad, for about two years, I held the view that the effective way and the only way to achieve academic success in the US was the American way. Therefore, for the first two years in graduate school, I took every opportunity to assimilate myself into the American academic and social culture, particularly into the academic culture of American graduate schools. I didn't contact my Chinese fellows at all, or at least, I had no intention of doing that. Instead, I emerged myself into various learning activities in which very few Chinese students were engaged. It was very challenging for me to devote myself to a lifestyle in a very different culture. It turned out that I successfully fit in the graduate school, did well in my doctoral study and made a circle of American friends. However, I did not feel "success" or "recognition" after all my efforts in this American culture. Instead, I constantly felt "empty", sometimes I felt "alien" or even like a "failure". I started wondering whether other Chinese international doctoral students experienced the same thing. I wanted to know more about the lifestyle and experience of other Chinese students who seemed very successful in their field of study and who seemed content and happy living in the US.

As I stayed longer in the US, I found that successfully acclimating into American academic culture was not enough for me to achieve academic success in the US. It was equally important to know how to live and socialize in American society and be content. Socializing became as important as studying for me. At the latter stages of my doctoral program, I found that both my ideas of academic success and my strategies for achieving it had been broadened largely. One possible explanation for this change is that I was strongly influenced by the variety and tolerance of American multiculturalism. I was often told that everyone was one of a kind and

should select his or her own way of living. Therefore, with the three indicators of academic success — experience, knowledge, and degree, as my goals to go to an American graduate school, academic success for me also meant discovering and developing my own identity in a different culture, to become an international educator in a different professional context, as well as to live a happy and healthy life in a cross-cultural setting.

The strategies that I adopted to achieve these types of academic success were changed accordingly: to experience different things in different cultural contexts and to socialize with people from varying cultural backgrounds, including Chinese people. Through campus contacts and national or international conferences, I met scholars from different places around the world and experienced diverse cultural events. All of these experiences contributed to maturing my perceptions of academic success in the US, as well as polishing my strategies of achieving academic success. This is my experience and my perceptions of academic success in the US. By listing and giving a reflection of my own past knowledge and experience, I could bracket my own experience and access other Chinese international students' experiences and perspectives from “brand new eyes”.

Sampling: Purposive and Convenient

In order to have a legitimate number of Chinese international students participating in my study, I conducted my sampling at institutional and individual levels. I chose the graduate school, where I was able to access resources in the best way, as the research and sampling site. From a purposeful perspective, I selected and sent a survey to the type of Chinese international students I wanted to interview. From a convenience perspective, I had to process with the students who responded and were willing to take part in the various iterations of data collection. Table 5 displays sampling of research participants in this study.

Table 5 *Sampling of Research Participants*

Pseudo nym	Field of Study	Stage of study	Prior Academic background	Gender		Research Participation		
				M	F	Interview 1 in Fall 2013	Interview 2 in Fall 2014	Focus Group in Fall 2014
Guang	Chemistry	PhD Candidate	Bachelor's and Master's degrees in China; Worked as a full-time research associate in China	√		√	√	
Jie	Biology	Coursework	Bachelor's degree in China		√	√	√	√
Nan	Computer Science	PhD Candidate	Bachelor's and Master's degrees in China	√		√		
Rui	Computer Science	Coursework	Bachelor's degree in China		√	√		
Wu	Statistics	PhD Candidate	Bachelor's Degree in China	√				
Xian	Statistics	Coursework	Bachelor's degree in China; Master's degree in the US	√		√		
Ya	Statistics	PhD Candidate	Bachelor's degree in the US		√	√	√	
Ye	Electrical Engineering	Coursework	Bachelor's and Master's degrees in China; 2 nd Master's degree in the US	√		√		
Ze	Biology	Coursework	Bachelor's degree in China	√		√		
Zhou	Computer Science	PhD Candidate	Bachelor's degree in the US	√		√		
Qiang	Biology	PhD Candidate	Bachelor's degree in China	√		√	√	
Bo	Physics	PhD Candidate	Bachelor's degree in China	√		√		√
Ning	Mathematics	PhD Candidate	Bachelor's degree in China	√		√		
Wen	Mathematics	PhD Candidate	Bachelor's degree in China	√		√		
Qiu	Mathematics	Coursework	Bachelor's degree in Hong Kong, China	√		√		√
Bing	Mathematics	Coursework	Bachelor's degree in China		√		√	√
Fei	Computational Science	Coursework	Bachelor's degree in China		√		√	√
Ke	Electrical Engineering	PhD Candidate	Bachelor's and Master's degrees in China; Worked as an engineer in China	√			√	√
Xu	Mathematics	Coursework	Bachelor's and Master's degrees in China		√		√	
Total				13	6	15	8	6

This study took place in a public research university in the southern part of the USA. In the 2012 spring semester, 1,028 international students (named as non-resident aliens in the university database) enrolled in either a master or doctoral program in the graduate school of this university. The largest group of international students was from Mainland China (383). In the eight disciplines within the STEM fields⁵, there were a total of 390 international students enrolled in 2012 spring semester, nearly half of whom were Chinese students (200) (CGE, 2013). By the 2013 fall semester, the total enrollment of degree-seeking graduate students in the university was 6,847 excluding professional graduate students in law and medical schools. Among these 6,847 graduate students, there were 1308 international students, 448 being Chinese and 220 of them studying in the STEM fields (CGE, 2014). This study was initiated in the 2012 spring semester in this university. The data collection started in the 2013 fall semester and ended in the 2014 fall semester on campus.

The selection process took into account the participants' willingness to volunteer. They were made aware of the purpose of the research and the research process through the following procedures: For the first round of interviews, a research invitation email was sent out through some department's listserv within the STEM fields and the listserv of the Chinese Scholar and Student Association (CSSA) to all the enrolled Chinese graduate students who were studying at the university. The email (Appendix A) clarified the research purpose and the qualifications for prospective research participants. There were a total of 23 eligible respondents to the recruiting emails. The responding rate was above 10% (23 out of 220). According to the email responses, I chose 15 non-first-year PhD students as the interviewees by considering the balance in

⁵ In this research site, the STEM fields focus on eight major disciplines of the university where there are largest enrollments: Biological Science, Chemistry, Computer Science, Electrical & Computer Engineering, Mathematics, Mechanical Engineering, Physics and Statistics.

disciplines (see Table 6 for detailed information). Gender was not considered in this selection because of the existing gender imbalance in the STEM fields.

For the second round of interviews, recruiting flyers (Appendix B) were handed out at an event that Chinese students celebrated for the Mid-Autumn Day festival on campus in the 2014 fall semester. Also, the flyer was emailed through the CSSA listserv. Four doctoral students were newly recruited according to their major and their interests in the study. Four first-interview participants were invited back according to their first-round interview data as well as their potential and willingness to offer more information to the study. Therefore, there were eight participants for the second interview (see Table 7 for detailed information).

Table 6 *Research Participants Selected for Interview I*

	Name (Pseudonym)	Stage of Studying in the PhD Program in the fall of 2013	Academic Related Background prior to the PhD program	Gender
1	Guang	PhD candidate in Chemistry	Bachelor's and Master's Degrees in China; Worked as a full-time research associate in China	M
2	Jie	2 nd year PhD student in Biology	Bachelor's Degree in China	F
3	Nan	PhD candidate in Computer Science	Bachelor's and Master's Degrees in China	M
4	Rui	3 rd year PhD student in Computer Science	Bachelor's Degree in China	F
5	Wu	PhD candidate in Statistics	Bachelor's Degree in China	M
6	Xian	2 nd year PhD student in Statistics	Bachelor's Degree in China; Master's Degree in Michigan	M
7	Ya	PhD candidate in Statistics	Bachelor's Degree from a Liberal Art college in the US	F
8	Ye	3 rd year PhD student in Electrical Engineering	Bachelor's Degree in China; 1 st Master's Degree in China; 2 nd Master's Degree in Texas	M
9	Ze	3 rd year PhD student in Biology	Bachelor's Degree in China	M
10	Zhou	PhD candidate in Computer Science	Bachelor's Degree from a Liberal Art college in the US	M
11	Qiang	PhD candidate in Biology	Bachelor's Degree in China	M
12	Bo	PhD candidate in Physics	Bachelor's Degree in China	M
13	Ning	PhD candidate in Mathematics	Bachelor's Degree in China; Incomplete graduate study in China	M
14	Wen	PhD candidate in Mathematics	Bachelor's Degree in China	M
15	Qiu	3 rd year PhD student in Mathematics	Bachelor's Degree in Hong Kong, China	M

Table 7 *Research Participants Selected for Interview II*

	Name (Pseudonyms)	Stage of Studying in the PhD Program in the fall of 2014	Academic Related Background prior to the PhD program	Gender
1	Bing	2 nd year PhD student in Mathematics	Bachelor's Degree in China	F
2	Fei	3 rd year PhD student in Computational Science	Bachelor's Degree in China	F
3	Guang	PhD candidate in Chemistry	Bachelor's and Master's Degrees in China; Worked as a full-time research associate in China	M
4	Jie	3rd year PhD student in Biology	Bachelor's Degree in China	F
5	Ke	PhD candidate in Electrical Engineering	Bachelor's Degree and Master's Degree in China; Worked as an engineer in China	M
6	Qiang	PhD candidate in Biology	Bachelor's Degree in China	M
7	Xu	3 rd year PhD student in Mathematics	Bachelor's Degree and Master's Degree in China;	F
8	Ya	PhD candidate in Statistics	Bachelor's Degree from a Liberal Art college in the US	F

Table 8 *Research Participants Selected for Focus Group*

	Name (Pseudonyms)	Stage of Studying in the PhD Program in the fall of 2014	Academic Related Background prior to the PhD program	Gender
1	Bing	2 nd year PhD student in Mathematics	Bachelor's Degree in China	F
3	Bo	PhD candidate in Physics	Bachelor's Degree in China	M
2	Fei	3 rd year PhD student in Computational Science	Bachelor's Degree in China	F
4	Jie	3rd year PhD student in Biology	Bachelor's Degree in China	F
5	Ke	PhD candidate in Electrical Engineering	Bachelor's Degree and Master's Degree in China; Worked as an engineer in China	M
6	Qiu	4th year PhD student in Mathematics	Bachelor's Degree in Hong Kong, China	M

After a preliminary data analysis of the second interview, three female and three male interviewees were selected for a focus group discussion from the research participant pool that I

had created from the first and the second interviews. The group of six people is large enough to generate rich discussion, but not too large that some participants are left out (Patton, 2002). The focus group members are listed in Table 8.

Data Collection

“Typically in the phenomenological investigation, the long interview is the method through which data is collected on the topic and question” (Moustakas, 1994, p. 114). Pilot interviews were conducted first with three Chinese graduate students to test the eligibility of the first interview protocol. Those three interviewees were selected at the researcher’s convenience. After each interview, the interviewee was requested to provide feedback to improve both the interview questions and the researcher’s interview skills. Also, the interview instrument was improved after the investigator analyzed the pilot interview data. After the pilot study was completed, a modified interview protocol was created (see Appendix G). Real interview data collection occurred during the 2013 fall semester and the 2014 fall semester.

In the mid-semester of fall 2013, email messages (see Appendix A) were sent out to recruit the first-round interviewees. After the recruitment, by using the semi-structured interview protocol (see Appendix G), the research investigator interviewed 15 Chinese international students who were purposefully chosen from the research participant pool. The interview recording tool — “Smart Pen” was used to record the interviewee’s voices. Meanwhile, notes were taken by using “Smart Pen” to connect the written notes to the voices. All the notes and audio were recorded and saved in “Smart Pen”. Also, they were copied and saved on two different computers owned by the researcher, and kept securely under password protection.

After analyzing the first-round of interview data in the 2014 spring semester, the second interview protocol (see Appendix H) was generated based on the preliminary findings and

research questions. In the 2014 fall semester, eight interviewees were selected and interviewed for further information. The data were collected and kept in the same way as the first round of interviews. Although I had developed a series of questions in advance aiming to evoke interviewees' full account of experience, these questions were varied, altered or not used when interviewees shared their stories (Moustakas, 1994).

In order to collect more rich data from a different source, in addition to the two interviews, a focus group discussion was the last step to complete the whole data collection process. Another advantage of a focus group was the depth and complexity of responses, as group members stimulated new thoughts for each other. Therefore, a focus group discussion was led by me among six Chinese students who wanted to discuss their opinions. Three female and three male participants were invited to a conference room at my academic department where there was a round table, a computer and a projector. We sat around the table with drinks and snacks, and I used the projector to show a power point presentation as the background. The presentation covered the main research purposes and questions, as well as our discussion guidelines. The focus group guidelines (see Appendix I) were created according to issues that needed to be discussed after the first and the second interviews. After we introduced ourselves to each other in the group, I reviewed my research process and initiated the discussion by asking for the most impressive cross-cultural experience they have ever had. The discussion was planned to be an hour, but it lasted two hours including a 15-minute break. I was able to collect rich data from agreement and disagreement, repercussion and expansion of group member's discussion.

In addition to recorded data collected from participants in the two interviews and one focus group, my interview notes and research reflections also served as data input for this study. The privacy and confidentiality of research participants were maintained in different ways from

different aspects to the extent allowed by law. First, the research proposal was approved by the university's Institutional Review Board (IRB). The IRB approval (see Appendix J) ensured that the rights and welfare of research participants were best protected during their participation. Second, research participants signed consent forms before their participation, in which there was a list of protections of their privacy and confidentiality (see Appendixes C, D & E). Third, the raw interview data were securely stored and kept confidential in the researcher's personal recorder and computers with password protection. After the completion of the research project, all the raw data containing private information will be destroyed upon the research participants' request.

Data Analysis

To deeply understand conceptions of academic success from Chinese international graduate students' perspectives, three steps were followed to analyze the qualitative data from the first-round of interviews. The first step was preparing a thick and rich description of data collected from the interviews by transcribing voices and notes into texts. The second step involved organizing the data under a variety of categorized themes by using inductive and deductive procedures for generating codes, patterns, themes and categories (Patton, 2002). The third step was classifying students' conceptions of academic success and strategies for achieving it, along with the factors that they felt were most important in influencing the outcome.

Results from analyzing the first interviews gave an initial sense of the meanings of academic success for participants and the factors that they considered most responsible for ensuring it. These generated themes and categories were used in developing the second interview protocol (see Appendix H), which served to refine the results from the individual interviews. In the same way, data from the second-round of interviews were analyzed in the three steps as in

the first interviews. The analytical results were then used to develop guided questions for the focus groups.

Both interview data and focus group data were treated in a similar manner of data analysis and description: inductive and deductive data analysis techniques were used to identify elements relevant to the targeted research questions by first developing textural descriptions, then compositing textural description into structural descriptions, and at last synthesizing the composite textural and structural descriptions into themes to answer research questions (Moustakas, 1994; Patton, 2002). According to Moustakas' phenomenological research method (1994), the first step of data analysis is called horizontalization, which is to display the thick data in different codes. The next step is to cluster meaning from different codes and categorize them into significant themes. The significant themes are used to write the textural description – the research participants' experiences of the phenomenon; and to develop the structural description – the settings and influences of research participants' experiences of the phenomenon.

In regards to technology, I used the software QSR Nvivo 10 to assist in all the data analyses. First, I organized the different data resources by inputting them into Nvivo: interview and focus group transcripts, transcript notes, research memos and literature review. Then, with the coding function, I conducted open coding and then axial coding by categorizing all the codes into different themes. Using the code classification and query function, I was able to induce, deduce and regenerate themes and categories as well as conduct selective coding so as to find the relationships among those categories. Combining Moustakas' phenomenological method (1994) with Nvivo's technical functions, I was able to develop descriptions of meanings and provided answers to research questions by the end of data analysis.

Validity of Qualitative Results

Validity refers to how accurately the account represents participants' experience of the social phenomena in question (Creswell & Miller, 2000), or the degree to which researchers' claims about knowledge correspond to the reality being studied (Cho & Trent, 2006) – a reality constituted in the present case by interviewees' experiences and perceptions. In order to ensure the validity of the qualitative results of this study, I followed three strategies – Member Checking, Peer Review and Data Triangulation (Creswell & Miller, 2000).

Member Checking

I sent the interview transcripts back to each participant for member checking prior to analyses. Also, I sent back the focus group discussion transcript to two group members (one male and one female) for review and feedback. After the inductive analysis, I randomly selected two research participants and shared with them my categorized meanings of academic success and strategies to achieve academic success. I asked them to testify to the accuracy and credibility of the accounts.

Peer Review

I reported my data analysis process and results to two of my professors, both of whom are experts in qualitative research in international and comparative education. We completed several rounds of discussion and accordingly I made modifications concerning the best means to ensure accurate interpretation of the accounts from the research participants.

Data Triangulation

As the two interviews and one focus group discussion are closely related and gradually extended into a deeper exploration, I used the three kinds of data to triangulate to each other while establishing a chain of evidence. Also, I combined and triangulated my findings with

theories and previous research results. For example, cultural meanings of academic success appeared in the first round of interviews and were explained in depth in the second round of interviews, in both situations it was said: “academic success is to succeed in American academic and social settings”. They were finalized as conceptions of academic success in the group discussion when all the group members agreed academic success has cultural meanings.

Summary of Research Design

Guided by multiple lenses and dimensions of conceptions of academic success, a three-phase phenomenological qualitative method was adopted to conduct research on the academic success of Chinese international students in an American graduate school. In the first phase, by using a semi-structured interview, I accessed a group of Chinese international students studying in the STEM fields and asked them for individual background information and for their ideas on meanings, influences and strategies in terms of academic success in American graduate schools. In the second phase, based on themes analyzed from the first interviews, I conducted in-depth interviews with eight Chinese doctoral students and collected more data about their conceptions of academic success and experiences of achieving academic success. In the third phase, by organizing a focus group, I was able to obtain group discussion data for answering questions that were lacking from the individual interview data. After progressive data collection and data analyses on these three phases, research findings and discussions were generated; conclusions and implications to international higher education were presented in the following chapters.

CHAPTER 4

FINDINGS & DISCUSSIONS

Chinese students who were first educated in Chinese cultural environment until adulthood, and then came to pursue graduate studies in the United States, have experienced tremendous cross-cultural changes and have had to make significant adaptations. As individuals, Chinese students have responded to these cultural transitions in affective, behavioral and cognitive ways (Ward et al., 2001). Overall, the responses of Chinese students to international migration reflect characteristics of American, Chinese and “globalized” cultures. In this study, Chinese doctoral students studying in the United States analyzed their experience by describing how their conceptions of academic success, their understanding of the factors and environments that favor it and their strategies for achieving it in the US, have changed and become more explicit over the course of their transition. Some of these conceptions, understandings and strategies seem to be widely shared among the students despite cultural, institutional and individual variations. Some, on the other hand, appear to be uniquely molded by the particular sociocultural experiences of each student. These conceptions, understandings and strategies are presented in the following categories:

- conceptions of academic success are categorized into conventional, social and cultural visions of that outcome;
- understandings of the factors that influence it are dissected into individual characteristics on one hand, and academic or social environments on the other; and
- strategies to achieve academic success are divided into academic, social and cultural adaptation strategies.

Each of these intersecting categories is discussed in light of the conceptual framework for this research literature and with reference to relevant literature on the topic.

Chinese International Students in This Study

Participants in this study included 19 Chinese doctoral students (13 males and 6 females) who were majoring in different disciplines in the STEM fields. The location was at a southern public university in the United States. All participants were born in 1980s and grew up in China. The data included, one student named Qiu, who completed his undergraduate study in Hong Kong, and two other students -- Ya and Zhou -- who did their undergraduate study at a liberal art college in the US. The other 16 students all completed their undergraduate study in Mainland China. In addition to undergraduate study, six students had already received the Master's Degree -- two of them in China and four in the US. Among those holding the Master's degrees, two participants -- Guang and Ke -- had worked as professionals in China for a period of time before coming to the US to pursue their doctoral degrees.

For the first round of interviews, 15 participants were recruited from the respondents to the initial round of invitation emails. For the second round of interviews, four new participants were recruited by another round of emails and a set of newly designed flyers, while four "veterans" of Interview I were asked -- and agreed -- to participate in the second round. In the focus group discussion, there was one participant who had participated in both interviews, two participants who had only taken part in Interview I, and three who had only taken part in Interview II. Among the total 19 participants, there was just one student (Jie) who participated in all three phases of the research project. Table 9 below summarizes the composition of these research participants.

Table 9 *Composition of Research Sample*

Research Phase	Nb. of participants	Gender		Nb. who took part before	Level of highest previous degree		Country of highest previous degree		Field of current study			Current doctoral student status	
		M	F		BA/S	MS	China	USA	Science	Math / Statistics	Engineering	2 nd -4 th year student	PhD Candidate
Interview 1	15	12	3	0	11	4	11	4	8	6	1	6	9
Interview 2	8	3	5	4	5	3	7	1	4	3	1	4	4
Focus Group	6	3	3	6	5	1	6	0	3	2	1	4	2
Total	29	18	11	10	21	8	24	5	15	11	3	14	15

These students, who were born in the 1980s and grew up, lived and studied in China until the year 2010, had experienced the three major stages of cultural globalization in China – Cultural Modernization, Cultural Renaissance and Cultural Self-consciousness ⁶(Yu, 2008). They had been largely, albeit indirectly, exposed to western culture (and the American variety in particular), and they experienced firsthand the rival forces between Chinese culture versus American culture and globalization versus localization. For example, they started learning English when they were in primary schools, and they were asked to attend after-school programs to improve both English and Chinese national studies. From programs on TV, movies, and the Internet, they accumulated knowledge of people, language, food, and customs in the U.S., the U.K., France, Australia, and other western countries. The degree of cultural globalization that had already been carried out in China made these Chinese students more accepting of different

⁶ The three major stages are defined in Chapter 2. See page 17-19.

cultures and more aware of the importance of cultural competence, which is the ability to navigate and understand different cultural environments.

The background of experiencing cultural globalization in China offered a possible explanation of the following findings:

- Chinese students formed their conceptions of academic success with various meanings that had imprints from Chinese, American and globalized cultures;
- None of these Chinese students in this study chose to separate themselves from American culture or from Chinese culture or to marginalize themselves from any one culture (Berry, 2005); instead, the majority of them chose to integrate aspects of American, Chinese and global cultures.

The purpose of this study is to better understand how this new generation of Chinese scholars define and then pursue academic success in a US graduate school, drawing from these diverse cultural sources. As such, replies to the in-depth interviews and focus group were analyzed thematically as a whole and not sorted by respondent variables such as gender, prior degree, or length of time in the US. However, those individual variations are considered important and relative to international students' success in extant research (e.g. Ward, Okura, Kennedy, & Kojima, 1998). Therefore, future research is needed, on a larger scale, to provide another lens to explore trends and generalizability of conceptions of academic success on the part of Chinese international graduate students and to look beyond the sociocultural lens used in this dissertation study.

Meanings of Academic Success

In order to better understand how Chinese international students achieve academic success in American graduate schools, this study first explored what academic success means to

them. From the 19 Chinese doctoral students who participated in this study, there emerged three types of meanings of academic success in American graduate schools: 1) conventional academic success, meaning to successfully complete academic study and be professionally prepared for future career paths; 2) social academic success, including meeting others' expectations, achieving success in a collaborative way, and realizing self-actualization; and, 3) cultural academic success, meaning to succeed in American academic and social cultures as well as in today's globalized culture. Under each category, there are different themes. Under each theme, there are characterizations that are analyzed according to different cultural lenses. Table 10 lists all the themes and meanings of academic success.

Conventional Academic Success

Conventional academic success means to fulfill the requirements of the academic program and the graduate school in which the Chinese doctoral students have enrolled in. There are four different themes that emerged under the category of conventional academic success:

- To become competent in academics,
- To have research contributions,
- To complete a degree, and
- To become a professional.

For all the participants, when asked this question, to complete a degree were their first responses; to become professionals and achieve career goals came the second idea of academic success after degree completion. After the first two responses, different numbers of participants started to relate academic success to academic competence and research contributions. Although these themes are aligned with institutional concepts of academic success that could be found in the mission statements and requirements of many American graduate schools, there did appear to be

some special characterizations of each theme, which were different than regular institutional concepts of academic success. These themes and characterizations are summarized in Table 10.

Table 10 *Meanings of Academic Success*

Categories	Themes	Special Characterizations	Major cultural root/influence
Conventional Academic Success	To become competent in academics	To build up the foundation first	Long-term oriented Chinese culture
	To have research contributions	To become innovative and creative	Short-term oriented American culture
	To complete a degree	To complete more than a degree	Competition in Chinese masculine culture
	To become a professional	To become a global professional	Cultural globalization
Social Academic Success	To succeed for others	To meet others' expectations first	Chinese collectivism
	To succeed with others	To cooperate with others on a team	STEM collaboration culture
	To succeed for oneself	To realize self-actualization first	American individualism
Cultural Academic Success	To succeed in American culture	Adapting to American culture when studying in the U.S. is important because it is the dominant culture in Chinese students' immediate surroundings.	American culture
	To succeed in globalized culture	Adapting to globalized culture when studying in U.S. is essential because it is the trend for future success in globalization.	Cultural globalization

To become competent in academics - foundation comes first and important.

In order to achieve academic success, a doctoral student had to primarily understand the subjects and master professional knowledge. For those Chinese doctoral students, the prerequisite of achieving academic success was to build up a solid and systemic foundational knowledge and accumulate wisdom and experience in the graduate school. Here were some students' explanations for this: "Like our professors, being academically successful means

mastering extensive knowledge in the field and deeply understanding of your research focus.” “As a graduate student, being successful in academics means having studied all the subjects in the field and formed a well-organized knowledge structure.” “If you have mastered the knowledge and know how to go wider and deeper in your field, you are successful in your academics.”

The idea of solid foundation is substantially emphasized in educational philosophy of Chinese culture. Compared to American culture with short-term orientation, Chinese culture is long-term oriented (Hofstede, et al., 2011). Reflected in education, the long-term oriented culture consider foundational knowledge and skills fundamental to future academic achievement (Fang et al., 2013). Therefore, in Chinese culture, higher-level learning achievement, such as academic success of graduate education, can be demonstrated only after having a solid foundation (Fang et al., 2013). Academic success meant to become competent in conducting academic work, but for Chinese students, the implied meaning of being competent and successful was to primarily master a solid foundational knowledge. However, in the interview, it was interesting that degree completion and professional careers came up first, before a solid foundational knowledge in all the participants’ minds, when they were asked the meanings of academic success. It might be because these Chinese students associated “success” with “a result” in preference to “a process”. This way of conceptualizing success is nurtured in Chinese culture: the ultimate meaning of success depends on what you have achieved instead of how you have achieved it.

To have research contributions - becoming innovative and creative.

Almost every research participant connected academic success to research. For them, being capable of conducting research was a strong indicator of academic success for doctoral students. Research competence, in their mind, included a clear research agenda in both the short

term and the long term, knowing how to apply for research grants, knowing how to conduct and present research, being able to cooperate with other researchers, and most importantly, having passion for and interest in doing research. For example, one participant said “As a doctoral student, being able to conduct research under supervision or by oneself independently is achieving academic success.” To be academically successful also meant having research contributions. For the interviewed Chinese doctoral students, research contributions referred to conducting cutting-edge research that could either improve methodology or solve current issues; producing publications and presentations; having research break-throughs on a specific study; and generating new research ideas; - all of which required innovation and creation.

Being competent in research and having research contributions both carried the meaning of “becoming innovative and creative”, which was specifically stated by a few research participants. Existent research shows that, in American culture and the American educational system, “becoming innovative and creative” has always been advocated and emphasized (Zhao, 2009), because American culture with short-term orientation values more on innovative ideas, creative thinking and learning by applying (Zhao, 2009). Learning in an American environment, Chinese students were refreshed with the concept that academic success in American graduate schools require doctoral students become innovative and creative to generate their own research ideas and agendas, instead of following and fulfilling academic and research requirements.

Nine Chinese students in this study recalled their past research activities before either in China or at the beginning of their doctoral programs. They thought that they used to carry out research in a passive way. One participant who had graduate school experience in China told me, “I dared not to disagree with my professor. We [students] were very quiet at our research meetings. Only the professor commented on students’ research presentation, not other students. I

didn't even try to think about others' research in a critical way as it was not encouraged. It was no use, too". However, after studying in an American graduate school for at least one year, those Chinese students realized that they had changed to become more aware of critical thinking and more creative in research. Here is one more comment, "We are encouraged to be a critic. I like in the colloquial, students can ask all kinds of questions and not worry about others' judgment." Another participant said, "I have learned to read and analyze papers in a critical way. Professors at all classes encourage us to be creative in our research projects" Similar to results of other studies on Chinese international students (e.g. Jiang, 2010), this study also found that Chinese international students' conceptions and thoughts, to a large extent, were influenced by American culture. As manifested in this example, Chinese international students became more aware of creativity in generating research contributions and achieving their academic goals.

To complete a degree – to complete more than a degree.

When those 19 Chinese doctoral students were asked what academic success meant to them, all of them thought academic success was "having earned a PhD". However, not all the interviewees considered degree completion a complete indicator of academic success. Respondents defined academic success as a complex concept, encompassing many aspects. For example, 6 out of 15 Chinese students in the first round of interviews specified it as a "bi-product" of academic success. One interviewee explained this, "I don't think getting a PhD is [an only indicator of] academic success. It is a bi-product. If you have research products like published papers, you will be granted the degree eventually". Another interviewee explained it in a similar way, "My adviser told me that once I had three research papers published, my dissertation committee would pass me and give me the PhD. So completing the degree is only a bi-product of academic success".

A PhD as a “bi-product” of academic success indicated Chinese students’ belief in education - an academic degree was just a stepping stone to future success. This belief is deeply rooted in Chinese traditional philosophy of education, as an old saying illustrates: “To be a scholar is to be the top of society” (Chinese Idiom Dictionary online). Therefore, academic success for Chinese students, first and foremost, was to complete a degree; however, there is more to achieve to be successful after the degree completion. The degree was a start step on the path towards greater success, such as a higher academic and social status. This concept implied that there were more things Chinese students felt obliged to complete to achieve academic success, than only the degree.

Similarly, a majority of Chinese students considered degree completion as “a minimum requirement” for achieving academic success, not tantamount to it. Whether academic success could be equated with completing a PhD in a certain time frame was another related topic discussed in the focus group. Completing a PhD within 5 to 7 years was agreed as an appropriate time frame by the six group members. However, 3 out of 6 students in the focus group mentioned a shorter period. For example, one student felt that “obtaining a PhD can only be called a mark of success if it is earned in a relatively shorter time than usual.” Another student remarked that “I think an important indicator of academic success is to meet the requirements of the program at a faster pace than regular students. One must make extra efforts to exceed others.”

This idea of academic success as “to complete more than a degree”, or “to complete a degree at a faster pace than other students”, involves the concept of “competition”. As indicated in Hofstede’s study (2011), Chinese culture is masculine in nature, which emphasizes competition. As such, the concept that completing a degree was a minimum requirement or completing a degree at a faster pace was an impressive notion of becoming competitive. Chinese

students in this study wanted to be more competitive than others in order to achieve success. In addition, this characterization manifests long-term orientation of Chinese culture that Chinese are willing to sacrifice short-term interests for long-term benefits and future gratification (Hofstede, 2007): In this case, Chinese students will work desperately to complete a PhD in a term as short as possible, denying leisure time and other comforts, so that they can enjoy fruits of their work and obtain the long term benefits of success in the future.

To become a professional – to become a global professional.

For the interviewed Chinese doctoral students, another key part of the meaning of academic success was to become a professional and work in their chosen profession after they have earned PhDs. A majority of students simply expressed “Getting a PhD and a job is what demonstrates academic success”; “The graduate school prepares us for becoming professionals. So, if we get a job working in the field and become professionals, we have achieved academic success.” According to the interviews, there was no limit to location or restriction on professional possibilities for those Chinese students working as professionals. Academic success for them, accordingly, meant to become a global professional no matter it be in the US, in China, or in other countries around the world. Also, academic success was not only seen as becoming a professional in academia, but also working in the industry, in the government, or other fields, too.

In addition to a global workplace and a global professional field, “academic success as a global professional” also meant “to become a transnational elite”. As stated in previous sections, in Chinese culture, education is an acknowledged approach to reach to the top of the society. A higher educational degree usually leads to a better professional job with a higher social status. For Chinese students in this study, therefore, they believed that success in doctoral education in

the US meant to become an elite in the world. In the group discussion, one student talked about the privilege of studying in American graduate schools, “America is the center of computer science in the world. Once I have a PhD from here [an American graduate school], I will become a world-class talent. I can look for jobs in other countries with an American degree”. In those students’ mind, American graduation education was the best education in the world and it produced elite professionals with global competence.

The conception of “academic success is to become a global professional” could be interpreted from the background of these Chinese students who grew up in the increasingly globalized culture and experienced cultural globalization (Yu, 2008). Because of such background, they were open and acceptable to different cultural environments, wherever their occupation was located. It might as well be related to the internationalization and diversification of the STEM fields (Anderson et al., 2011). The increasing diversity in faculty, staff and graduate students in the STEM disciplines in the US made Chinese students in the field feel that they too should become global professionals.

However, due to their limited immigration status, Chinese international students have to be flexible in landing a professional job anywhere they can. Aligned with Yan and Berliner’s research (2013), Chinese international students’ stressors, including the immigration stressor, affected their conceptions and choices of working as professionals. Because of this limitation to obtain employment in the US, they considered taking whatever professional jobs they could get in the world, even by sacrificing their preferences, such as job locations.

Academic Success from a Social Perspective

The 19 Chinese students in this study were advanced doctoral students who had experienced living and learning in American culture for at least two years. During this time, they

also formed new social meanings of academic success. In addition to the conventional meanings of academic success presented above, Chinese international students considered academic success a social concept as well, which include three meaningful themes from a social perspective – “success for others”, “success with others”, and “success for oneself”. The three social meanings of academic success embodied both American and Chinese cultures, as well as other global cultural aspects.

To succeed for others.

“To succeed for others” meant making efforts to succeed in order to meet others’ expectations, including expectations from parents, significant others, family members and the people in the community. As one participant told a story, “It’s funny I know a guy. Once I asked him why he came to the US for graduate school, and he said he wanted his girl’s family to be proud of him. And you know, if he got a PhD in the US, they would therefore think him a good match for their daughter.” Another kind of expectation was from the family, “My family and my friends all think it’s so good to earn a PhD in the US. The admiration from them, you know... I always tell myself I can’t fail them. They expect me to have a good job with a PhD.”

In addition to meeting others’ expectation, “academic success for others” was also associated with obtaining recognition from people in the professional field or broadly in the community. Here are two examples of the professional recognition identified by Chinese students:

My idea of academic success is from my peers. Being influential and important among peers in the field is considered success in academics. So I think in general, [academic success means] you get recognition or are accepted by others for what you have done in your academic field. — Wen

Once you are recognized in your professional field, you will be granted the PhD and you will be offered a job, so academic success is getting recognition. Getting recognition was represented by academic awards, publications, invitations to be keynote speakers at professional conferences, as well as acknowledged by other professionals. — Nan

No matter if academic success was to meet others' expectations or to obtain recognition, the social meaning of "success for others", for Chinese international students, was imprinted more strongly by Chinese culture than American culture, as the former was more collectivistic and the latter was more individualistic (Hofstede et al., 2011). In collective Chinese culture, real success comes from harmonious social relations, defined social roles, ruled obligations of each role, and the fulfillment of obligations to each other. In this study, Chinese students had multiple roles as professional students, adult children, life partners, instructors, researchers and others. Accordingly, success for them, was to fulfill the obligation of each role that they played in daily life. Even for academic success, they thought about their social roles and included social meanings with academic success. In contrast to individualism, the role of being oneself became less important than other roles in the culture of collectivism.

To succeed with others.

Another social meaning of academic success was "to succeed with others", which primarily referred to the success achieved by collaborated efforts instead of individual efforts. Advisers, peers and other professionals in related fields were considered influential and important people for these Chinese students' academic success in graduate schools. For example, two doctoral students from biology programs commented, "In my field, almost all the publications are multiple authors. It is very important for me to collaborate with others to publish papers." Another said, "Most of the time, I hang out with my lab mates and we talk to each other

about our research project. It is very helpful we are under the same research adviser and conduct research in a team.” Therefore, to succeed with others conveys that academic success is achieved in part by cooperating with related people.

It also had a secondary meaning of successfully developing social relations in the academic field. This concept of collaboration and socializing was stressed by other researchers too, such as Adrian-Taylor, Noels, and Tischler (2007) and Harrington (2003), whose studies pointed out the important role that developing social and collaborative relations played in international students’ academic success. However, Harrington’s study (2003) found that Chinese international students’ network were predominantly student friends. Also, Chen (2003) pointed out Chinese international students rely on each other much more than any other resource. In contrast, Chinese students in my study reported that they tried to socialize with professors, American peers, and scholars from other disciplines, as well as Chinese compatriots, in order to enlarge their professional networking so as to achieve academic success.

The concept “success with others” could be interpreted as originating from the Chinese collective culture, which reflects the belief that success is built up on having harmonious social relations. As stated in the previous theme “to succeed for others”, harmonious social relations require everyone faithfully play their different social roles. In order to achieve academic success, Chinese students feel obliged to fulfill their responsibilities as students, peers and co-workers. In order to fulfill those roles well, Chinese students have to collaborate with others through socializing and communication. In addition to this Chinese collective cultural influence, “to succeed with others” was also influenced by the culture in the STEM fields, where collaboration, interdisciplinary cooperation and teamwork were highly emphasized. This finding agreed with findings in previous research that networking and collaboration were needed to succeed in the

STEM fields (Anderson et al., 2011; Markert, 1996). Although the collectivism in Chinese culture is different from the collaborative culture in the STEM fields in the US, both collective spirits work on well for Chinese international students studying in American STEM programs. Students in this study didn't show that they realized the overlap of the two collective spirits, but they did mention that they liked the collaboration and felt very accustomed to the collective culture in their department. For instance, Guang, who worked as a research associate in China before, told me, "I like going to the lab every day and working with my lab mates. It's like what I did in China". This kind of culture familiarity benefits Chinese international students in adjusting to a new environment and pursuing academic achievement.

To succeed for oneself.

When asked for ideas and experiences of what academic success was in the US, research participants recalled their application to and beginning stages of doctoral studies. Most of them had no idea what academic success was at that time. What they knew was to do what others do, such as to attend academic conferences, as professors and peers do; to conduct certain research if it is said to be cutting edge; to teach undergraduate courses as other doctoral students do; and to apply for research grants, as others say this is necessary for them to succeed.

After studying in an American graduate school for a period of time, however, Chinese international students in the middle or late stages of doctoral programs (Ampaw & Jaeger, 2012), found specific goals to pursue for themselves, instead of following the example of others. Some of them discovered their own academic and career paths to succeed; and some discovered "themselves" and which things best fit into their paths to achieve academic success. Here is an illustration of "discovering oneself":

Before I came to the US, I didn't know a PhD was to do research. I just thought that a PhD was good. I only knew classes were important and publishing with your adviser was important too. Now I know more about myself and have become clearer in my research plans and future plans [for academic success]. — Fei

Different than “success for others”, research participants indicated that academic success was also “success for oneself”. It meant developing a successful self, or to complete self-actualization in American graduate education. One participant pointed it out by saying that “The importance of going to graduate school in the US is to grow in a round way as American graduate schools offer more resources and opportunities for us to discover ourselves [than Chinese graduate schools]. Also, there are multiple cultures and cross-cultural learning and living experiences for us [international students] to grow and succeed”. Clearly, Chinese students expressed their appreciation of American graduate education and its advantages over that offered in China. These opinions also demonstrated Chinese international students' transformation within American academic and cultural surroundings.

Academic success as personal success also meant to satisfy one's own expectations rather than others'. It is to make oneself happy first instead of putting others' satisfaction before your own. This social meaning of academic success as successful self-actualization emerged under the influence of American culture that focused more on individualism and indulgence (Hofstede, 2011). People tend to have loose ties among group members in individualistic culture and everyone look after their own interests first.

In this study, Chinese students' process of transformation involved discovering oneself and realizing the importance of self-actualization; this supports Hofstede's cultural analysis of American culture as individualistic. It also indicated the more indulgent culture in the US,

whereby people tend to give more priority to gratifying human desire and living a happy (more indulgent) life while also working to achieve their goals. Whereas in the more restrained Chinese culture, people believe more strongly that human desires need to be curbed during the process of pursuing success. This finding also supports results from other studies that Chinese international students changed and adapted to American culture while learning and living in the US (e.g. Jiang, 2010).

Academic success from a Cultural Perspective

In addition to reporting academic success with conventional/institutional and social meanings as illustrated, Chinese students in this study also conceived of it as being imbued with cultural meanings. Thus, for Chinese international students, academic success was defined not only as success in studying and socializing with others, but in addition, success in adapting to both American and globalized cultures.

To succeed in American culture.

For international students, adapting to American culture is essential for their success, because they are learning and living in a culture that is very different from their home culture. Accordingly, Chinese international students in this study deemed that academic success also meant successful adaptation into American academic and social cultures. As one research participant mentioned, “To succeed in American graduate schools, we have to know the rules to win the game. If I am accustomed [to American culture], I can say that I am successful here, at least partially.” Fei commented in the group discussion, “America has the best graduate education. That’s why I chose to study here. If we want to learn the best from here, we have to know American culture and do as Americans do. I have learned this since high school. My

English teacher explained the importance of culture when we were learning the English saying – when in Rome, do as the Romans do.”

We could tell from these comments that Chinese students realized the importance of adapting to American culture even before they came to the US. This finding was congruent with characteristics of the new generation of Chinese international students illustrated in Chapter 2: compared to the older generation of students studying in the US, today’s Chinese international students were better equipped with the English language and cultural knowledge (ERIC Education, 2013). This finding also supported results from previous research on Chinese international students’ adjustment in the US. For example, it was aligned with the findings in Zhang and Xu’s study (2007) that Chinese students worked very hard to adapt to American culture.

In the literature of international students, adaptation to the host culture was substantially researched (e.g. Jiang, 2010; Lin, 1998; McClure, 2007). However, this study is the first in which international students themselves emphasize its importance and indeed include it in their overall conception of being academically successful. This finding demonstrated Chinese international students’ high level awareness of culture as a factor in their studies, which could be explained by their background of experiencing the cultural globalization of China (Yu, 2008) and their cross-cultural experiences in the US (Zhang & Xu, 2007). By growing up in an increasingly globalized culture in modern China, these Chinese international students became more familiar with and open to accepting/adapting to Western culture, particularly when matriculating in an environment where American culture is the dominant culture.

To succeed in globalized culture.

Another cultural meaning of academic success found in this study was to successfully survive and thrive in today's globalized world by appropriately responding to and adapting to different cultures. American graduate schools, especially the STEM departments, provided an international environment for scholars from all over the world to communicate with each other. Research participants in this study were highly aware that American society was a multicultural society where there were people from different cultural backgrounds. One participant, Zhou commented on the academic culture of the Department of Computer Science, "The majority (of students and scholars) in our program are Indians and Chinese, very few American students. I, kind of have to know or already unconsciously known some Indian culture, besides American culture. You'd better understand English with Indian accent." To succeed at living and learning in such a multicultural environment as the STEM fields of American graduate schools, not only meant to succeed in adapting to American culture, but also meant to succeed in adjusting to multiple cultures or cultural globalization (Makhlouf, 2014).

"The US is the center of science. All the famous scientists get together in the US to conduct research. To succeed here is to succeed in the world." "We have to understand English with different accents. We have to compete with people from India, whose English are always considered much better than us." "If we succeed here with such diversity, we can succeed in the globalized world. So after graduation, I can go to any country in the world as long as they are conducting math research in English." Adaptation to a more globalized culture is a new concept which my study indicated is an important aspect of academic success for Chinese graduate students in the US. The formation of this concept could be attributed to Chinese students' experiences in cultural globalization, American internationalized higher education, and the

increasingly globalized living and learning context. This novel concept also resulted in Chinese international students' unique acculturative strategy that is explained in the following section.

One fundamental aspect of globalization process is about “the space flows”, which generates international migration of talents and transnational elites (Castells, 2000). Within the process of globalization, Chinese international students, particularly those doctoral students studying in the STEM fields in the US, are potential transnational elites who can migrate and work everywhere in the globe with their international elite education. Both the globalized culture that they have experienced before in China and that they are experiencing in the US have endowed those students with a conception of academic success from a cultural perspective: to succeed in globalized culture and become successful transnational elites.

In summary, for Chinese international students studying in the STEM fields of American graduate schools, their conceptions of academic success were deeply involved with social and cultural meanings in addition to conventional/institutional meanings. Exposed to plural cultures and experience in increasingly globalized cultures, they conceived academic success a sociocultural concept that not merely meant to succeed in academics, but also meant to succeed in acculturating oneself to both Americanized and globalized cultures.

Factors that Influence Academic Success

Before those Chinese doctoral students were asked how to achieve academic success in American graduate schools, they were first asked to talk about what factors influenced their achievement of academic success. Coping with those different factors, they came up with strategies to achieve their envisioned academic success. There were two major influences identified in this study. One influence was intra-personal factors, or individual characteristics and experiences, including personal intelligence, diligence, determination/persistence, and cross-cultural adaptive attitudes, skills and experiences. The second influence was interpersonal

factors, including influences from the academic environment, interactions with academic advisers, peers, family members and others.

This finding confirmed Ward, Bochner and Furnham’s model of the acculturation process (2001), which I adopted, modified, and used to construct the conceptual framework of this study (Table 4 on page 41). The individual characteristics and past experiences identified in my study corresponded to “characteristics of the person” in the model of acculturation. The environmental determinants in my study corresponded to “characteristics of the situation” in the model (Ward et al., 2001, p. 44). Similar to the process in the model, both categories of influences mediate individual students’ acculturation process, together with cultures from societal level in my study. According to both the model of the acculturation process and the conceptual framework of this study (see Table 4 on page 41), Table 11 summarizes Chinese international students’ conceptions of intrapersonal and interpersonal influences on their academic success, which are illustrated in detail in the following sections.

Table 11 *Chinese International Students’ Conceptions of Influences on Academic Success*

Interpersonal (situational)		Chinese International Students’ Conceptions of Influences on Academic Success (Individual Level: individual attitudes, characteristics, and experiences) (intra-personal)
Cultural Level	American culture	It is important to actively learn American language and culture as it positively influences academic success in the U.S.
	Chinese culture	It is necessary to keep learning Chinese language and culture as it positively influences academic success of Chinese students.
	Globalized culture	It is important to learn various language and cultures due to the globalization.
Socio-institutional Level	American graduate schools	Supportive academic and social environment positively influence academic success. Therefore, it is important to academically and socially adapt to American graduate schools and STEM disciplines.
	STEM fields	
	Social groups	Advisers, faculty, staff, and family positively influence academic success. Therefore, it is important to socialize with those people.

Individual Attitudes, Characteristics, and Experiences

When asked what influenced their academic success, Chinese students first thought about themselves. In their mind, whether they were intelligent, diligent, determined, persistent or good at communicating with others, to a large extent, decided whether they could succeed in academics.

First is about yourself. You should know how to self-control. You should contribute a lot of time doing research. You don't have to be very smart, but you should have your own ideas so that you can contribute to the research. — Zhou

You should be determined and hard-working. You have to be consistent doing your research and completing your program for many years. Hard working is not a one-time thing. — Wu

I don't have any strategies to achieve success. Doing research is lonely, so "me" factor is the big factor. If you read literature, figure out a problem, dig it deeper, design and do a study, present your research, and get it published, then you're considered academically successful in my field [Math]. — Wen

It was important for Chinese students to be diligent, determined and persistent to achieve success. This finding was supported by existent research on Chinese international students' achievement (Wang, 2004), which indicated that the Chinese culture focused on long-term orientation and restraint. These two cultural characteristics expected people to concentrate, work hard, persevere, and endure hardship in order to succeed (Li, 2012).

Related studies found that personal cross-cultural attitudes and skills were vital for international students' academic achievement, which included personal attitudes towards learning languages and cultures, and skills of communicating and socializing with the

surroundings (Smith & Khawaja, 2011; Zhang & Xu, 2007). Chinese international students in this study shared the same opinions as these findings. They all admitted the importance of knowing English language and American culture in succeeding in the US. However, when someone pointed out he was learning Chinese National studies rather than English, other research participants echoed and stressed the importance of the Chinese language and culture, as well.

Here are some comments on it: “I’ve never stopped learning English. I am learning English all the time. It is important as when you want to express yourself in public, you need good English to communicate.” “Well, for me, I started reading Chinese masterpieces and learning Chinese philosophy in the US. I am always interested in Chinese national studies, but I didn’t have time to study it when I was in China as I had to prepare for all the tests to study abroad.” “You’re right, knowing the Chinese language and social approaches are important too, especially if you are going back to work [in China]”. Those comments indicated their new perspectives of language and culture, particularly of Chinese language and culture, when Chinese students spend a longtime living overseas. This finding echoed a phenomenon shown in some studies that Chinese sojourners [including Chinese international students], who live among different races, become more enthusiastic about the Chinese language and culture than their countrymen who have remained in China (e.g. Funnell & Yip, 2014).

In addition, participants all agreed on the significance of learning a second foreign language in the U.S., which was considered useful for their future professional development in our globalized world. Participants’ positive attitudes and experiences in learning English and American culture, Chinese language and culture, as well as other languages and cultures, could be aptly explained by cultural globalization that they experienced in China (Yu, 2008) and also

by the more globalized learning and living environment in the U.S. where they currently are (Albatch & Knight, 2007). However, the positive attitudes and experiences in learning languages and cultures reported by my informants disagreed with results from some studies that reported Chinese students felt a lot of stress when facing English language and American culture. For example, Huang and Brown's study in 2009 showed Chinese ESL students considered American language and culture as one of the biggest challenges they were facing. In my study, however, those Chinese students had already passed the initial stage of language adjustment a long time ago, and they did not mention it as a huge stress for them at the later stage of graduate school. Instead, they showed the importance of language communication skills. Meanwhile, this finding confirmed the importance of individual characteristics in the acculturation process, which was highlighted in Berry's acculturation framework (2005) and Ward and her colleagues' acculturation model (2001).

Academic and Social Surroundings

Participants expressed that the academic environment of American graduate schools and universities positively influenced their academic success, as it provided diversity, interdisciplinary collaboration and academic reputation.

Another thing the university brings to me is diversity. I like our university. It's a large university with students from diverse backgrounds. Meeting different people brings different perspectives and broadens my mind. Mentioning about this, you have to be open-minded and tolerant of different ideas. — Qiang

In my case, a lot of students from different background work together on one project. The cooperation between us is very important (to academic success). The interdisciplinary

communication is important too. This kind of environment is encouraging and motivating for my academic success. — Guang

So, university as a whole is an influence too. The university's reputation can bring you a lot of job opportunities. As we talked earlier, if getting a job is one criterion to measure academic success, then a university's reputation is definitely influencing your success in getting a job. — Xian

Participants in this study had positive attitudes towards their academic surroundings. This finding, however, was incongruent with some studies in which the STEM academic culture itself was found to be problematic. For example, Christie's study (2013) pointed out the loose connection between faculty and students in the STEM disciplines. Therefore, we could speculate from this study that positive attitudes and appreciation towards the learning environment in the U.S. could be one important factor related to Chinese international students' academic success in the U.S. The positive attitudes included perceiving diversity and collaboration as positive features instead of difficulties and perceiving a university's reputation as something to be leveraged for success.

In addition, social interaction in such an academic environment was also considered important for Chinese international students to pursue academic achievement. Among the academic community, academic advisers played a crucial role in Chinese students' academic path to success. Here are some elaborations: "The most influential [factor] is your adviser. If you look at the history of science, successful advisers usually have successful students." "For PhD students, the most influential person is adviser. You and your adviser work mostly tightly in the research." "Your adviser or supervisor is the key: if your adviser is famous and know a lot of people, you can get a job easily." "Your adviser needs to be ambitious, supportive, encouraging

and passionate. I have a good adviser who cares about me and my research. I am not the labor working for him. He includes me to be part of the research. Sometimes, he is pushy. But I think that works in a positive way for me to succeed.”

In accordance with research on doctoral advising (e.g. Fedynich & Bain, 2011; Kuttig, 2012), this study found that advisers did play a very important role in doctoral students’ academic success. For Chinese students, advisers are like their masters and fathers according to Confucius culture. In China as a Confucian culture, the large power distance between faculty and students defines the roles of teachers as authorities and models for students to respect and follow (Zhao, 2007). This could also possibly explain some participants’ comments on their advisers, such as “Sometimes, he is pushy. But I think that works in a positive way for me to succeed.” Therefore, it was found from this study that advisers were particularly important for Chinese international students, and the way in which Chinese students respected and followed their advisers affected their learning and achievement, too.

This concept was congruent with findings from existing literature that the academic adviser is one of the key influences that impact international students’ academic success (Bain, Fedynich, & Knight, 2011). However, contrary to previous studies, research participants in this study all reported positive aspects of their advisers and advising experience. Also, this study identified multiple roles that advisers played in students’ pursuit of academic success: academic advisers, mentors, trainers, masters, friends, and colleagues.

The positive attitudes and multiple roles of advisers can be explained in relation to the cultural variations between China and the US as well. Deeply embedded in Chinese culture with its Confucian philosophy, Chinese students respect advisers as authorities and follow them as models and masters (Fang et al., 2013). Influenced by American social and academic cultures,

Chinese international students also take advisers as their colleagues and cooperative partners in research. In the individualistic American culture, everyone is considered as equal. Therefore, in American graduate schools, doctoral students and professors are colleagues. They are also partners who collaborate to conduct research because in American academic culture, especially in the STEM fields, collaboration is highly valued among all the scholars including professors and students (Markert, 1996).

Not only advisers, but faculty, staff, peers, friends, and family members also influenced how Chinese students achieved academic success. “Especially in the first two years when I just came here, Chinese students from the Chinese Scholar and Student Association (CSSA) helped me a lot in my living. Though it is not directly related to academics, it’s important for me to focus on my study without having living difficulties.” “I have learned a lot from my American peers: their serious attitudes towards classes, which surprised me, especially in the first two-year course work. They did homework very seriously. They had discussions almost every time after class.” “Both of my parents are science teachers [in China]. When I have some ideas that not ready yet to share with my adviser, I will talk about them with my parents instead. You know, as a scientist, you spend a lot of time thinking of ideas. So I talked about my ideas with my family a lot.”

This finding was confirmed by other studies on social support of international students. For example, in Zhou, Frey and Bang’s study (2011), relationships with professors and peers, as well as family concerns, all affected Chinese international students’ adjustment to US graduate schools. Therefore, it could be concluded that maintaining a strong relationship with different people was another attribute to Chinese international students’ academic success. Maintaining a strong relationship with others manifested the philosophy of harmony in Chinese traditional

culture. Alternatively, it came from “Face Culture”, which means that having harmony saves everyone from embarrassment or shame, which is extremely important in the emphasis on social relationships in Chinese culture (Leung, 2010).

Chinese students in this study considered that they had a professional academic environment and pleasant social surroundings in this American graduate school, which included supportive faculty, helpful staff, friendly peers and an understanding family. These positive conceptions were beneficial for their academic success and defined their demeanors to achieve academic success. Despite such positive academic and social environments, however, Chinese international students still felt that social adaptation to American culture was more difficult than academic adaptation. For instance, one participant said, “most of the time, I hang out with Chinese friends. We [American and Chinese students] can be co-workers, but it is difficult for us to become close friends”. This result agreed with some previous studies on international students’ academic and social integration, indicating that social adaptation was always more difficult than academic adaptation for international students (Zhao et al., 2005). One explanation for this was that Chinese students committed more time to academic work than into socialization (Zhao et al., 2005).

Strategies for Achieving Academic Success

Under influences from individual, environmental and cultural variations, Chinese students adopted various strategies to cope with those influences to achieve academic success. Corresponding to meanings of academic success, strategies of achieving academic success generated from this study were classified into three different categories with these themes: academic strategies, social strategies, and cultural strategies/acculturation. Categories and themes of strategies are listed in Table 12.

Table 12 *Conventional, Social and Cultural Strategies for Achieving Academic Success*

Categories	Themes	Related Research
Conventional Academic Strategies	Working hard Balancing life and work Being persistent and creative	Cultural dimensions of both American and Chinese cultures
Social Strategies	Cooperating with others Developing social and communicative skills Keeping harmonious relationships with others Making best use of resources Seeking help	Sociocultural adaptation in acculturation process
Cultural Strategies/ Acculturation	Americanization Globalization Individualization	Acculturation attitudes and strategies

Conventional Academic Strategies

In order to achieve academic success, Chinese students must work hard and give great effort to fulfill the requirements of their academic programs and the graduate school. *Working hard* was the top important strategy emphasized by all the research participants. Here are some specific descriptions from the interviewees: “I work very hard, six days a week. And I think about my research every day.” “I come to the lab at 9am. Go home around 7pm. Sometimes, I have to come back to work after dinner. When I am at home, I do some readings related to the research.” “On average, I work ten hours a day. I have been in graduate school too long [six years]. I want to graduate very soon, so I can work five days a week or six days a week.”

Chinese culture with its long-term orientation and emphasis on restraint values and promotes diligence, concentration and endurance (Zhao, 2007). Much research on Chinese students reported that their hard work and strong work ethic contributed to their achievement (e.g. Zhou et al, 2011). However, participants in this study also expressed an important strategy, which is to *balance “hard work” and “happy life”*. “We have to stay healthy to endure all the research activities, so we should keep a balanced and healthy life.” “Always stop and self-reflect.

Find a direction to work on. Stop working and think about whether you are on the right track.” “One thing is to schedule your time accordingly. My priority goes to work on my research and stay healthy.” This strategy had an imprint of the more indulgent American culture that prioritizes happiness. Although this is very different from Chinese culture where people tend to sacrifice happiness and immediate satisfaction for future success, Chinese students in this study combined both cultures.

Being persistent, passionate and creative in research was a third academic adaptation strategy that Chinese students addressed, which was also formed from by combining both American and Chinese cultures. Chinese culture emphasizes perseverance and endurance to gain achievement as it is long-term oriented. For example, one student said, “Doing research is a lonely and long process. So from the inside, you have to be strong-minded. You have to face and try to overcome the difficulties, never give up.” In contrast, in the short-term oriented American culture, creativity is more strongly valued and personal satisfaction is prioritized. This explained one student’s idea, “I think working happily is a key to academic success. You should have interests in doing research in your area. Otherwise, you can only get a degree but not the real success.”

In my study, the conventional academic strategies that Chinese international students adopted to achieve academic success indicated Chinese students’ integration of their home culture heritage and their host culture preference. These strategies also indicated some aspects of Chinese international students’ transformation and acculturation. Such kinds of integration, transformation and acculturation were also manifested in their social and cultural strategies too. This finding supported the transformation of Chinese international students in Wang’s study (2011).

Social Strategies

Cooperating with others referred to working with advisers, professors, peers and other researchers to conduct research, which was a significant strategy mentioned by every interviewee. “Teamwork and collaboration is necessary in our field (biology). There are five students in our lab. We are under one research professor’s supervision, doing a project together. We have meetings together every week. I like our team. It is so important for my learning.” “The interdisciplinary collaboration is very important. For example, I went to the Computer Science department to ask for help. One professor there recommended some articles for me to read and one doctoral student helped me with the modeling. It was very useful to cooperate with people from different academic background.” The strategy of cooperating with others was closely related to the highly collaborative culture in the STEM field. As indicated in Markert’s article (1996), collaboration and teamwork are highly needed in the STEM disciplines.

Making the best use of resources in the surroundings is another social strategy to achieve academic success for Chinese international students. All the research participants were very satisfied with resources provided to them by the university, the graduate school and the department, especially when they compared them to the resources available in China. These resources included research facilities and equipment, opportunities for meeting famous scholars and other professional development channels. Chinese international students cherished all the available resources in the US that were difficult for them to access in China and they tried to make the best use of them.

Make best use of resources here, including people and equipment. Our department is very supportive. I will directly send out emails if I need the data, for instance. If I can’t, I will ask my adviser for help to get resources from some professional organizations. — Guang

Resources and equipment are very good here and easy to be accessed. You are encouraged to use these resources. Not like that in China, you have to know a certain way to purchase or use the equipment you need. — Ye

For engineering PhD, pre-training of necessary engineering skills is needed, like computer aided design tools, and hands-on experience on hardware and equipment. Such corresponding training is widely offered in US industry through internship. This is quite different from the PhD study in China where students are complaining about lack of industry intern opportunities. So I grasped the opportunity and I will do an intern job next summer. — Ke

“I have more opportunities to contact famous scholars in my field. I want to talk to them. They are the valuable resources for me. I have learned that I can reach them and communicate with them. We should participate in all kinds of academic activities including talking to VIPs so as to develop ourselves in academics. — Jie

Seeking help was an adopted strategy for Chinese international students to solve problems in their daily life in the US. Because there were all kinds of people and services for students, on and off campus, making the best use of those resources to solve the problems became an effective strategy that Chinese students adopted to achieve academic success. From student security to research grants, there was always a way to solve problems that a student might have. Therefore, all the research participants agreed that knowing how to seek help and support was important for them to overcome difficulties.

I seek help from students with experience, who can bridge the gap between professors and students. Those veteran students who stayed here longer can give you help from different perspectives. Some professors assume that students know a term, for instance,

but in fact, students from different backgrounds may not all know it or understand it. However, a veteran student at this time can give you guidance. For example, give you a paper to read to understand what the professor was talking about. — Ya

This strategy again confirmed previous findings from this study that Chinese students consciously employed strategies of socializing with others and succeeding with others. They believed it was important to network with peers, including peers who were at different stages of their programs. They possess positive attitudes and take active steps to seek help to advance their opportunities for academic success.

Keeping a good relationship with “everyone” was to create a harmonious atmosphere. All the research participants emphasized the importance of maintaining strong relationships with their advisers, professors, staff, peers and friends. They tried to create a harmonious living and learning environment with different people. One interviewee explained, “Keep a good relationship with your advisers and other faculty members, and let them know you are devoted into your research. It’s important as you need the right person to consult and ask questions.” However, generally, Chinese international students stayed closer to Chinese peers and friends than Americans, as they felt it more difficult to socialize with people from non-Chinese cultures. To socialize with different social circles, Chinese students were using different strategies to maintain relationships. For example, one participant said, “I prefer to directly ask Chinese friends for help. I think that it’s easier for us to communicate with each other. When I have to communicate with Americans, I use emails instead of talking to them directly.”

Here we can see the different strategies that Chinese students took to communicate with different groups of people with different culture backgrounds. Only by doing things in this way could they make everyone feel comfortable in daily interactions, which preserved the

harmonious relationships they sought. This strategy also indicated Chinese students' cultural awareness, developed through experience in an increasing globalized culture.

Developing better communicative and social skills was another strategy that Chinese students adopted to obtain social recognition in American communities. As international students, Chinese participants realized their deficit in language and culture. They were trying very hard to learn English and American culture in daily life and apply them to their academic field and social life.

[The] second [strategy] is to improve my communicative skills including English and social skills. When I came here, I grasped every chance to talk to Americans. We have social Fridays in our department. I am one of the organizers. We have two students presenting their work in the lab first, and after that we go out to eat together. See this is the social aspect of academic success I mean. It is essential and we should be involved in.

— Qiang

I think my strategy is to talk to professors and peers to improve communicative skills and obtain information that we don't know as Chinese. For example, they tell me useful websites to purchase textbooks. Also, I have learned how to present my research in a more effective way by talking or presenting. — Bing

Some Chinese professors are very successful academically. Except the reasons I mentioned above, they know people. They go to conferences and meet other professionals. They have good communicative skills; they present their research and make themselves known among others. This is very important, especially for Chinese students in the US. So we should learn from them about the communicative skills. — Bo

Consistent with social meanings of academic success perceived by Chinese students in this study, being skillful in socializing and communication became effective strategies for them to develop in order to achieve their goals. Those strategies became particularly important when they need recognitions from American society, such as to locate a job or to win a scholarship.

The above stated social adaptation strategies confirmed the social adaptation strategies of international students found in previous research (e.g. Zhang & Rentz, 1996). Although those strategies were not new to the existing literature, it was new to see Chinese students' positive attitudes and active participation in improving their social network and communicative skills, rather than characterizing the former as stressors only (Yan & Berliner, 2013). In fact, they held much more positive attitudes and adopted more active strategies than those reported in previous research (e.g. Chen, 2003; Masuda et al., 2009). For example, in previous studies, Chinese international students were less likely to seek help or utilize resources (Masuda et al., 2009). But in this study, Chinese students sought help from various resources. Also, participants in this study realized the importance of social integration and expressed that they wanted to improve their social skills since they were necessary and helpful to their academic success in the STEM fields (Lee & Buxton, 2011).

Cultural Adaptation/Acculturation Strategies

Aligned with cultural meanings of academic success — to succeed in adapting to American and globalized cultures — Chinese international students recognized the inseparability between acculturation and academic success. Accordingly, they adopted acculturative strategies in addition to academic and social strategies. There were three types of acculturation strategies generated according to Chinese students' acculturation experiences: Americanization, Globalization and Individualization. Those cultural adaptation strategies were related to Chinese

students' experience of growing up in a globalized culture. They accepted, integrated and tailored different cultures that they confronted, in their own understanding and demeanors.

Americanization.

Six out of nineteen Chinese students who participated in this study thought they adopted an active way of acculturating into the host culture, in order to pursue academic success. They possessed a US-centered attitude, regarding the US as the birthplace of academic success in the STEM fields, and that's also the reason why they chose American graduate schools to pursue their PhDs. With this belief, they adopted strategies of assimilating into American culture and society. In Berry's Acculturation theory (2005), assimilation was defined when individuals did not wish to maintain their cultural identity and sought daily interactions with the dominant culture. However, in this study, I called this kind of strategy "Americanization".

First, it was because the dominant or host culture was American culture. Secondly, different than Berry's definition, Chinese students in this study did not wish to completely give up their Chinese identity. They were willing to merge into American academic and social culture and follow American customs and behaviors, while keeping the Chinese culture in their heart. They had several reasons: "If you're Americanized in academics, you will be accepted and understood by others, which is beneficial to your academic success." "Even scholars from the Europe come to the US to study and research, as American culture is the best culture to nurture academic success, especially in the STEM." "Adaptation to American life makes me feel more comfortable. This kind of adaptation makes me feel no difference than other Americans most of time, except the specific situations that indicate nationality status."

Specifically, Chinese international students who adopted the strategy of Americanization were speaking American English, learning American norms, mimicking American behaviors and

immersing themselves into American context with the least Chinese involvement. “Do what Americans do. For example, they use Linked-in to connect to other professionals and look for jobs. I am using that too to have an online professional network.” “I have learned from Americans how to raise questions, how to participate in discussion, and how to say no or disagree with professors. I am encouraged to ask questions or express myself here. All of these are American ways that I have learned.” This group of Chinese students believed that becoming Americanized was the best way for them to achieve academic success in the US.

However, it is difficult for students in some STEM programs to adopt this strategy where there are a predominant number of Chinese international students. In the group discussion, one student told us a story, “The adviser is Chinese. All the students in the lab are Chinese. It is hard not to speak Chinese when we are together. So the professor had to set up rules for the lab. The first one is NO CHINESE.” However, even within this situation, no participants denied the positive influences that the American academic and social environment had exerted on their academic success. This again offered evidence that Chinese students’ positive attitudes towards their acculturation experience in the U.S. was an important attribute to their academic success.

Globalization.

Most research participants, 11 out of 19, adopted integrated acculturation to benefit their academic study. They were integrating merits from American culture, Chinese culture and other cultures to achieve their goals. As the STEM fields were highly internationalized, facing scholars from different cultures around the globe, Chinese students had to “internationalize” and “globalize” themselves, as well. A typical way of globalization was to be “international” in a professional environment and “Chinese” in their personal life. “I take in some American values, such as the criteria on a profession. I think I am deeply immersed into the culture of how they

work. Other than that, I consider myself a Chinese.” “I have learned the way to analyze a problem from my German professor; I discussed questions with my Indian classmates; but when coming to borrow a car, I will call my Chinese friends.”

Another aspect of the globalization strategy was to improve multilingual and cross-cultural communication skills. In international and multicultural surroundings, some Chinese students kept learning Chinese, English and/or another foreign language so as to be more competitive in the globalized world. Foreign language and cross-cultural communication skills are often stressed in the literature of international students. The finding that Chinese students emphasized language and culture learning supported findings in previous studies on international students. For instance, in Gu and her colleagues’ study in 2010, evidence suggested that it was equally important for international students to master the English language and to understand the hidden cultural norms and values regarding to communication. However, it was a new discovery from my study that Chinese international students in the STEM fields paid particular attention to their language and communicative competence. It might be due to the influence of the very diverse STEM culture, or there might exist other attributes that need further empirical studies.

However, there existed difficulty in bridging different cultures together to serve different purposes. Participant Bing told me she couldn’t easily switch the cultural modes back and forth when she was interacting with people from different cultures. Sometimes, it created misunderstandings. “I am considered too manly by my Chinese friends. I love scuba diving and fixing things by myself like Americans. Once I insisted fixing my bike in front of my Chinese guy friend, he was sort of insulted by me. I didn’t feel that way at all until he told me his feelings.” Participant Bo told me another story, “The worst status was when I was in China, I felt a little off and weird. On day, I was waiting in a line at a bank. I am used to keeping a distance

from people in front me, you know. However, there were two guys just walked over and filled in the distance. I told them I was in line, but they told me that I should stand here [closer to others], instead of standing far away. I felt too embarrassed to argue with them in public and I let them go first before me.” Misallocating different cultures, as indicated in the examples, was the difficulty for students who adopted the cultural globalization strategy in this study. However, they didn’t consider it an unconquered problem, but a challenge which could be conquered by more practice and experience in multiple cultures.

Similar to the *Integration* strategy in Berry’s model (2005), globalization emphasized the awareness and integration of the home culture and host culture, but also of other cultures beyond the two cultural dimensions. Chinese students could not adopt this kind of strategy without experiencing cultural globalization (Yu, 2008). Neither could they do without living and learning in the multiculturalized and internationalized American higher education environment (Altbach & Knight, 2007), particularly in the highly diverse and globalized STEM fields (Anderson et al., 2011).

Individualization.

Two Chinese students summarized in the group discussion that there were different ways and different paths to achieve academic success in the U.S. Namely, students with this idea adopted individualized strategies to acculturate into the U.S. and to achieve academic success in American graduate schools. First, individualized strategies of achieving academic success changed and adapted as students continued their academic pursuits in the U.S. “At the beginning, academic success was to become a faculty like my adviser. However, after I have met more scholars in our field, I have more models to follow and I think academic success means a lot of things. I should find my own way to achieve my academic success.”

A second meaning of individualization was to adopt diverse and customized methods based on individual characters and needs. As there were multiple ways to interpret the meanings of academic success, so were there multiple ways to achieve academic success. For example, one participant said, “You can achieve academic success in different ways. Even you haven’t published anything; you have still achieved something in your graduate study, which can be called success.” The other one echoed, “I agree. If you think working hard by yourself can lead to success, then go for it. Don’t worry about other strategies such as balancing work and life as everyone is different. You know what you can do and you know yourself much better than others.”

I categorized those students, who were open to individualized and customized ways to success, as the group who adopted individualization. One student commented on comparing American culture with Chinese culture, “No culture is the best. Your own culture is the best. To achieve success you have to have your own culture and do it in your own way. Everyone’s way is different.” Different from Americanization and Globalization, students who adopted Individualization did not consider certain national or social cultures as important as their own cultures. With the perception that academic success is the success for oneself, individualized Chinese students consider that the best strategies to achieve academic success are their own individualized strategies.

Individualization is rooted in the ethic of individualism embedded in American culture. Chinese students in this study accepted and developed their own conceptions of “being oneself”, and adopted their own strategies of “being individualized to achieve academic success.” This finding reconfirmed the cultural influence from host countries on international students’ development and change (Ward et al., 2001). Additionally, it contributed a new characteristic for

the new generation of Chinese international students in the U.S.⁷ Compared to the older generation with homogeneity; the new generation was more diverse and individualized.

Thirdly, for this group of students with high individualism, they were more influenced by their individual characteristics than by institutional or cultural variations, and this affected their behaviors towards achieving academic success. This point confirms the multi-cultural dimensions set up in the conceptual framework of this study – students’ strategies to achieve academic are under influences from cultural, institutional and individual aspects (see Table 4). For students adopting different cultural strategies to achieve academic success, different levels of culture, at different degrees, influenced their conceptions and behaviors of achieving academic success.

This finding of Chinese international students adopting individualization strategies could be interpreted by the findings indicated in intercultural studies: Because certain aspects of cultural beliefs and values may be beyond modification or integration and will never be completely abandoned, international individuals might have developed their own proficiencies in fulfilling their various needs in the host culture whilst continuing to experience conflicts between a sense of “otherness” (alienation) and a sense of “one of them” (belonging) (Gu, Schweisfurth, & Day, 2010). In my study, I identify the individualized strategies that Chinese students adopt to fulfill their academic pursuits in the U.S. They neither modified themselves to adapt to American culture, nor integrated into American culture, Chinese culture or any other culture; instead, they formed their own culture and developed their own strategies to achieve academic success.

⁷ The new generation of Chinese international students referred to Chinese students who came to the US around 2010. They were different from the older generation who came to study in the US in 1990s.

Summary of Findings

To summarize, Chinese international students' conceptions and strategies of academic success are complex combinations of cultural, environmental and individual variations. Although rooted in Chinese culture, they have social and educational values that are implicitly transmitted from the American university environment (people, resources and pedagogical practices). Those values mediate their approaches to learning and achieving academic success. Also, as Hopwood's research (2010) argued, "Doctoral experience and its outcome are actively shaped by student themselves" (p. 830), their conceptions and behaviors are closely related to their own living and learning experiences, too. Meanings of academic success and strategies to achieve academic success found in this study provide information for us to better understand what academic success is for Chinese international students studying in American graduate schools and to identify how they achieved academic success while experiencing cross-cultural adaptation. Findings and discussions here also provided answers to research questions as well as implications for theories and practices of international student affairs, which are stated in Chapter Five.

CHAPTER 5

CONCLUSIONS AND IMPLICATIONS

Conclusions

For students, “much of academic success is dependent on the educational and cultural congruence between themselves and the institution they study in” (Rajaram & Bordia, 2011, p. 64). For international students, academic success cannot be separated from acculturation/adaptation, which involves a process of learning about and integrating into new cultures at three levels: (i) an “alien” social culture; (ii) an “alien” academic culture (Gu & Maley, 2008); and a globalized and internationalized culture (Makhlouf, 2014). As demonstrated in in this study (see Tables 10, 11 & 12), Chinese international students’ conceptions of academic success and the strategies that they envisage for achieving it in the US all bear strong cultural, institutional, educational, and individual imprints.

In order to deepen our understanding of the various conceptions of academic success and the strategies that may be adopted to achieve it, this study examined respondents’ meanings and strategies from the perspectives of (a) conventional academic success, (b) social networking and role-playing and (c) cultural adaptation and self-actualization. It set the analysis in the super-imposed frameworks of cultural globalization (the macro level), American institutional university cultures (the meso level), and Chinese international students’ individual characteristics (the micro level). The principal findings are summarized in Table 13 below and discussed under three major headings hereafter: the composite nature of academic success for Chinese graduate students, the factors most influencing it from their perspectives and the strategies that they adopt to achieve it.

The Composite Nature of Academic Success

Chinese international graduate students interviewed in the study had for the most part developed and adopted a “composite” understanding of academic success, including standard institutional/conventional elements along with social and cultural ones, dosing and mixing them in different ways.

Table 13 *Chinese International Students’ Conceptions of Academic Success*

Levels of Cultural Variations	Meanings of Academic Success	Strategies of Achieving Academic Success
<u>Cultural (Macro)</u> <ul style="list-style-type: none"> • American culture • Chinese culture • Globalized culture 	<u>Cultural meanings</u> <ul style="list-style-type: none"> • To acculturate successfully in American culture and to maintain and inherit essence of Chinese culture • To become more of a global citizen and professional and function well in a variety of contexts (Success in Globalized) 	<u>Cultural strategies/Acculturation</u> <ul style="list-style-type: none"> • To Americanize themselves • To Globalize themselves • To Individualize themselves
<u>Institutional (Meso)</u> <ul style="list-style-type: none"> • American graduate schools • STEM disciplines 	<u>Conventional academic meanings</u> <ul style="list-style-type: none"> • To complete the degree in a competitive way • To become global professionals • To be creative in research 	<u>Conventional Academic strategies</u> <ul style="list-style-type: none"> • To work hard • To balance work and life • To be persistent, professional and creative
<u>Individual (Micro)</u> <ul style="list-style-type: none"> • Local/family influences • Growing up in an increasingly globalized culture • Evolving with American and global cultures in an American setting 	<u>Social meanings</u> <ul style="list-style-type: none"> • To achieve success for others • To achieve success with others • To achieve success for oneself 	<u>Social strategies</u> <ul style="list-style-type: none"> • To cooperate with others • To develop social and communicative skills • To keep harmonious relationships with others • To make best use of resources • To seek help

The conventional dimension.

As a rule, all subscribed to the "conventional" and institutional meanings of academic success measured by American universities – satisfaction of criteria such as "degree completion", "professional preparation," and "research competence and contributions." (Rienties, Beusaert, Grohnert, Niemantsverdriet, & Kommers, 2012; Lydell, 2008). They, moreover, elaborated on these meanings in certain ways, stressing to importance of "completing the degree in a competitive way," "becoming global professionals," and "being creative in research."

Their values, in this regard, suggested that they fit very well into the institutional culture they encountered in American graduate schools, particularly the culture of STEM fields with its cross disciplinary work and high rate of collaboration. The declared importance of competitiveness offered a possible explanation to the question of why Chinese doctoral students in the STEM fields generally complete their doctoral degrees at higher rates than Chinese students in the social sciences or humanities, and those students from other national and cultural backgrounds (CGS, 2008; SED, 2014).

The social dimension.

Respondents also prized social meanings of academic success, including "success for others," "success *with* others," and – paradoxically – "success for oneself." In this case the latter meant the development of a new social identity founded on positive appreciation of one's own skills and potential contributions to society. Their values not only manifested both American and Chinese influences, but also gave evidence on personal growth, change, and transformation (Wang, 2011).

In the collectivist cultural context that is typical of China, in an environment characterized by a large power distance (Hofstede, 2010), academic success has become the way

to succeed in a society with unequal resource distribution and fierce competition. In this respect, success means to be acknowledged in different kinds of *social relations* (Hofstede, 2010), including those in the workplace, schools, and families, as well as in relationships with friends and communities. The Chinese students who participated in this study received their elementary, secondary and higher education in China. That experience imbued them with the perception that, to be real, academic success had to be clearly recognized by fellow students, teachers, parents, educational authorities and others. Therefore, their definitions of academic success were framed by the notion that it essentially meant performing for others – “success for others.”

In contrast, in more-individualistic American culture, the ultimate source of meaning and action lies in the individual him- or herself rather than in the social group (Williams, 1970). Individualistic cultures like the American one attribute success to individual effort and willpower much more than to social circumstances or social pressure (Fischer, 2008). Furthermore, this kind of individualism is based on a sort of voluntarism, in that individuals *choose* to commit themselves individually to certain goals and to give up pursuing other ends or rewards (Fischer, 2008). From this perspective, individuals are responsible – and credited -- for their own achievements. Having learned and gained experience in American culture for a certain period of time, Chinese international students do pick up elements of the ambient individualistic culture and realize that academic success is not only achieved for others, as emphasized in Chinese collective culture, but also for their own benefit and development, as stressed in American culture.

In an Asian culture like that of China, people attribute individually-attained outcomes – in this case, academic success – to social demands and expectations. However, in American culture, people are more likely to attribute it to individual traits and to the “real” or best self of

the persona involved (Fischer, 2008). During the acculturation process and through the process of achieving academic success in American universities, Chinese students seem to undergo a degree of conceptual transformation by “discovering themselves” and “realizing self-actualization.” These changes are then manifested in their personal growth and a change in social identity (Wang, 2011).

In addition, learning and working in the STEM fields, where the academic culture stresses interdisciplinary collaboration and cooperation, Chinese students developed the conception of “success *with* others”: To succeed in a competitive and cooperative study field is to succeed in establishing social networks within the professional community and maximizing the utility of social resources. For them, success could not be achieved without the active collaboration of faculty, staff, peers, family members, friends and others.

The cultural dimension.

Interviewees in this study also turned out to have important *cultural* meanings for the notion of academic success: for them, it included their successful adaptation to American culture and to accede to full citizenship in a global culture. This finding confirms previous research that stressed the influence of host cultures on international students and the importance of cross-cultural adaptation (e.g., Berry, 2005; McClure, 2007). However, this study particularly pointed out that Chinese international student themselves realized the importance of cultural adaptation and regarded it as one of the goals that they felt critical to achieve while studying abroad. To become elites, who are capable of excelling in American culture and a globalized culture, were their ultimate goals of academic success. This close association of academic success with cultural meanings offers a possible answer to the question of why Chinese students perform better in academics than other international students.

Factors that Influence Achievement of Academic Success

Chinese international students identified intrapersonal and interpersonal factors that influenced their achievement of academic success. The intrapersonal factors were personal characteristics such as intelligence, diligence, and persistence, as well as cross-cultural adaptive attitudes, skills, and experiences. The interpersonal factors were cultural, environmental, and social influences, such as students' interactions with academic and social surroundings. Summarized in Table 11, Chinese students held positive attitudes toward individual and situational influences. They believed that it was important to actively interact with the people and the culture in order to maximize their opportunities of achieving for academic success.

Influences on Chinese international students' academic success generated from this study corresponded to individual, socio-institutional, and cultural levels of variations, which included American, Chinese, and Globalized cultures; cultures of American graduate schools, STEM disciplines and social groups; and individual characteristics (See Table 11). Also, they were congruent with the academic, social, and cultural meanings of academic success defined by Chinese students in this study. Being aware of those influences, Chinese international graduate students adopted responsive strategies to promote their academic success.

Strategies for Achieving Academic Success – Conventional, Social and Cultural

Whatever academic success may *mean* to Chinese international graduate students pursuing their degree in the United States, and however well they may understand factors that potentially influence its attainment, in practical terms, they must develop strategies to achieve it by cultivating positive influences and aligning factors that will secure that result. In fact, participants in this study reported useful academic and social strategies and positive tactics for cross-cultural adaptation, confirming previous studies. For example, this study had similar

findings to Gu and Maley's (2008): Chinese international students indeed work very hard to improve their language proficiency, their communicative powers, and their intercultural skills.

Studies of Rienties et al., (2012), and Zhao, Kuh, & Carini (2005) indicated that Chinese students find academic adjustment into American campuses less challenging than social integration. Zhao and her colleagues provided a "compensatory relationship" between academic adjustment and social integration to explain Chinese student' academic success: Chinese students have better academic achievement when they maximize their efforts to integrate academically but devote less energy to integrating socially (Zhao et al., 2005). This explanation, however, was not verified by Chinese international students in my study. Chinese students, in my study, considered all academic, social and cultural strategies very important to achieving academic success. They didn't indicate how they allocated their time and energy between these different strategies.

The accounts given by study participants of their own adaptation to academic life in the United States suggest they typically adopt one or all of *three acculturative strategies* — Americanization, Globalization and/or Individualization. Compared with four acculturation strategies categorized by Berry (1997) — Assimilation, Integration, Separation, and Marginalization, there were similarities and differences.

Six Chinese students in the "Americanization" category tried to learn and do what Americans do, as they believed "American culture equals to the culture that cultivate academic success." "Americanization" was similar to Berry's "Assimilation" in that individuals in this group sought daily interactions with the host culture (Berry, 1997). "Globalization" shared the meaning of Berry's "Integration" in that individuals in this group kept interest in maintaining their cultural heritage and at the same time developed daily interactions with the host culture

(Berry, 1997). However, in the “Globalization” category, individuals developed daily interactions with more cultures rather than just the host culture. In other words, the 11 Chinese students in the “Globalization” group were actively interacting with cultural globalization and internationalization while maintaining and developing their own Chinese culture.

“Individualization”, however, was a different attitude and strategy from Berry’s four acculturation strategies, which Chinese students in this group had developed. In this group, two students may or may not have been aware of cultural variations, but they emphasized more of their own characteristics and individualism. They believed that their individualized approaches were the best strategies to achieve academic success. By growing up in an increasingly globalized culture and with their experience in an individualistic American culture have entitled these Chinese students with the freedom to choose to be either “Globalized” or “Individualized”.

Although there were no Chinese students in this study claiming to fall into Berry’s “Separation” or “Marginalization” categories, they did state that they experienced difficulties in academic and sociocultural adjustment at the beginning stage of graduate school. They had kind of “marginalization” or “separation” feelings when they were trying to figure out their cultural belongings. Therefore, the findings of my study did not deny the two categories, but admitted the existence of the two categories, especially for international students at early stage of their overseas journey. In addition, the findings inferred that cultural separation or marginalization is not beneficial to academic success. As indicated in this study, no Chinese students chose to adopt either of the two acculturation strategies to achieve their envisioned academic success in the US.

According to Berry (2005), there is a prerequisite to adopting acculturation strategies – the hosting cultural environment is open and welcomes people with other cultural backgrounds. The three acculturative strategies could be utilized in the US by Chinese international students

because the American society and American graduate schools were open and inclusive of diverse cultures (Berry, 2005). In addition, the cultural strategies could not exist without the co-existence of cultural variations in the host cultural environment. In this study, they included American, Chinese, and globalized cultures, American institutional and campus cultures, as well as individual cultures.

There is no question that transitioning from a Chinese cultural and educational background to an American cultural and educational environment presents great difficulties for Chinese international students. However, in such a challenging transition/acculturation process, Chinese international students, in general, have achieved academic success. Through exploring Chinese international students' conceptions of academic success in an American graduate school, my study found a connection or a relationship between their definitions of academic success and their acculturation experiences in the US; this, in turn, provides a possible explanation to the paradox of all international student groups in the US: Chinese international students achieve the highest level of academic success, although they come from a culture that is most different from American culture (i.e. non-Western, Confucian, traditional culture, compared to European culture).

In conclusion, under the influences of three levels of cultural variations in an American living and learning context, Chinese international students have formed their own understandings of academic success and adopted their own strategies for achieving it in the US: to become academically, socially and culturally competent in cross-cultural learning and living. Conclusions of my study are further presented by answering the following research questions. At the end of this chapter, implications are given to international students, educators, practitioners, policy makers and researchers.

Answers to Research Questions

Research Question One: What does “academic success” mean to Chinese international students who are studying in an American graduate school?

For Chinese doctoral students who are studying in STEM fields in American graduate schools, academic success is perceived and defined with conventional academic, social, and cultural meanings. Such conceptions of academic success are closely related to individual characteristics and are under various sociocultural influences. First, academic success with conventional meanings refer to successfully meeting the requirements of academic programs, including to master a solid foundation, to contribute to research in a creative and innovative way, to complete the degree at a competitive pace, and eventually to become a global professional or a transnational elite. Secondly, learning and living in an American cultural environment, Chinese students interact with people from different backgrounds. This infuses their ideas of academic success with social meanings. Hence, academic success from a social perspective is to successfully meet others' expectations, to earn recognition from others, to effectively collaborate and cooperate with others, and to discover and actualize oneself. Thirdly, Chinese students' cross-cultural experiences in US graduate schools lead them to imbue academic success with cultural meanings. Academic success from a cultural perspective, for Chinese international students, is to successfully acculturate into American culture as well as globalized culture. To sum it up, Chinese international students perceive academic success in American graduate schools as a broad sociocultural concept with multiple meanings rather than an academic concept with merely conventional and institutional academic meanings.

Research Question Two: What strategies have they found to be most effective for achieving their perceived academic success in an American university setting?

Chinese international graduate students have developed academic, social and acculturative strategies to cope with challenges in their pursuit of academic success. To achieve conventional academic success in fulfilling the requirement of their graduate programs, Chinese students draw on the strategies strongly promoted by Chinese culture (i.e. working extremely hard, persevering, and delaying gratification, etc.). However, these Chinese students also attempt to work in a creative and productive way, as well as live a balanced life. Those strategies are strongly promoted in American culture.

In order to achieve academic success with social meanings, Chinese students employ sociocultural strategies, such as making the best use of the institutional resources that they have access to, and developing their social and communicative skills. Being fully aware of the importance of cooperation and networking in succeeding in the STEM fields, Chinese graduate students collaborate with other scholars within and across disciplines. Also, they are willing to seek help from others in their professional community and try to maintain strong relationships with others. Due to the critical role that advisers play in doctoral students' academic achievement, Chinese international students pay particular attention to developing harmonious relationships with their advisers – considering advisers to be their role models, bosses, teachers, and colleagues.

In addition to academic and social strategies to achieve academic success, Chinese international students have also adopted three acculturation strategies — *Americanization*, *Globalization* and *Individualization*. The three acculturation strategies indicate their awareness of cultural dynamics of academic success in the US and around the globe. Chinese international students tailor their communicative and interactive approaches to different cultural elements according to various cultures and sub-cultures they matriculate within. By Americanizing,

globalizing or individualizing themselves, they take active actions to meet their goals of academic success in US graduate schools.

Research Question Three: To what degree do these attitudes and strategies seem to bear the imprint of national, socio-institutional and individual or familial cultures?

The conceptions of academic success that emerged from this study were imbued with American, Chinese, and globalized cultures at the macro level. The concept of completing a degree at a competitive pace is imprinted with Chinese masculine culture which emphasizes competition (Hofstede et al., 2010). Achievements and competitions are always placed in a prominent position in Chinese education. Accordingly, students educated in this culture are inclined to work very hard just in order to stand out and be the most competitive (Hofstede et al., 2010). The concept of becoming a global professional indicates a sense of joining the larger and globalized culture (Makhlouf, 2014). It also manifests the internationalized culture of American higher education (Altbach & Knight, 2007). The concept of research competence and contribution not only reflect the institutional culture of American graduate schools, but also carry out the long-term orientated Chinese culture, in which continuous effort and persistent hard work over the long-term are valued and believed to eventually leading to success (Wang, 2004).

Strategies to achieve academic success reflect Chinese students' sociocultural background and cross-cultural experiences, and how those individual cultural variations interact with national, global, and institutional cultures. All the strategies generated in this study are products with multiple cultural influences. Therefore, it is impossible to specify, in an exhaustive way, all the cultural imprints on one single strategy. The cultural imprints of conventional academic strategies are mainly from Chinese culture. For instance, "to be diligent and persistent" is valued in Chinese culture, which to a large extent attributes success to hard work and

endurance. Social strategies embody cultures from all the three levels. For example, to maintain a harmonious relationship with everyone is a typical Chinese value. Chinese students in this study have a deep cultural attachment to this value and keep it as a strategy to pursue their academic success in the US. Such strategies as seeking help, utilizing resources, socializing and adapting to American culture were more reflective of the American social and institutional culture. Cultural strategies have very distinct imprints from American, Chinese and globalized cultures. They also manifest how individual characteristics interact with those cultures. For instance, American culture is predominantly demonstrated by the strategy of Americanization. Globalized culture is vividly imprinted onto Globalization strategy. And Individualization strikes individualism and personal characteristics.

Research Question Four: What role do they believe that acculturation or adaptation to American society plays in achieving the goals of those strategies, and to what degree is it manifested within them?

From sociocultural perspectives, this inquiry reveals the profound impact that cross-cultural adaptation had on Chinese international graduate students' conceptions of academic success and behaviors for achieving it. This does not mean a simple cause-effect relationship between acculturation and academic achievement exists, nor does it deny other important factors and influences on academic success. However, it does demonstrate that Chinese international graduate students' conceptions of academic success and behaviors of achieving academic success in the US can be meaningfully enriched and explained by exploring how they acculturate themselves at both the university and in the larger American contexts and settings.

Findings in this study also indicate that Chinese students' sociocultural strategies to achieve academic success in the US are closely associated with a globalized sociocultural

mobility, or a globalized migration of transnational elites (Castells, 2000). Chinese international students who are studying in American doctoral programs, conceive achieving academic success in the US as the means to achieve the coveted – usually high – social status in China, in the US, or even in the world. For them, to achieve academic success in American graduate education by culturally adapting themselves to American society can provide them the best platform to climb up in the global social ladder. Academic success in American graduate schools and acculturation to American society lead to their future success in globalization. Like one participant said, “Once I have obtained a PhD and a faculty position in the US, I can easily have decent job offers from China. I can also go to work in other countries, too, with an American PhD.”

If acculturation is taken as experience, Chinese students report that it is an inseparable part of their whole experience of achieving academic success in the US. Likewise, if acculturation is taken as a strategy, Chinese students deem that it is an effective strategy that contributes to academic success. Although cultural adaptation brings challenges and stressors to Chinese international students, it also changes their attitudes and strategies to achieve academic success in the US. Therefore, from this study, we can conclude that for international students, it is impossible to separate academic success from acculturation. This result again confirmed the ABC model of acculturation (Yue & Le, 2012): the acculturation process involves affective, behavioral and cognitive aspects of individuals. It also contributed to a possible relation between behavioral and cognitive aspects of acculturation process, by giving an example of Chinese international students adopting acculturation strategies to achieve academic success.

Implications

In the face of defined learning outcomes in American graduate education, academic success is shaped by national and institutional policies and cultures. The picture painted in this

study, however, is more focused on how individual international students construct their conceptions of academic success and respond to cultural variations to achieve it. Therefore, the conclusion from this study is that international students' conceptions of academic success in American graduate schools are not only determined at cultural and institutional levels, but also shaped and reshaped by international students themselves with individual characteristics and personal acculturation experiences.

Chinese international students have developed Americanized, globalized and individualized acculturative strategies to achieve their perceived academic success with sociocultural meanings. In order to cope with factors that are influencing their achievement of academic success, they maintain the advantage of their Chinese cultural heritage, improve their deficits in communication and socialization in the US, as well as integrate themselves into American academic and social surroundings and the globalized world.

Recognizing the important role international students play in internationalized American graduate education, this study explored Chinese international students' conceptions of academic success in relation to aspects of their acculturation experiences. Within a multi-dimensionally cultural framework, it adds information to research on international students' academic success and acculturation, and offers implications to practices in international student affairs work.

Faculty and Staff

With a better understanding of international students' academic and acculturative adaptations, professors and administrators may accurately recognize these students' needs and effectively offer supportive guidance and services. Working with international students requires faculty and staff understand cultural differences, language limitations, adjustment issues and students' conceptions of them as authority figures. For instance, this study reconfirms the

important role that academic advisers play in international students' academic success. Chinese international students regard academic advisers as authority figures, masters and models to follow. Accordingly, they expect a more formal and more dependent advising relationship, with beliefs that advisers should show, tell, or even do for them. However, this expectation is in conflict with an American concept that advisees should take individual responsibilities for their work. This study demonstrates that advisers should first be sensitive to Chinese international students' conceptions of the adviser/advisee relationship and then communicate with them about what is expected in American culture.

This study also indicates Chinese international students' willingness and efforts to socialize within the professional fields. Therefore, in social aspects, for example, it is necessary to establish a well-organized academic and socialization structure which are supervised by either faculty or staff members. With this system, faculty and staff become more accessible for international students and would help them better improve their deficits in communication and socialization. As mentioned by some Chinese students in this study, periodic professional social activities led by faculty or staff are beneficial for their learning in addition to formal classes and instructions.

Universities and Graduate Schools

This study sees participants' conceptions of academic success and adopted strategies to achieve academic success as a rational acculturative response to American culture and American learning contexts. Chinese international students have tried very hard to adapt to new cultures academically and socially. Compared to academic adjustment, it is more difficult for them to achieve their goals in social integration. At the department level, for example, to include the doctoral students' professional networking events as a part of the doctoral program would be a

culturally congruent practice. This could support international students' culturally bounded understanding of positionality, personal learning, and growing (Hung & Hyun, 2010). At the graduate school level, both academic and social orientations, as well as professional development programs should be provided for all the graduate students. Those programs can create sufficient opportunities for international students to learn American culture and other cultures, by socializing with domestic students at an earlier stage, as well as different stages of graduate school.

Also, the participants' voices and stories stated in this inquiry, tell us it is very important for international students to access educational resources in American higher education. To support international students in using these resources, host countries and universities need to have cross-cultural training and orientation practices that are facilitated collaboratively among all of the educational stakeholders of various resources. For example, the international center can collaborate with the counseling center to provide special counseling services for international students, which pay special attention to international students' characteristics and cultural differences. In this study, Chinese international students found it important to reach out, seek help, and access resources. Therefore, it is essential for universities to target international students and advocate their student services. For international students at later stages, consistent and continued cross-cultural programs and services are necessary and should be accessible on campus, as well. For example, the career center can collaborate with the international service center to provide the extra help that international students need to locate jobs while fulfilling their visa requirement.

International Students

Chinese international students in this study demonstrated their positive attitudes and strategies during the process of acculturation and for the purpose of achieving academic success. Accordingly, for all international students to better prepare for and succeed in American graduate education, it is necessary for them to first learn American academic and social culture by participating in cultural experience programs and orientation programs. If students have not experienced cultural globalization like the Chinese students did in this study, they should at least take every opportunity to prepare themselves for the multicultural environment that exists in the US. It is important for international students to have an open mind and a positive attitude towards various cultural differences. Being sensitive in cultural awareness and being adaptive in cultural transition are necessary to achieve success for international students who are studying and living in the US.

It is also important for international students to realize the difficult initial stage of graduate study in the US. Therefore, it is necessary to be proactive and prepared to overcome the initial difficulties and successfully transition to the next stage. For example, active participation in cross-cultural events or workshops is of help before departure for the American schools or after arrival in American schools. What is more important is to align one's national and ethnic culture, as well as American institutional and social culture, with one's individual characteristics, so as to find the best-customized means to achieve one's personal goals of American graduate education. For instance, if students go to a research university that emphasizes research a lot, the students should try to discover their own research interest and passion and see whether and how it fits into the research environment and culture. It is like the "Globalization" acculturation strategy that Chinese international students adopted in this study: they aligned their

understanding of academic goals with Chinese national and ethnic culture, American national and institutional culture, and academic and social culture in the STEM fields, and adopted globalization strategy in order to become successful global professionals.

Future Research

In terms of theoretical implications, the study confirms the application of the acculturation model. It illustrates cultural, contextual and individual components in Berry's acculturation model (2005) and Ward's acculturation process (2001). It also supports the ABC model of the acculturation process (Yue & Le, 2012), which involves affective, behavioral and cognitive aspects of international students in their cross-cultural experiences. In addition, this study applies Hofstede's (2010) cultural comparisons to American and Chinese cultures. It further uses these comparisons to analyze the conceptions of academic success held by Chinese international students in American graduate schools. This offers more information of cultural studies in the population of sojourner students.

This study, due to the small sample size, is limited in generalizing its findings. However, it builds up a theoretical basis and conceptual understanding for future studies to explore on a larger scale. This study provides in-depth qualitative data of conceptions of academic success, and also explores the relationship between academic success and acculturation by analyzing those qualitative data. Therefore, one suggestion for future research would be to examine the relationship between academic success and acculturation in a quantified approach on a large data base. This kind of quantitative research, based on my qualitative study, can generate more accurate statistics to examine the social phenomena and conceptions of academic success among international students. Take one research topic for example, in order to achieve the conventional/institutional meaning of academic success, which acculturative strategy works

better for international students – Americanization or Globalization? Such quantitative research is important in offering more information and statistical data to better understand the outcomes of international education in today's internationalized and globalized world.

APPENDIX A

THE EMAIL TO RECRUIT RESEARCH PARTICIPANTS

Dear Chinese doctoral graduate students,

You're invited to a dissertation study titled *Exploring Chinese International Students' Conceptions of Academic Success in an American Graduate School*. This study will explore Chinese international graduate students' conceptions of academic success in American graduate schools: perceived meanings, influences, strategies, outcomes and possible changes.

If you are willing to voluntarily participate in this study, please reply to this email by providing the following information. All the information you have provided to the study, including the following records will be used for research only and will be kept confidential by the researcher to the extent allowed by law.

Your name (please provide a pseudonym if you prefer): _____

Your gender: _____

Your major: _____

What stage of your study: _____ (e.g.: 1st year doctoral student; doctoral candidate)

Thank you very much for your supporting my research. I appreciate your participation and contributions to this study.

Sincerely yours,

Yuanyuan Xiang

Investigator

Ph.D. candidate in Sociocultural and International Development Education Studies

Department of Educational Leadership and Policy Studies

College of Education

Florida State University

APPENDIX B

THE FLYER TO RECRUIT RESEARCH PARTICIPANTS

Share Your Experience and Get a Gift Card

参与我的学术研究；分享你的留学经历；获得有爱心的礼物卡！

1. Are you a Chinese doctoral student majored in the **STEM** fields (Science, Technology, Engineering and Mathematics)?
2. Have you already completed **at least ONE YEAR** of study in your program?
3. Could you spare a little time to take part in a study of Chinese doctoral students' strategies for achieving academic success in the US?

If you answer **YES** for all the three questions above, you are invited to participate in a research interview or a focus group discussion. And you will **EARN** a **\$10** Starbucks gift card for talking and sharing your ideas and stories at your convenient time.

Please contact: *Yuanyuan Xiang*, a PhD candidate in International & Comparative Education.

APPENDIX C

THE CONSENT FORM FOR INTERVIEW I

Study: Exploring Chinese International Students' Conceptions of Academic Success in an American Graduate School

You are invited to participate in a research study titled Exploring Chinese International Students' Conceptions of Academic Success in an American Graduate School. You are selected as an interviewee because you are qualified and willing to participate in the research. We ask that you read this form and ask any questions you may have before the interview.

This study is being conducted by Yuanyuan Xiang, a doctoral candidate in the Department of Educational Leadership and Policy Studies, Florida State University.

Background Information: The purpose of this interview is to explore Chinese international graduate students' conceptions of academic success in American graduate schools, including the perceived meanings, measurements, strategies, outcomes and possible changes.

Procedures: If you agree to participate in this study, I will conduct an interview with you, which will be audio-recorded and last for about 35 minutes.

Confidentiality: The records of this interview will be kept confidential to the extent allowed by law. The records are for research only. Your real names will be replaced by pseudonyms in published research products. Research records will be stored securely under password protection and only researchers will have access to the records.

Voluntary Nature of the Study: Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with your academic institutions. If you decide to participate in this study, you are free to not answer any question or withdraw at any time without affecting those relationships.

Contacts and Questions: The researcher conducting this study is Yuanyuan Xiang. You may ask any question you have now. If you have a question later, you are encouraged to contact Yuanyuan Xiang by email, or her research advisor, Dr. Peter Easton, by email peaston@fsu.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, you are encouraged to contact the FSU Institutional Review Board at 2010 Levy Street, Research Building B, Suite 276, Tallahassee, FL 32306-2742, or by phone at (850) 644-7900.

You will be given a copy of this information with signatures to keep for your records.

Statement of Consent:

I have read the above information. I have asked questions and have received answers. I consent to participate in the study.

_____	_____	_____
Signature	Date	Email

_____	_____	_____
Signature of Investigator	Date	Email

APPENDIX D

THE CONSENT FORM FOR INTERVIEW II

STUDY: Exploring Chinese International Students' Conceptions of Academic Success in an American Graduate School

You are invited to participate in a research study titled *Exploring Chinese International Students' Conceptions of Academic Success in an American Graduate School*. You are selected as an interviewee because you are qualified and willing to participate in the research. We ask that you read this form and ask any questions you may have before the interview.

This study is being conducted by Yuanyuan Xiang, a doctoral candidate in the Department of Educational Leadership and Policy Studies, Florida State University.

Background Information: The purpose of this interview is to explore Chinese international graduate students' conceptions of academic success in American graduate schools, including the perceived meanings, measurements, strategies, outcomes and possible changes.

Procedures: If you agree to participate in this study, I will conduct an interview with you, which will be audio-recorded and last for about 60 minutes. After the interview, you will be given a 10-dollar Starbucks gift card for your participation.

Confidentiality: The records of this interview will be kept confidential to the extent allowed by law. The records are for research only. Your real names will be replaced by pseudonyms in published research products. Research records will be stored securely under password protection and only researchers will have access to the records.

Voluntary Nature of the Study: Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with your academic institutions. If you decide to participate in this study, you are free to not answer any question or withdraw at any time without affecting those relationships.

Contacts and Questions: The researcher conducting this study is Yuanyuan Xiang. You may ask any question you have now. If you have a question later, you are encouraged to contact Yuanyuan Xiang by email, or her research advisor, Dr. Peter Easton, by email peaston@fsu.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, you are encouraged to contact the FSU Institutional Review Board at 2010 Levy Street, Research Building B, Suite 276, Tallahassee, FL 32306-2742, or by phone at (850) 644-7900.

You will be given a copy of this information with signatures to keep for your records.

Statement of Consent:

I have read the above information. I have asked questions and have received answers. I consent to participate in the study.

_____	_____	_____
Signature	Date	Email

_____	_____	_____
Signature of Investigator	Date	Email

APPENDIX E

THE CONSENT FORM FOR A FOCUS GROUP DISCUSSION

STUDY: Exploring Chinese International Students' Conceptions of Academic Success in an American Graduate School

You have been asked to participate in a focus group as a part of the research named *Exploring Chinese International Students' Conceptions of Academic Success in an American Graduate School*. The purpose of the group discussion is to understand the roles that acculturation from Chinese culture to American culture plays in achieving academic success for Chinese international graduate students.

Procedures: If you agree to participate in this study, you will discuss provided questions within a group. The focus group discussion will be audio-recorded and last for about 60 minutes. After the focus group discussion, you will be given a 10-dollar Starbucks gift card for your participation. There is no right or wrong answer to the focus group questions. Everyone's voice is welcomed in the discussion. Please feel comfortable and be honest even when your responses may not be in agreement with the rest of the group. In respect for each other, only one individual speaks at a time in the group.

Confidentiality: The records of this group discussion will be kept confidential to the extent allowed by law. The records are for research only. Your real names will be replaced by pseudonyms in published research products. Research records will be stored securely under password protection and only researchers will have access to the records.

Voluntary Nature of the Study: Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with your academic institutions. If you decide to participate in this study, you are free to not answer any question or withdraw at any time without affecting those relationships.

Contacts and Questions: The researcher conducting this study is Yuanyuan Xiang. You may ask any question you have now. If you have a question later, you are encouraged to contact Yuanyuan Xiang by email, or her research advisor, Dr. Peter Easton, by email peaston@fsu.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, you are encouraged to contact the FSU Institutional Review Board at 2010 Levy Street, Research Building B, Suite 276, Tallahassee, FL 32306-2742, or by phone at (850) 644-7900.

You will be given a copy of this information with signatures to keep for your records.

Statement of Consent:

I have read the above information. I have asked questions and have received answers. I consent to participate in the study.

_____	_____	_____
Signature	Date	Email

_____	_____	_____
Signature of Investigator	Date	Email

APPENDIX F

THE RECEIPT OF RESEARCH COMPENSATION

I, _____ have received a \$10 Starbucks gift card as a compensation for voluntarily participating in the research conducted by Yuanyuan Xiang.

Signature

Date

APPENDIX G

THE FIRST INTERVIEW PROTOCOL (35 MINUTES)

1. Tell me about yourself and your academic background.
2. Describe your academic performance in school.
3. How would you define academic success?
4. What does academic success mean to you? (And what is the most important meaning to you?)
5. What goals have you set for yourself (short/long term)?
6. What mostly affects you to achieve academic success (positive/negative)?
7. Discuss people who influence your academic success and explain what role of those people play on your way to achieve academic success. How do you navigate relationship with your advisors? How do you socialize with your peers? Do you help each other with homework or research? (Hobby? Party? How many Chinese friends? American friends?)
8. Discuss how the environment affects your academic success (department, graduate school, university).
9. Discuss what resources you can/cannot access that help you better achieve academic success. (What to do if you cannot access the resources?)
10. Discuss other factors that may contribute to/impede academic success.
11. Among the different factors, what do you think is the most important? And why?
12. Under your ideas of academic success and factors influencing your achieving academic success, what do you do to achieve academic success?
13. What do you think is the most important strategy that you use to achieve academic success?
14. What suggestions do you have for graduate students who want to become successful in academics?
15. Do you have any questions in terms of my asked questions?
16. Who do you recommend me interview if I want to learn more about my questions.

APPENDIX H

THE SECOND INTERVIEW PROTOCOL (60MINS)

INTRODUCTION & PAPERWORK (5mins)

Thank you for agreeing to a second interview on the topic of my dissertation research: Conceptions and strategies for academic success among Chinese graduate STEM students.

I'd like to give you first a sense of what I learned from the first round of interviews and then ask a few further questions designed both to clarify those findings and to go a bit deeper into the topic.

[Brief summary of essential results of first round.]

Here then are the topics that I would like to discuss today. I will begin with a few questions that arose as I reviewed interviewees' comments on the topic of "academic success" during the first round. Then I would like to explore in a bit more depth with you the issue of strategies for achieving academic success and the question of your own adaptation or acculturation to the United States and the role that it has played in that process.

QUESTIONS OF CLARIFICATION ABOUT "ACADEMIC SUCCESS" (5 mins)

1. One critical indicator of "academic success" mentioned by a number of interviewees was achievement of a "research contribution."

- Do you agree?
- What exactly do you mean by "research contribution?"
- What is typically meant by that idea in your field and by your advisors and peers?

2. Another indicator of academic success indicator often mentioned by first round interviewees was "publication."

- Do you agree? And if so, why do you think "research publication or presentation" is an important indicator of academic success?

3. Would you mind sharing with me the academic achievements of which you are most proud?

- Why were these achievements particularly satisfying?
- Have you done some academic work that you did not feel was as successful as it could have been? What is it? Why do you feel that way?

4. From the first round of interviews, I had the impression that the criteria of academic success are entirely decided by others and that students' principal concern is to meet the expectations of others -- like parents, the school, and people working in their academic field.

- Do you feel this way or would you see things differently?
- Why do you feel as you do?

QUESTIONS OF CLARIFICATION ABOUT STRATEGIES FOR ACHIEVING ACADEMIC SUCCESS (5 mins)

5. *In the first round of interviews, when asked about how to achieve academic success, almost everyone mentioned the importance of “working hard.”*

- What does “working hard” mean to you?
- Do you think your American peers work as “hard” as you do?
- Why do you think so? What do you think “working hard” means in American culture?)

6. *Another strategy mentioned in earlier interviews is “keeping a good relationship with everyone.”*

- Do you agree?
- What exactly does “keeping good relationships mean for you? What does one have to *do* in order to ensure that?
- How far does “everyone” extend? Are relationships with some more important than others?

FURTHER PROBING STRATEGIES FOR ACHIEVING ACADEMIC SUCCESS (15mins)

We didn’t have an opportunity during the first interview to go very far into the question of students’ strategies for achieving whatever they consider academic success to be and I would like to go a little further now.

8. *One obvious condition for achieving academic success is a supportive environment – both academic and social.*

- How would you describe your current school environment in this regard? Is it friendly or competitive for you as an international student?
- How do you find it different, if at all, from the Chinese academic environment?
- In what ways, if any, have you had to change or modify your strategy as a student to deal with these differences?

9. *A student's immediate living environment also can have a real effect on their academic performance.*

- How would you describe your current living environment?
- Whom do you live with? Have you had ever lived with Americans?
- Are your current living circumstances supportive of your studies?
- Are there any ways in which you would like to modify them?

10. *The surrounding social environment is another actor that can affect a student's morale and their academic work.*

- How would you describe your current social environment?
- What do you do after school? Whom do you hang out with?
- Do you socialize with your peers and professors? If so, how helpful or enriching do you find that to be?

CONSIDERING ISSUES OF ACCULTURATION AND ADAPTATION (25mins)

A final important topic that I would like to discuss with you concerns your own experience with adaptation or acculturation to the American environment and the role that it plays in your academic work.

11. *Different terms are used in English to describe this process. Some suggest finding ways to deal with the foreign cultural environment without adopting any of it. Others imply working out a sort of "hybrid" style by selective incorporation of some habits and values of the new culture. And still others suggest broader adoption of new cultural traits. I am interested in how you perceive your own experience in this regard and what effect you feel adjustment of one kind or another to the new environment has had on your academic success.*

- In general, how would you describe your own strategy of adjustment to American culture here in the United States?
- Would you describe it as a process of assimilation, integration, separation, isolation – or something else? Can you illustrate what you mean by a few examples?

12. *Do you look upon academic success differently now than when you were in China or before you came to study in the US?*

- Why or why not?
- In what ways? Can you describe any changes of your ideas of academic success?)

13. To what degree, if any, do you feel you have adopted American ideas vis a vis academic success? Academic life? Research? Social relations with peers? Working habits?

14. Do you consider yourself an “American” doctoral student or a “Chinese” doctoral student enrolled in the US? Or neither or both? And why do you think in that way?

15. Please explain any other particularly significant aspects of or experiences with living and learning in the United States that you would like to share.

CLOSING (5mins)

Thank you very much for your participation! Your remarks will be of great help in completing this study.

APPENDIX I

THE FOCUS GROUP GUIDE (60 MINUTES)

INTRODUCTION AND PAPERWORK (5 minutes)

1. I will read aloud the Consent Form and emphasize how the focus group discussion works. I will try to encourage each other to talk and discuss with each other.
2. Thank you again for participating in my interviews. (Showing PowerPoint slides). I would like to refresh everyone here with my research. Some of you have had one interview and some have had two interviews. My research is to better understand the ways in which Chinese graduate students studying in the United States conceive of “academic success” – its requirements, its prime indicators and its expected consequences – and how they manage to achieve this sort of success even while they are experiencing acculturation and adaptation into the American culture and society. From previous two rounds of interviews, I have collected rich data about your conceptions and strategies of academic success. Also, I have information about your acculturation attitudes and strategies that relate to academic studies. However, what I would like to know more is **what roles acculturation and adaptation play in your achieving academic success**. I hope we can get answers from the group discussion.

DISCUSSION QUESTIONS (50 minutes)

1. Stress and Coping (Affection)

There are a list of challenges that my interviewees told me hampering achieving academic success, which are also mentioned in other studies.

- Which of the following do you think is the most challenging one?
- Why do you think so? Could you give us specific examples to illustrate your answer?
 - ✓ English language and communicative skills (language stressors).

- ✓ Thinking and working in Chinese way, not in American flow (academic stressors).
- ✓ Lack of American social and living environments or live in Chinese sociocultural environment (sociocultural stressors).
- ✓ Pressure from immigrant status (employment issues, etc.).

2. Cultural Learning (Behavior)

Having general knowledge about the host culture and being competent in intercultural communication are two important aspects of culture learning. Acquiring cultural knowledge is “the process of seeking and obtaining a sound educational foundation about diverse cultural and ethnic groups” (Campinha-Bacote, 2002, p. 182). Having intercultural communication competence requires the sojourner to have knowledge of both his/her own national and host-national communication patterns, rules and conventions that regulate interpersonal communication. It also includes how people send and receive information, express their emotion, and influence each other by verbal and non-verbal communication (Ward, Bochner, & Furnham, 2001). The culture learning theory involves and demands a great deal of cultural knowledge and social skills of the receiving society which are acquired in the new sociocultural context. (Quote from Yue & Le, 2012, p. 137).

- Could you tell us one example of American culture that you know and you think it is related to your academic study?
- How did you learn this? (From where and who?)
- (Optional) Do you think you have acquired general knowledge of American culture? If yes, what are they in general? And how do you acquire them? If no or

little, why not? And do you think you have to learn more so that you can achieve better in your academic study?

Some of my interviewees mentioned that their Chinese advisors were great examples of being academically successful in the US and they used to be Chinese international doctoral students studying in American graduate schools.

- How do you think your advisor's intercultural communication competence?
- Could you give us some examples? What do they do in American ways or in Chinese ways? Or a combined or integrated way?
- (Optional) How about yourselves compared to your American peers? How do you present research? How do you socialize in your academic field? How do you communicate with people so that you can obtain resources and information you need for your academic success?

3. Acculturation and Identity (Cognition)

According to Berry (1997), there are four acculturation strategies for non-dominant group to acculturate to the dominant group. **Assimilation** describes a state that a sojourner identifies entirely with the host culture and at the same time completely gives up his/her own original identity. In our case, a Chinese student is Americanized. Contrary to assimilation, **separation** refers to a situation in which a sojourner treasures highly his/her own heritage culture and does not identify with the host culture. In our case, a Chinese student choose not to adapt to American culture. **Integration** implies that an individual considers both the home and host cultures equally important in his identification. In our case, a Chinese student combine both American and Chinese culture. **Marginalization** means that the individual sees himself/herself low in both

home and host culture identification. In our case, a Chinese student is not aware of either Chinese cultural identity or American cultural identity.

- Which acculturation strategy do you think you are adopting?
- And how is it related to or effective in reaching your academic achievement?
Could you give one or two examples/stories to illustrate that?
- (Optional if there is no examples). One student mentioned that Chinese students in their program, in general, would like to think out solutions by themselves or solve problems by searching the Internet. They rarely solve problems by talking to others or by group work. American students in the program often get together and talk to keep the research going or get problems solved. This Chinese student occasionally joined American students for getting new ideas, but she stayed doing research by herself or seeking help from Chinese students first. What acculturation strategy do you think she adopts? And how does this strategy affect her achieving academic success?

CLOSING (5mins)

Thank you all for your participation and contribution to my research. Here is the gift card to express my gratitude. In the future, if you have more information that you would like to share with me for my research, please don't hesitate to contact me.

APPENDIX J

IRB APPROVALS

The Florida State University
Office of the Vice President For Research
Human Subjects Committee
Tallahassee, Florida 32306-2742
(850) 644-8673 · FAX (850) 644-4392

APPROVAL MEMORANDUM

Date: 7/10/2013

To: Yuanyuan Xiang

Address: 4452

Dept.: EDUCATIONAL FOUNDATIONS AND POLICY STUDIES

From: Thomas L. Jacobson, Chair

Re: Use of Human Subjects in Research

Academic Success in American Graduate Schools: A Comparative Study between American and Chinese Students

The application that you submitted to this office in regard to the use of human subjects in the proposal referenced above have been reviewed by the Secretary, the Chair, and one member of the Human Subjects Committee. Your project is determined to be Expedited per per 45 CFR § 46.110(7) and has been approved by an expedited review process.

The Human Subjects Committee has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval does not replace any departmental or other approvals, which may be required.

If you submitted a proposed consent form with your application, the approved stamped consent form is attached to this approval notice. Only the stamped version of the consent form may be used in recruiting research subjects.

If the project has not been completed by 7/8/2014 you must request a renewal of approval for continuation of the project. As a courtesy, a renewal notice will be sent to you prior to your expiration date; however, it is your responsibility as the Principal Investigator to timely request renewal of your approval from the Committee.

You are advised that any change in protocol for this project must be reviewed and approved by the Committee prior to implementation of the proposed change in the protocol. A protocol change/amendment form is required to be submitted for approval by the Committee. In addition,

federal regulations require that the Principal Investigator promptly report, in writing any unanticipated problems or adverse events involving risks to research subjects or others.

By copy of this memorandum, the Chair of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols as often as needed to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Human Research Protection. The Assurance Number is FWA00000168/IRB number IRB00000446.

Cc: Peter Easton, Advisor
HSC No. 2013.10648

The Florida State University
Office of the Vice President For Research
Human Subjects Committee
Tallahassee, Florida 32306-2742
(850) 644-8673 · FAX (850) 644-4392

APPROVAL MEMORANDUM

Date: 7/31/2014

To: Yuanyuan Xiang

Address: 4452

Dept.: EDUCATIONAL FOUNDATIONS AND POLICY STUDIES

From: Thomas L. Jacobson, Chair

Re: Use of Human Subjects in Research

Exploring Chinese International Students' Conceptions of Academic Success in an American Graduate School

The application that you submitted to this office in regard to the use of human subjects in the proposal referenced above have been reviewed by the Secretary, the Chair, and one member of the Human Subjects Committee. Your project is determined to be Expedited per per 45 CFR § 46.110(7) and has been approved by an expedited review process.

The Human Subjects Committee has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval does not replace any departmental or other approvals, which may be

required.

If you submitted a proposed consent form with your application, the approved stamped consent form is attached to this approval notice. Only the stamped version of the consent form may be used in recruiting research subjects.

If the project has not been completed by 7/30/2015 you must request a renewal of approval for continuation of the project. As a courtesy, a renewal notice will be sent to you prior to your expiration date; however, it is your responsibility as the Principal Investigator to timely request renewal of your approval from the Committee.

You are advised that any change in protocol for this project must be reviewed and approved by the Committee prior to implementation of the proposed change in the protocol. A protocol change/amendment form is required to be submitted for approval by the Committee. In addition, federal regulations require that the Principal Investigator promptly report, in writing any unanticipated problems or adverse events involving risks to research subjects or others.

By copy of this memorandum, the Chair of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols as often as needed to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Human Research Protection. The Assurance Number is FWA00000168/IRB number IRB00000446.

Cc: Peter Easton, Advisor
HSC No. 2014.13321

REFERENCES

- Ablard, K. E. (1996). Parents' conceptions of academic success: Internal and external standards. *Journal of Advanced Academics*, 8 (2), 57-64. doi: 10.1177/1932202X9600800202
- Adrian-Taylor, S. R., Noels, K. A., & Tischler, K. (2007). Conflict between international graduate students and faculty supervisors: Toward effective conflict prevention and management strategies. *Journal of Studies in International Education*, 11(1), 90-117.
- Altbach, P.G., & Knight, J. (2007). The internationalization of higher education: Motivations and realities. *Journal of Studies in International Education*, 11(3-4), 290-305.
- Ampaw, F. D., & Jaeger, A. J. (2012). Completing the three stages of doctoral education: An event history analysis. *Research in Higher Education*, 53: 640–660. doi: 10.1007/s11162-011-9250-3
- Anbari, F. T., Khilkhanova, E., Romanova, M., & Umpleby, S. (2004). Managing cultural differences in international projects. *Journal of International Business and Economics*, 2(1), 267-271.
- Anderson, W. A., Banerjee, U., Drennan, C. L., Elgin, S. C. R., Epstein, I. R., Handelsman, J., ... & Warner, I. M. (2011). Changing the culture of science education at research universities. *Science*, 331, 152-153. Retrieved from <http://www.physics.emory.edu/faculty/weeks/journal/anderson-sci11.pdf>
- Bain, S., Fedynich, L., & Knight, M. (2011). The successful graduate student: A review of the factors for success. *Journal of Academic and Business Ethics*, 3(7). Retrieved from <http://www.aabri.com/manuscripts/10569.pdf>
- Benet-Martínez, V., & Haritatos, J. (2005). Bicultural identity integration (BII): Components and psychosocial antecedents. *Journal of personality*, 73(4), 1015-1050.
- Berk, G., & Galvan, D. (2009). How people experience and change institutions: A field guide to creative syncretism. *Theory and Society*, 38(6), 543-580. doi:10.1007/s11186-009-9095-3
- Berry, J. W. (1997). Immigration, acculturation and adaptation. *Applied Psychology: An International Review* 46, 5-34.
- Berry, J. W. (2005). Acculturation: Living successfully in two cultures. *International Journal of Intercultural Relations*, 29, 697-712
- Bieber, J. P., & Worley, L. K. (2006). Conceptualizing the academic life: Graduate students' perspectives. *The Journal of Higher Education*, 77(6), 1009-1035.
- Bourdieu, P. (1973). Cultural reproduction and social reproduction. In R. Brown (Ed.), *Knowledge, education and cultural change: Papers in the Sociology of Education* (pp. 71-112). London: Tavistock.

- Bourdieu, P. (1986). The forms of capital. In J. G. Richardson (Ed.), *Handbook of theory and research for the sociology of education* (pp. 241-258). NY: Greenwood Press.
- Butler, P., Leach, L., & Zepke, N. (2011). Non-institutional influences and student perceptions of success. *Studies in Higher Education*, 36(2), 227-242. doi:10.1080/03075070903545074
- Byrne, M. M. (2001). Understanding life experiences through a phenomenological approach to research. *AORN journal*, 73(4), 830-832.
- Castells, M. (2000). *The Rise of the Network Society* (Vol. I, 2nd ed). Oxford: Blackwell.
- Center of Global Engagement, Florida State University (CGE). Retrieved from <http://cge.fsu.edu/>
- Chen, P. (2003). *Factors influencing academic success of Chinese international students in Los Angeles community colleges* (Doctoral Dissertation). Retrieved from <http://search.proquest.com/docview/305293507?accountid=4840>.
- Chinese Idiom Dictionary (online). Retrieved from <http://www.purplepanda.com.au/IdiomDictionary.aspx>
- Cho, J., & Trent, A. (2006). Validity in qualitative research revisited. *Qualitative research*, 6(3), 319-340.
- Christe, B. (2013). The importance of faculty-student connections in STEM disciplines: A literature review. *Journal of STEM Education: Innovations and Research*, 14(3), 22.
- Cortazzi, M., & Jin, L. (1997). Communication for learning across cultures. *Overseas students in higher education: Issues in teaching and learning*, 76-90.
- Council of Graduate Schools. (2008). *Ph.D. completion and attrition: Analysis of baseline program data from the Ph.D. completion project*. Washington, DC: Author.
- Council of Graduate Schools. (September 12, 2013). *U.S. graduate schools report slight growth in new students for fall 2012*. Retrieved from <http://www.cgsnet.org/us-graduate-schools-report-slight-growth-new-students-fall-2012>
- Council of Graduate Schools. (September 28, 2012). *Graduate enrollment and degrees: 2001 to 2011*. Retrieved from http://www.cgsnet.org/search/apachesolr_search/Graduate%20Enrollment%20and%20Degrees%3A%202001-2011
- Creswell, J. W., & Miller, D. L. (2000). Determining validity in qualitative inquiry. *Theory into practice*, 39(3), 124-130.
- Creswell, J.W. (2007). *Qualitative inquiry and research design: Choosing among five approaches* (2nd ed.). Thousand Oaks: Sage Publications.

- Curtin, N., Stewart, A. J., & Ostrove, J. M. (2013). Fostering academic self-concept: Advisor support and sense of belonging among international and domestic graduate students. *American Educational Research Journal*, 50 (1), 108-137. Retrieved from <http://www.jstor.org/stable/23319709>
- David, D., & Florea, C. (2013). Cultural syncretism and cultural identity. *Academica Science Journal, Geographica Series*, (3), 83.
- Dimmock, C., & Walker, A. (1998). Comparative educational administration: Developing a cross-cultural conceptual framework. *Educational Administration Quarterly*, 34(4), 558-595.
- Eric Education. (January 15, 2013). *A Survey Report: Studying Abroad Intentions of Chinese Students*. Retrieved from <http://edu.sina.com.cn/a/2013-01-15/1632224517.shtml>
- Fang, Z., Grant, L. W., Xu, X., Stronge, J. H., & Ward, T. J. (2013). An international comparison investigating the relationship between national culture and student achievement. *Educational Assessment, Evaluation and Accountability*, 25(3), 159-177.
- Fedynich, L., & Bain, S. (2011). Mentoring the successful graduate student of tomorrow. *Research in Higher Education Journal*, 12(1). Retrieved from <http://www.w.aabri.com/manuscripts/11803.pdf>
- Fischer, C. S. (2008). Paradoxes of American Individualism. *Sociological Forum*, 23 (2), 363-372.
- Funnell, L., & Yip, M. F. (Eds.). (2014). *American and Chinese-language Cinemas: Examining Cultural Flows* (Vol. 34). Routledge.
- Furnham, A., & Bochner, S. (1986). *Cultural shock: Psychological reactions to unfamiliar environments*. London: Taylor & Francis.
- Gansemer-Topf, A. M., Ross, L. E., & Johnson, R. M. (2006). Graduate and professional student development and student affairs. *New Directions for Student Services*, 2006 (115), 19-30. doi: 10.1002/ss.213
- Gao, X. (2008). You had to work hard 'cause you didn't know whether you were going to wear shoes or straw sandals! *Journal of Language, Identity and Education*, 8, 169-187.
- Gardner, S. K. (2009). Conceptualizing success in doctoral education: Perspectives of faculty in seven disciplines. *The Review of Higher Education*, 32, 383-406.
- Greer, B. J. (2005). Overcoming academic challenges: The experiences of mainland Chinese graduate students at an American university (The University of Iowa). ProQuest Dissertations and Theses, 146-146. Retrieved from <http://search.proquest.com/docview/304988240?accountid=4840>. (304988240).

- Grehan, P. M., Flanagan, R., & Malgady, R. G. (2011). *Successful graduate students: The roles of personality traits and emotional intelligence*. *Psychology in the Schools*, 48(4), 317-331. doi: 10.1002/pits.20556
- Gu, Q., & Maley, A. (2008). Changing places: A study of Chinese students in the UK. *Language and Intercultural Communication*, 8(4), 224-245. doi: 10.1080/14708470802303025
- Gu, Q., Schweisfurth, M., & Day, C. (2010). Learning and growing in a 'foreign' context: Intercultural experiences of international students. *Compare*, 40(1), 7-23.
- Harrington, M. A. (2003). *Navigating the University System: The Effects of Chinese and Indian Graduate Student's Social Networks on Academic Progression* (Doctoral dissertation, Virginia Polytechnic Institute and State University).
- Hofstede, G. (2007). Asian management in the 21st century. *Asia Pacific Journal of Management*, 24(4), 411-420. Retrieved from <http://link.springer.com/article/10.1007%2Fs10490-007-9049-0>
- Hofstede, G. (2010). Motivation, leadership and organization: Do American theories apply abroad? In J. McMahon (Ed.), *Leadership classics* (pp. 337-363). Long Grove, IL: Waveland Press.
- Hofstede, G. (2011). Dimensionalizing cultures: The Hofstede model in context. *Psychology and Culture*, 2(1). Retrieved from <http://dx.doi.org/10.9707/2307-0919.1014>
- Hofstede, G. H., Hofstede, G. J., & Minkov, M. (2010). *Cultures and organizations: Software of the mind: Intercultural cooperation and its importance for survival (revised and expanded)* (3rd ed.). New York, NY: McGraw-Hill.
- Hopwood, N. (2010). Doctoral experience and learning from a sociocultural perspective. *Studies in Higher Education*, 35 (7), 829-843.
- Hu, S., & Kuh, G. (2002). Being (dis)engaged in educationally purposeful activities: The influences of student and institutional characteristics. *Research in Higher Education* 43, (5): 555-575.
- Huang, J., & Brown, K. (2009). Cultural factors affecting Chinese ESL students' academic learning. *Education*, 129 (4), 643-653.
- Huang, J., & Rinaldo, V. (2009). Factors affecting Chinese graduate students' cross-cultural learning. *International Journal of Applied Educational Studies*, 4(1), 1-10.
- Hung, H. L., & Hyun, E. (2010). East Asian international graduate students' epistemological experiences in an American university. *International Journal of Intercultural Relations*, 34(4), 340-353.

- Institute of International Education (IIE). (2010). *Open Doors Fact Sheet—China*. Retrieved from <http://www.iie.org/Research-and-Publications/Open-Doors/Data/Fact-Sheets-by-Country>
- Institute of International Education (IIE). (2011). *Open Doors Fact Sheet—China*. Retrieved from <http://www.iie.org/Research-and-Publications/Open-Doors/Data/Fact-Sheets-by-Country>
- Institute of International Education (IIE). (2012a). *Open Doors 2012 Fast Facts*. Retrieved from <http://www.iie.org/Research-and-Publications/Open-Doors/Data>
- Institute of International Education (IIE). (2012b). *Open Doors Fact Sheet—China*. Retrieved from <http://www.iie.org/Research-and-Publications/Open-Doors/Data/Fact-Sheets-by-Country>
- Institute of International Education (IIE). (2012c). *International Students: Fields of Study by Place of Origin*. Retrieved from <http://www.iie.org/Research-and-Publications/Open-Doors/Data>
- Institute of International Education (IIE). (2013a). *Open Doors 2013 Fast Facts*. Retrieved from <http://www.iie.org/Research-and-Publications/Open-Doors/Data>
- Institute of International Education (IIE). (2013b). *Open Doors Fact Sheet—China*. Retrieved from <http://www.iie.org/Research-and-Publications/Open-Doors/Data/Fact-Sheets-by-Country>
- Institute of International Education (IIE). (2013c). *International Students: Fields of Study by Place of Origin*. Retrieved from <http://www.iie.org/Research-and-Publications/Open-Doors/Data>
- Institutional Research Office of Florida State University. (2013). Retrieved from <http://www.ir.fsu.edu/student/headcount.htm>
- Jiang, X. (2010). Chinese engineering students' cross-cultural adaptation in graduate school. (3429426, University of Michigan). ProQuest Dissertations and Theses, 230. Retrieved from <http://search.proquest.com/docview/762023967?accountid=4840>. (762023967).
- Kao, G. (2000). Group images and possible selves among adolescents: Linking stereotypes to expectations by race and ethnicity. *Sociological Forum*, 15 (3), 407-430. doi: 10.1023/A:1007572209544
- Kuttig, M. Y. (2012). *Doctoral advising: A grounded theory exploration of female mainland Chinese international students* (Doctoral dissertation). Retrieved from <http://search.proquest.com/docview/1018060748?accountid=4840>
- Le, T., & Gardner, S. K. (2010). Understanding the doctoral experience of Asian international students in the science, technology, engineering, and mathematics (STEM) fields: An

- exploration of one institutional context. *Journal of College Student Development*, 51(3), 252-264.
- Lee, O., & Buxton, C. (2011). Engaging Culturally and Linguistically Diverse Students in Learning Science. *Theory into Practice*, 50(4), 277-284.
- Lester, S. (1999). An introduction to phenomenological research. Retrieved from www.psyking.net/HTMLobj-3825/Introduction_to_Phenomenological_Research-Lester.pdf
- Leung, K. (2010). Beliefs in Chinese culture. *The Oxford handbook of Chinese psychology*, 221-240.
- Li, G., Chen, W., & Duanmu, J. (2010). Determinants of international students' academic performance: A comparison between Chinese and other international students. *Journal of Studies in International Education*, 14(4), 389-405.
- Li, J. (2012). *Cultural foundations of learning: East and West*. New York, NY: Cambridge University Press.
- Lin, L. (1998). *Chinese graduate students' perception of their adjustment experiences at the University of Pittsburgh*. (9837533, University of Pittsburgh). ProQuest Dissertations and Theses, 202-202. Retrieved from <http://search.proquest.com/docview/304445903?accountid=4840>. (304445903).
- Lin, L. (2013). *Chinese doctoral students' perceptions of academic achievement, identity investment and use of English in an American university*. (3596185, the University of Alabama). ProQuest Dissertations and Theses, 93. Retrieved from <http://search.proquest.com/docview/1448873410?accountid=4840>. (1448873410).
- Lovitts, B. E. (2001). *Leaving the ivory tower: The causes and consequences of departure from doctoral study*. Lanham, Md.: Rowman and Littlefield.
- Lydell, L. (2008). Assessing outcomes in graduate education. *On the Horizon*, 16(2), 107-117. doi: 10.1108/10748120810874504
- Makhlouf, H. H. (2014). Facets of globalization. *International Journal of Business and Social Science*, 5(1) Retrieved from <http://search.proquest.com/docview/1503139881?accountid=4840>
- Markert, L. R. (1996). Gender Related to Success in Science and Technology. *Journal of Technology Studies*, 22(2), 21-29.
- Masuda, A., Anderson, P. L., Twohig, M. P., Feinstein, A. B., Chou, Y. Y., Wendell, J. W., & Stormo, A. R. (2009). Help-seeking experiences and attitudes among African American, Asian American, and European American college students. *International Journal for the Advancement of Counselling*, 31(3), 168-180.

- McClure, J. W. (2007). International graduates' cross-cultural adjustment: Experiences, coping strategies, and suggested programmatic responses. *Teaching in Higher Education*, 12(2), 199-217.
- Micari, M., & Pazos, P. (2012). Connecting to the professor: Impact of the student–faculty relationship in a highly challenging course. *College Teaching*, 60(2), 41-47. doi:10.1080/87567555.2011.627576
- Moerer-Urdahl, T., & Creswell, J. (2004). Using transcendental phenomenology to explore the “ripple effect” in a leadership mentoring program. *International Journal of Qualitative Methods*, 3 (2). Article 2. Retrieved DATE from http://www.ualberta.ca/~iiqm/backissues/3_2/pdf/moerercreswell.pdf
- Moustakas, C. (1994). *Phenomenological research methods*. Sage Publications.
- NAFSA (Association of International Educators), (2014). *The economic benefits of international students to the U.S. economy*. Retrieved from http://www.nafsa.org/_/File/_/eis2013/Pennsylvania.pdf
- NBSC (National Bureau of Statistics of China), (June 17, 2015). Retrieved from <http://www.stats.gov.cn/english/Statisticaldata/AnnualData/>
- Ogbu, J. U. (1992). Understanding cultural diversity and learning. *Educational researcher*, 21(8), 5-14+24.
- Ono, S. J. & Hardcastle, V. G. (April 4, 2014). Network and the STEM Gender Gap. Inside Higher Ed. Retrieved from <https://www.insidehighered.com/advice/2014/04/04/campuses-must-create-formal-networks-female-stem-professors-essay>
- Pandit, K. (2007). The importance of international students on our campuses. *Yearbook of the Association of Pacific Coast Geographers*, 69(1), 156-159.
- Pascarella E.T., & Terenzini, P.T. (2005). *How college affects students: A third decade of research*. San Francisco, CA: Jossey-Bass.
- Patton, M. Q. (2002). *Qualitative research & evaluation methods*. Thousands of Oaks, CA: Sage.
- Pedersen, P. B. (1991). Counseling international students. *The counseling psychologist*, 19(1), 10-58.
- Polson, C. J. (1999). Programming for successful retention of graduate students. *The National Academic Advising Association (NACADA) Journal*, 19(2), 28-33.
- Pratt, D. D. (1992). Conceptions of teaching. *Adult Education Quarterly*, 42(4), 203-220.
- Rajaram, K., & Bordia, S. (2011). Culture clash. *Journal of International Education in Business*, 4(1), 63-83. doi:<http://dx.doi.org/10.1108/18363261111170595>

- Rienties, B., Beusaert, S., Grohnert, T., Niemantsverdriet, S., & Kommers, P. (2012). Understanding academic performance of international students: the role of ethnicity, academic and social integration. *Higher education*, 63(6), 685-700.
- Ryan, M. E., & Twibell, R. S. (2000). Concerns, values, stress, coping, health and educational outcomes of college students who study abroad. *International Journal of Intercultural Relations*, 24, 409-435.
- Schneider, B., & Lee, Y. (1990). A model for academic success: The school and home environment of East Asian students. *Anthropology & Education Quarterly*, 21: 358-377. doi: 10.1525/aeq.1990.21.4.04x0596x
- Seymour, E. & Hewitt, N. (1997). *Talking about leaving: Why undergraduates leave the sciences*. Boulder, CO: Westview Press.
- Smith, R. A., & Khawaja, N. G. (2011). A review of the acculturation experiences of international students. *International Journal of Intercultural Relations*, 35(6), 699-713.
- Snow, C. P. (2012). *The two cultures*. Cambridge University Press.
- Survey of Earned Doctorates. (2014). Retrieved from www.nsf.gov/statistics/sed/2013/datatables.cfm
- The problem with Chinese graduate students. (1988, Oct 07). *The Washington Post*. Retrieved from <http://search.proquest.com/docview/307103833?accountid=4840>
- Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition (2nd ed)*. Chicago: University of Chicago Press.
- Trice, A. G. (2005). Navigating in a multinational learning community: Academic departments' responses to graduate international students. *Journal of Studies in International Education*, 9(1), 62-89.
- Trueba, H. T. (1988). Culturally based explanations of minority students' academic achievement. *Anthropology & Education Quarterly*, 19(3), 270-287.
- Wang, Y. (2011). Transformation of Chinese international students understood through a sense of wholeness. *Teaching in Higher Education*, 17(4), 359-370. Retrieved from <http://dx.doi.org/10.1080/13562517.2011.641004>
- Wang, Z. (2004). *Studying in the United States: Chinese graduate students' experiences of academic adjustment*. (3153455, University of Illinois at Urbana-Champaign). ProQuest Dissertations and Theses. Retrieved from <http://search.proquest.com/docview/305192267?accountid=4840>. (305192267).
- Ward, C., Bochner, S., & Furnham, A. (2001). *The psychology of culture shock (2nd ed)*. Philadelphia, PA: Routledge.

- Ward, C., Okura, Y., Kennedy, A., & Kojima, T. (1998). The U-curve on trial: A longitudinal study of psychological and sociocultural adjustment during cross-cultural transition. *International Journal of Intercultural Relations*, 22(3), 277-291.
- Williams, R. M. Jr. (1970). *American Society* (3rd ed). New York: Knopf.
- Yan, K., & Berliner, D. C. (2011). Chinese international students in the United States: Demographic trends, motivations, acculturation features and adjustment challenges. *Asia Pacific Education Review*, 12(2), 173-184.
- 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. Retrieved from <http://search.proquest.com/docview/1413417062?accountid=4840>
- Yang, Y. T. (2010). *Stress, coping, and psychological well-being: Comparison among American and Asian international graduate students from Taiwan, China, and South Korea*. (Doctoral dissertation). Retrieved from <http://search.proquest.com/docview/748814074?accountid=4840>.
- Yu, K. (2008). The developmental logic of Chinese culture under modernization and globalization. *Boundary 2*, 35(2), 157-182.
- Yu, W., & Wang, S. (2011). An investigation into the acculturation strategies of Chinese students in Germany. *Intercultural Communication Studies*, XX (2), 190-210. Retrieved from <http://www.uri.edu/iaics/content/2011v20n2/15WeihuaYuShuWang.pdf>
- Yue, Y., & Le, Q. (2012). From “Cultural Shock” to “ABC Framework”: Development of intercultural contact theory. *International Journal of Innovation Interdisciplinary Research*, 2, 133-141.
- Zhang, H. (2013). Academic adaptation and cross-cultural learning experiences of Chinese students at American universities: A narrative inquiry. (3595874, Northeastern University). ProQuest Dissertations and Theses, 190. Retrieved from <http://search.proquest.com/docview/1446718357?accountid=4840>. (1446718357).
- Zhang, N. (2000). Acculturation and counseling expectancies: Asian international students' attitudes toward seeking professional psychological help. *Dissertation Abstracts International*, 60(07), 2392A. (UMI No. 9937198)
- Zhang, N., & Rentz, A. L. (1996). Intercultural adaptation among graduate students from the People's Republic of China. *College Student Journal*, 30(3), 321-328.
- Zhang, Z., & Xu, J. (2007). Understanding Chinese international graduate students' adaptation to learning in North America: A cultural perspective. *Higher Education Perspectives*, 3(1).
- Zhao, C. M., Kuh, G. D., & Carini, R. M. (2005). A comparison of international student and American student engagement in effective educational practices. *Journal of Higher Education*, 209-231.

- Zhao, F. (2007). *Comparing educational beliefs of Chinese and American graduate students*. (3265537, Auburn University). ProQuest Dissertations and Theses, 227. Retrieved from <http://search.proquest.com/docview/304899080?accountid=4840>. (304899080).
- Zhao, Y. (2009). *Catching up or leading the way: American education in the age of globalization*. Alexandria, Virginia: ASCD
- Zhou, Y., Frey, C., & Bang, H. (2011). Understanding of international graduate students' academic adaptation to a U. S. Graduate School. *International Education*, 41(1), 76-84.
- Zhou, Y., Jindal-Snape, D., Topping, K., & Todman, J. (2008). Theoretical models of culture shock and adaptation in international students in higher education. *Studies in Higher Education*, 33(1), 63-75.

BIOGRAPHICAL SKETCH

Yuanyuan Xiang earned her Bachelor's Degree in English from Hubei University in 2003 and Master's Degree in Higher Education from Huazhong University of Science and Technology in 2007. In 2010, she came to the US from China and joined the doctoral program in International and Comparative Education at Florida State University (FSU).

Before she started her doctoral program in the US, Yuanyuan Xiang had been working as a college English instructor and a study-abroad adviser in China. While pursuing her doctoral degree at FSU, Yuanyuan Xiang worked as a research assistant and an instructor for the Department of Educational Leadership and Policy Studies. She interned at Florida State College in Jacksonville (US) in 2011 as an international student adviser, and at Hubei Education International (China) in 2014 as an international program coordinator.

Yuanyuan Xiang has given research presentations at international and regional conference meetings including the conferences of Comparative and International Education Society. She has publications collaborated with other scholars in international education such as a report in *EdData II, USAID* and an article in *Asian Social Work and Policy Review*. She also has practical experiences in coordinating international educational programs and advising international students and scholars. Her career goal is to be an international education practitioner and researcher.