

School of Education

INTERCULTURAL COMPETENCE DEVELOPMENT: THE PERCEPTIONS OF CHINESE VISITING SCHOLARS SOJOURNING ABROAD

By

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To my husband:

KAIJUN CHEN

ABSTRACT

Considering the increasing number of Chinese scholars being sent to foreign countries to study as visiting scholars as well as limited research focusing on examining their intercultural competence development while sojourning abroad, it is important to examine their perceptions of the factors affecting their intercultural competence development during their sojourning abroad.

A mixed-methods design was employed for this study. Quantitatively, using generalizability theory (Cronbach, Gleser, Nanda, & Rajaratnam, 1972) as a theoretical framework, this study examined differences in 85 Chinese visiting scholars' ratings of the factors affecting their intercultural competence development during their sojourning abroad across sex (i.e., male and female), age (i.e., younger than 40 years old, 40-50 years old, and older than 50 years old), country of study (i.e., the United States and the United Kingdom), and length of study (i.e., 3-6 months, 7-12 months, and more than 12 months). Qualitatively, this study used ten semi-structured interviews (i.e., 5 interviews with Chinese visiting scholars studying in the United States and 5 interviews with Chinese visiting scholars studying in the United Kingdom) to gain Chinese visiting scholars' perceptions of the factors affecting their intercultural competence development during their sojourning abroad.

Results show that there were significant differences in the ratings of certain factors in terms of their impact on the development of intercultural competence as evaluated by the 85 Chinese visiting scholars across sex, country of study, age, and

length of study. Further, the variables sex, country of study, age, and length of study did generate different results in terms of the sources of rating variation of the impact of the factors on Chinese visiting scholars' intercultural competence development. Furthermore, both Chinese culture and the host country culture affect Chinese visiting scholars' intercultural competence development while they are studying abroad. Finally, Chinese visiting scholars' study abroad experience continues to impact their interpersonal communication after they have come back to China. Important educational implications for Chinese visiting scholars as well as American and British professors and administrators are discussed.

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CHAPTER ONE

INTRODUCTION

The purpose of this chapter is fivefold: a) to describe the research rationale and present its context; b) to briefly explain the concept of intercultural competence; c) to put forth the research problem of the thesis; d) to outline the structure of the thesis and its organization; and e) to list the abbreviations and acronyms used in this thesis.

The Research Rationale and Context

Due to globalisation and internationalisation, intercultural competence has become an increasingly important ability (Benjamin, 2010; Bradford, Allen, & Beisser, 1998). Internationalisation is a multi-faceted process. One of its potential dimensions is found in higher education. It is concerned not only with dominant themes such as "…the free flow of information, capital, goods and services, as well as the free movement of capital and people and the wealth and knowledge they represent" (Morgan, 2002, p.10), but also with new opportunities and challenges at a time when nation-states are no longer the sole providers of higher education. Such opportunities and challenges involve social issues of access, equity, funding and quality as well as those of socio-cultural diversity and sustainable development (UNESCO, 2004). In order to respond to such opportunities and challenges, higher education needs to become more holistic and to integrate an intercultural dimension into its system; hence reinforcing its capacity and maintaining its excellence. It is often expected that the internationalisation of higher education can foster intercultural understanding,

respect, and tolerance among peoples and influence the capacity of individuals and institutions to develop as ethical, socially just and sustainable entities (Alfred, Byram, & Fleming, 2003; Byram & Feng, 2006; Byram, 1997; Halpern, 2004; Hamza, 2010; Held & McGrew, 2003; Martell, 2010).

The potential of intercultural competence development is a concept that is receiving growing interest from researchers and policy makers in international higher education. As indicated by Bond, Qian, and Huang (2003), internationalisation strategies in higher education have many elements including study abroad programmes/campuses, exchange students, international students, faculty mobility, and visiting scholars.

Internationalisation in higher education also calls for better cross-culture communication and for greater social harmony and tolerance (Alfred, Byram & Fleming, 2003; Kramer & Carnevale, 2001; Hamza, 2010; Martell, 2010). Studying abroad often leads to increased cultural capital for the individual as an extra dimension to the educational experience (Byram & Feng, 2006; Halpern, 2004). It is not simply about acquiring skills or a formal qualification. It implies the socio-cultural changes or adaptations over time in beliefs, attitudes, values, etc., as well as consciousness of the individuals' ethnic and heritage cultures, albeit in varying degrees. It is two-dimensional in the sense that inter-culturality can be developed in the sojourners while they endeavour to function within a host society. This sophisticated process of intercultural dilemma is usually brought about by the

individuals' sojourning in another country (Berry, 1997; Laroche, Kim, Hui, & Tomiuk, 1998; Nguyen, Messé, & Stollak, 1999).

The individuals sojourning abroad must develop a strong intercultural competence to communicate with speakers from various racial, cultural, and linguistic backgrounds (Hu, 2007; Keengwe, 2010). In order to examine how individuals develop their intercultural competence while sojourning abroad, it is important to understand what intercultural competence is and what factors affecting their intercultural competence development. The following section briefly explains the concept of intercultural competence and the factors that affect its development.

What Is Intercultural Competence?

Intercultural competence refers to "a complex of abilities needed to perform effectively and appropriately when interacting with others who are linguistically and culturally different from oneself" (Fantini, 2006, p. 12). Throughout the literature, a few terms which are more or less related to intercultural competence are commonly used; for example, intercultural communicative competence (ICC), trans-cultural communication, cross-cultural adaptation, and intercultural sensitivity (Fantini, 2006).

As explained by Sinicrope, Norris, and Watanabe (2007), these terms indicate the "ability to step beyond one's own culture and function with other individuals from linguistically and culturally diverse backgrounds" (p. 1). Intercultural competence is operationalised as the following six competencies: "language competence, adaptation, social decentering, communication effectiveness, social integration, and knowledge of the host culture" (Redmond, 2000, p. 151).

Intercultural competence requires the speaker to be able to understand and use the language appropriately in a given social situation or context (Garcia, 2004). For example, in order to speak English appropriately, English as a second or foreign learners need to "focus on when to speak, in what matter to speak and to whom, all skills that can be difficult to master when transferring socio-cultural rules from their first language" (Huang, Dotterweich, & Bowers, 2012, p. 37).

Effective intercultural communication has become extremely important for non-native English speakers to succeed at English-speaking schools. However, their different languages and cultural backgrounds as well as their different social assumptions about how a conversation should go can cause a breakdown in communication, which is known as intercultural miscommunication (Huang & Tavano, 2013). Research shows non-native English students' insufficient English language proficiency, coupled with their unfamiliarity with the English-speaking culture has prevented them from communicating effectively with their English-speaking teachers and peers (Huang & Tavano, 2013).

Understanding the Development of Intercultural Competence

The development of intercultural competence is receiving increasing interest from researchers and policy makers in international higher education. There are two predominate perceptions related to intercultural competence development.

The first perception is that of the *culture learning approach*. It emphasises the significance of the adaptation process of becoming intercultural (Ward & Kennedy, 1993, 1994; Ward & Searle, 1991). By being intercultural, individuals first

incorporate their in-groups *habitus* (Bourdieu & Passeron, 1990), but still are accepted by the out-groups representing another culture in first hand contact. And the *habitus* is a complex concept. Its simplest usage could be understood as a structure of the mind characterized by a set of acquired schemata, sensibilities, dispositions and taste (Scott & Marshall, 1998). The *habitus*, defined from the socio-cultural aspects, includes the totality of learned habits, bodily skills, styles, tastes, and other non-discursive knowledge that are embedded in the body or daily practices of a specific group of individuals, societies, and nations (Bourdieu & Wacquant, 1992). A more detailed explanation of the concept of *habitus* is to be explored in the literature review. Then, through interlinked flows of information, the sensitivity of the self-conscious integration into the out-groups takes place, although there may be some degree of conflicts in the cultures involved. "An intercultural speaker is aware of both their own and others' culturally constructed selves." or "…the intercultural speaker is someone, who in a comparative and relative way, is learning about their own and others' cultural practices in a mutually reinforcing relationship" (Roberts, Byram, Barro, Jordan, & Street, 2001, pp. 30-31). Therefore, one is not expected culturally to become a native, but to learn to *mediate* between different beliefs systems in their social life. And through these adaptive processes, individuals are enhancing their capacity of inter-culturality and integrity.

The second perception is the *stress and coping approach* (Lazarus & Folkman, 1984). It conceptualises the individuals' intercultural capacity "…as a series of stress-provoking life changes that draw on adjustive resources and require coping

responses" (Ward, Bochner, & Furnham, 2001, p. 37). As being intercultural, the sojourners have to face the stress of their taken-for-granted conventions, such as, who they are and what are their roots. The compression of the time and space of social relations provokes a consciousness of their deep rooted human preferences (Morgan, 2002). They are required to reflect on the impacts upon them; and matters of funding, accommodation, loneliness, homesickness, away from family and formal social connections, and so on usually make their frustrations even worse (Teichler & Janson, 2007; Zhou & Todman, 2009; Chapdelaine & Alexitch, 2004). However, the sojourners have to learn to harmonise with others in order to achieve their academic success and to function effectively. Being intercultural always means a dilemma of conflicts and integrity in cultures.

Factors Affecting Intercultural Competence

Research shows that many factors affect an individual's intercultural competence; for example, linguistic factors, socio-cultural factors, psycho-cultural factors, cognitive factors, psycho-logical factors, affective factors, and personal factors (Bennett, 2004; Bouton, 1994; Chen & Starosta, 1998; Chang, 2009; Huang & Tavano , 2013; Huang & Brown, 2009; Huang & Klinger, 2006; Huang & Rinaldo, 2009; Lin, Su, & Ho, 2009; Olshtain & Cohen, 1990; Redmond, 2000; Roh, 2014; Sercu, 2006; Shaheen, 2004; Tanck, 2002; Williaume, 2009). Table 1 on next page presents a list of 40 specific factors that were found to impact an individual's development of intercultural competence overseas. These factors are reviewed in the literature review chapter.

Table 1

Factors Affecting an Individual's Intercultural Competence Development Overseas

No.	Factors
1	interaction engagement
2	cultural differences
3	interaction confidence
4	interaction enjoyment
5	interaction attentiveness
6	pre-departure preparation
7	interactions with international peers
8	stereotypes
9	prejudice
10	ethnocentrism
11	self-concept
12	open-mindedness
13	being non-judgemental
14	social relaxation
15	knowledge about the host country/culture
16	experiences with cultural difference
17	being members of the majority race
18	having prolonged negative experiences with international people
19	having the goal of gaining cultural understanding
20	time spent with their international peers
21	having career goals and vocational interests
22	training and orientation for overseas sojourners
23	culture shock
24	socio-economic status
25	previous travelling experience
26	growing up in a multicultural home
27	accompanying spouses and children
28	foreign language skills or proficiency
29	previous experience abroad
30	family international experience
31	having the goal of gaining cultural understanding
32	past international experiences
33	studying language overseas
34	living with a host family
35	having an international perspective
36	being self-confidence
37	tolerance of ambiguity
38	having social skills
39	having self-esteem
40	feeling stressful

Table compiled by author

The Research Problem

Internationalisation in higher education has influenced educational policy making in different countries worldwide. China, a country with the largest population (Internet World Stats, 2014), started to send visiting scholars overseas since its Open Door Policy[1] in 1978. The term "Chinese visiting scholar" is used throughout this thesis to refer to a faculty member selected from a Chinese university and sponsored by the Chinese government for a relatively short period of time studying abroad (China Scholarship Council, 1999). The number of Chinese visiting scholars sojourning abroad has more than doubled since the 1980s and has recently grown significantly (China Scholarship Council, 2010). Statistics show that in the 2010, 13,038 Chinese visiting scholars were sponsored to study in different countries and 7,000 finished their studies and research and returned to China (China Scholarship Council, 2010).

These Chinese visiting scholars are different from regular Chinese students studying for academic degrees in foreign universities in terms of linguistic and cultural competence. Chinese students studying for academic degrees have passed the required foreign language proficiency tests such as TOEFL (Test of English as a Foreign Language) or IELTS (International English Language Test System); further they are usually younger and easier to adapt to the new linguistic and cultural environment (Huang, 2013). Many studies have examined Chinese students' cross-cultural learning challenges and coping strategies as well as their intercultural competence development in foreign universities (Gu, 2009; Huang, 2013; Huang,

2009; Huang & Klinger, 2006; Huang & Rinaldo, 2009; Zhou & Todman, 2009). However, there is very limited research focusing on examining Chinese visiting scholars' cross-cultural experience while sojourning abroad. What is achieved socio-culturally by Chinese visiting scholars as an extra dimension is not very clear. Knowledge of the factors impacting their intercultural competence development during their sojourning abroad is almost absent from the current literature. Therefore, the examination of Chinese visiting scholars' perceptions of the factors impacting their intercultural competence development during their sojourning abroad has important educational implications. Given the increasing number of Chinese scholars being sent to foreign countries to study as visiting scholars, the purpose of this thesis was to examine Chinese visiting scholars' perceptions on the factors affecting their intercultural competence development during their sojourning abroad.

The Research Questions

Specifically, the following five research questions guide this thesis study: a) Are there any significant differences (e.g., by sex, age, country of study, and length of study) in rating the impact of the factors on the Chinese visiting scholars' intercultural competence development? b) What are the sources of rating variation of the impact of the factors on Chinese visiting scholars' intercultural competence development? c) How does Chinese culture influence the Chinese visiting scholars' intercultural competence development during their sojourning abroad? d) How does the host country (i.e., the United States versus the United Kingdom) culture influence the Chinese visiting scholars' intercultural competence development during their

sojourning abroad? and e) How does the study abroad experience influence their interpersonal communication after they have come back to China?

Personal Significance

My educational background and professional experience have enabled me to choose this topic for my thesis. I received my undergraduate and graduate education in Teaching English as a foreign language (TEFL) and intercultural communication has become one of my research interests. Further, I had experiences of several years' study and work abroad in countries and regions including the United Kingdom (UK), Australia, Thailand and Hong Kong. I became more aware of how the host culture and the Chinese culture influence my own intercultural competence development. Due to my educational and professional experiences, the need for intercultural competence is very clear in my mind and so is the significance of the important skills required to be an interculturally competent educator in today's world.

Structure of the Thesis

The thesis comprises six chapters. Chapter 1 is an introduction chapter. It provides a general overview of the study by describing the research rationale and the research problem as well as presenting the research context and explaining some key concepts.

Chapter 2 reviews the related literature. It first describes studying abroad and higher education in China, giving a contextual account of the phenomenon of studying abroad and higher education reform after the Chinese Open Door Policy

even since 1978. It then reviews literature related to the theoretical frameworks for intercultural competence as well as empirical studies that examined the factors affecting individuals' intercultural competence development.

Chapter 3 describes the research methodology and methods. It begins with an overview of the research design. It then describes both data collection procedures and analysis methods.

Chapter 4 is the presentation of the findings. It reports both quantitative and qualitative results, focusing on answering the four research questions of the study.

Chapter 5 discusses the results of the study. It first discusses the quantitative results, which are related to the first two research questions. It then discusses the qualitative results, which are related to the last three research questions. This chapter makes links to the previous published literature and identifies both similarities and differences so that new understandings about intercultural competence development are revealed.

Chapter 6 begins with a re-statement of the research questions and a brief description of the methods used in this study. It then highlights the major findings. The limitations of the study are then presented. The conclusions and implications for Chinese visiting scholars and American and British professors and administrators are then discussed in light of the limitations. The chapter concludes with recommendations for future research in the area of intercultural competence development of Chinese visiting scholars sojourning abroad. Finally, this chapter

makes a final personal reflection on what the researcher has learned about the research process.

Abbreviations and Acronyms

The following abbreviations and acronyms were used in this thesis. They were spelled out in full.

ANOVA – Analysis of variance

CSC – The China Scholarship Council

CTT – Classical test theory

DMIS – The Developmental Model of Intercultural Sensitivity

GRE – Graduate Record Examination

GENOVA – Generalized *Analysis of Variance*

G-theory – Generalizability theory

ICC – intercultural communicative competence

IDI – The Intercultural Development Inventory

IELTS – International English Language Testing System

IVIS – The International Volunteering Impacts Survey

JET – Japan Exchange and Teaching Programme

L1 – The first language

L2 – The second language

PRC – The People's Republic of China

SPSS – Statistical Package for Social Sciences

TEFL – Teaching English as a Foreign Language

TOEFL – Test of English as a Foreign Language

UK – The United Kingdom of Great Britain and Northern Ireland

USA – The United States of America

WTO – The World Trade Organization

CHAPTER TWO

LITERATURE REVIEW

The purpose of this literature review chapter is fivefold: a) to provide an overview of studying abroad and higher education reform in China; b) to describe the construct of intercultural competence and its major theoretical frameworks; c) to review the factors affecting the development of intercultural competence of individuals sojourning abroad including Chinese students studying for academic degrees in foreign universities; d) to present the conceptual framework of this study; and e) to identify research gaps in current literature on Chinese visiting scholars sojourning abroad and state the specific research questions that guided the study.

Study Abroad and Higher Education Reform in China

Since this thesis examined Chinese visiting scholars' perceptions of the factors impacting their intercultural competence development during their sojourning abroad, it was important to provide more detailed description of the research context, which could help better understand Chinese visiting scholars' educational and cultural backgrounds and how these could impact their intercultural competence development. The following section first briefly describes the development and reform of higher education in China; and then provides an overview of study abroad phenomenon in the context of higher education reform after the Chinese Open Door Policy in 1978.

The Development and Reform of Higher Education in China

The history of higher education in China can be traced back to Han Dynasty over 2,000 years ago (Ministry of Foreign Affairs, 2014). The modern universities started at the end of the 19th century and the earliest universities in China include Tianjin University, Jiaotong University, Zhejiang University, and Beijing University, which were founded in 1895, 1896, 1897, and 1898, respectively.

Before the founding of the People's Republic of China in 1949, higher education in China developed slowly with limited resources and poor conditions (Ministry of Foreign Affairs, 2014). Only after 1949, especially after the Chinese Open Door Policy in 1978, higher education in China has achieved significant progress (Ministry of Foreign Affairs, 2014; Morgan & Wu, 2011).

Higher education can be classified into elite, mass, and universal higher education, with university participation rate under 15%, between 15% and 50%, and 50% and above, respectively (Trow, 1974). Higher education in China, as argued by Shan and Guo (2014), gradually moved away from an elite mode of higher education after the Chinese Open Door Policy in 1978; and by 2004 it "had sped into a market-based, mass higher education system" (Morgan & Wu, 2011, pp. 11-12). Over the past decade, as argued by Morgan and Wu (2011), a major transformation of Chinese higher education has taken place. China has reshaped its higher education sector from elite to mass education with the number of graduates having quadrupled to three million a year over six years.

Shan and Guo (2014) provide the following brief summary about China's higher education reform. A comprehensive reform was initiated in 1985 with the release of *The Decision on Reforming Chinese Educational System* by the State Council. Before 1985, the university participation rate in China was extremely low (i.e., approximately 5%). All students admitted into universities were fully funded by the state and they were "recruited and posted to jobs on the basis of state quotas and central state plans" (p. 12). After 1985, universities were allowed to admit students funded (i.e., commissioned) by their future employers or self-supporting (i.e., paying their own tuition) students. Prior to 1989, only commissioned and self-supporting students were required to pay tuition. Students recruited within state quotas were fully funded by the state. This situation changed in August 1989 when Ministry of Education, Central Price Bureau, and Ministry of Finance jointly issued the *Regulation on Higher education Institution Tuition and Accommodation Fee*. This regulation proposes that "higher education is beyond compulsory education, and that all university students should pay tuition fees. Institutions then started charging tuition fees. In 1997, all students became fee paying students." (Shan & Guo, 2014, p.12; Sun & Barrientos, 2009)

Higher education in China is continuously growing, developing, and improving. It has played a significant part in economic growth and social development in the country (Ministry of Foreign Affairs, 2014). China is exceptional in using tertiary education as a development strategy to improve the quality of its graduates, and make

higher education available to as many of its citizens as possible (Morgan & Wu, 2011).

The year of 1999 is an important landmark in China's higher education. Since 1999 China has greatly accelerated the pace of developing its higher education. Significantly increased funding from the central government and private enterprises has helped improve the conditions of campuses remarkably. Further, the number of colleges and universities as well as student enrollment has increased rapidly (Ministry of Foreign Affairs, 2014; Morgan & Wu, 2011).

From 1998 to 2013, the number of colleges and universities in China increased from 1022 to 2442. The undergraduate and postgraduate enrolment increased six and nine times, respectively. In 2013, the number of full-time students in Chinese higher education was 26.475 million, which was 7.3 times larger than in 1998. Full-time teachers increased from 407 thousand to 1.34 million, increased by 254%. More and more college and university teachers have earned doctorate degrees and/or had study abroad experience. Further, teaching effectiveness and research outcomes have greatly improved (Ministry of Foreign Affairs, 2014; Morgan & Wu, 2011).

Currently, there are over 2,000 universities and colleges, with a total yearly enrolment of more than six million students. Chinese higher education has adopted degree systems (i.e., Bachelor’s, Master’s and Doctoral degrees). Chinese colleges and universities also accept international students.

Higher education in China can be classified into public and private and it is administrated by central government or regional government (Ministry of Foreign

Affairs, 2014; Morgan & Wu, 2011). These universities can be further classified into four levels. Among the highest level are 39 research universities within "Project 985". These universities have received the largest amount of funding from the central government in order to compete with the top universities in the world. Among the second level are over 100 universities within "Project 211". These universities have received funding from both the central government and the regional government. The third level includes more than 1000 regular colleges and universities administered by regional government or departments. The fourth level contains over 1200 higher vocational schools. Many of them are private schools.

Morgan and Li (2011) described the problems and possibilities of private higher education in China. They illustrated the current state of the private higher education system in China and predicted several possibilities for its growth in the future. A private university in China, which is different from private universities in the West, is perceived as less desirable and competitive than public universities. In China, a private university is viewed as a business, and therefore, its tuition is generally high. Many students from low-income families cannot afford the high private tuition and have to seek admission to public universities. It is important to note that private universities in China are not held to the same standard of excellence. Therefore, a degree from a private university is less valued than a degree from a public one (Morgan & Li, 2011).

Although Chinese higher education achieved great progress, there are problems and challenges. In 2013, Chinese government decided to carry on a comprehensive and

more in-depth reform in all fields including education sector. The following items are related to higher education: a) to innovate talents cultivation mechanism and promote uniqueness in universities; promoting universities to make excellent achievements with uniqueness; b) to improve the university entrance examination and the enrollment system by optimizing talents selection mechanism; c) to expand the overall planning power of the provincial government and the decision making of universities and encourage the development of private schools; and d) to accelerate the construction of modern vocational educational system, and deepen the combination of industry and teaching, and school-enterprise cooperation (Ministry of Foreign Affairs, 2014).

Study Abroad in the Context of Higher Education Reform in China

Study abroad is not a new phenomenon in China. It has been more than 100 years since China began to send its students and scholars to study abroad, though with different scales and various forms during different stages of history (CSC, 1999; Hu, 2009; Morgan & Tuijnman, 2002).

In 1978 after the Chinese Open Door Policy, important decision of expanding the scales of internationalising higher education has been made. Studying abroad in foreign universities resumed and developed progressively with three phases (Hu, 2009). The first phase was from 1978 to 1981, which began the current programme of sending Chinese students and teachers abroad, and the acceptance of foreign scholars in China, albeit on a small scale. It served initially as a window for China's reform and opening up as well as for the intercultural exchanges specifically (CSC, 1999).

The second phase witnessed the reform of Chinese higher education between 1982 and 2000. The relevant Laws and Regulations include *Decisions on Reform of Chinese Education System* in 1985, *Notification on Relevant Issues about Students Studying Abroad* in 1992, *and Law on Higher Education of PRC* in 1998 etc. The Chinese central government promulgated guideline for students and scholars studying abroad in the *Notification on Relevant Issues about Students Studying Abroad,* that is: "…to support studies abroad, to encourage returns after the completion of studies, and to guarantee the freedom of coming and going" (Ministry of Education of the People's Republic of China: MoE of PRC).

In 1996 the China Scholarship Council was established and laid down a significant landmark for Chinese students and scholars studying abroad (CSC, 1999). The CSC is a non-profit institution affiliated to the Chinese Ministry of Education. It is responsible for the management and provision of financial resources to Chinese citizens studying abroad and to the foreign students and scholars studying in China for the purpose of developing educational, scientific, and cultural exchanges. The main commitments of the CSC aim at enhancing the friendship and understanding between Chinese people and the people of all other countries, and promoting world peace and the socialist modernization drive in China (CSC, 2008). The Senior Research Scholar programme and Visiting Scholar programme were among the major state sponsored categories of studying abroad programmes at the outset of CSC's foundation.

The term Senior Research Scholar refers to those senior academics at Chinese universities, usually holding academic titles of associate professor or above, who are

invited to spend from three months to six months at foreign institutions. Their main tasks are to pursue research and to become involved in the intellectual life of the host universities. The term Visiting Scholar refers to academics at Chinese institutions who are invited to spend between six to twelve months at foreign institutions, auditing advanced classes, participating in seminars, interacting with intellectual life of the host universities, and pursuing professional development.

The two programmes aim at creating platforms for cooperation and exchanges between Chinese universities and their counterparts abroad, and at establishing sustainable academic relationships between them (CSC). During the second phase period, the three complementary financial supporting channels from the national level to the local level for Chinese university students and scholars studying abroad were set up, namely state-funded, institution-funded and self-funded. Between 1978 and 2003, a total number of 700,200 Chinese students and scholars studied at universities in 108 countries and regions throughout the world, covering almost all disciplines (MoE of PRC).

Phase three was from China's entry into the World Trade Organization (WTO) in 2001 to the present (Ding, Yue & Sun, 2009). With China's obligations for educational services under the WTO rules, various laws and regulations regarding international cooperative education were passed, such as: *Regulations of the PRC on Chinese-foreign Cooperative Education* in 2003, *Implementation Measures for the Regulation of the PRC on Chinese-foreign Cooperative* in 2004, and *Measures for the Administration of Chinese-foreign Cooperative Education on Occupational Skills*

Training in 2006 and so on. As a result, the market for higher education in China opened up internationally. Foreign institutions can not only enrol Chinese students, but also run schools in China. In 2004, the University of Nottingham Ningbo, China became the first Sino-Foreign university in China with approval from the Chinese Ministry of Education (Ennew & Yang, 2009).

Many foreign institutions seem optimistic to exploit the Chinese higher education market. Various measures are taken to attract Chinese students and scholars to go and study abroad, such as, organizing educational fairs in China, relaxing visa requirements, offering after graduation working experience periods, and so on. (Ding et al, 2009). At the same time, the vast demand for overseas study by the Chinese students and academics is in part driven by China's rapid economic development and the significant increase of household income. Figures from China National Bureau of Statistics (2007) show that in 2001 China's *per capita* GDP exceeded 1,000 US dollars for the first time (1,042 US dollars to be precise). And a comparatively high rate of economic growth was maintained in the following eight years. These have made the overall picture of students and scholars studying abroad, both in volume and scale, develop unprecedentedly. For example, the total number of students and scholars studying abroad in 2007 was 144,500 of which 8,853 were state-funded, 6,947 institution-funded and 128,700 self-funded (China Education Year Book, 2008). Also the number has increased from 860 in 1978 to 179,800 in 2008, which reaches a total of 1,391,500 by the end of 2008 (CSC, 2008). Table 2 summarises the statistics of the total number of students and scholars studying abroad and the figures of those

self-funded from 2000 to 2008, together with the increasing rate. All the statistics are from *China Education Year Book* (2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008) in the official website of the Ministry of Education of People's Republic of China (http://www.moe.edu.cn). The total number of students and scholars studying abroad from year 1978 on are displayed with the figure of annual increasing rate as well. Diagram 2 illustrates that from 2003 to 2008, the annual increasing rate of studying abroad in China is more than 13%. Except for the year 2003 and 2004, due to the influence of SARS in China, the rest of the increasing rates indicate a huge market in internationalisation of higher education. According to the Chinese Ministry of Education, the figure of studying abroad could reach 200,000 annually as from 2010 and 300,000 annually by 2020 (MoE of PRC).

Table 2

Overall Statistics of students and scholars studying abroad in China

Year	Total	Increasing Rate	Self-funded	Increasing Rate	Total from 1978	Increasing Rate
2000	38,989	NA	32,293	NA	NA	NA
2001	83,973	115.5%	76,052	135.5%	NA	NA
2002	125,000	48.9%	117,000	53.8%	583,000	NA
2003	117,300	-6.2%	109,100	-6.8%	700,200	20.1%
2004	114,700	-2.2%	104,300	-4.4%	814,900	16.4%
2005	118,500	3.3%	106,500	2.1%	933,400	14.5%
2006	133,800	12.9%	120,700	13.3%	1,067,200	14.3%
2007	144,500	8%	128,700	6.6%	1,211,700	13.5%
2008	179,800	24.4%	161,600	25.6%	1,391,500	14.8%

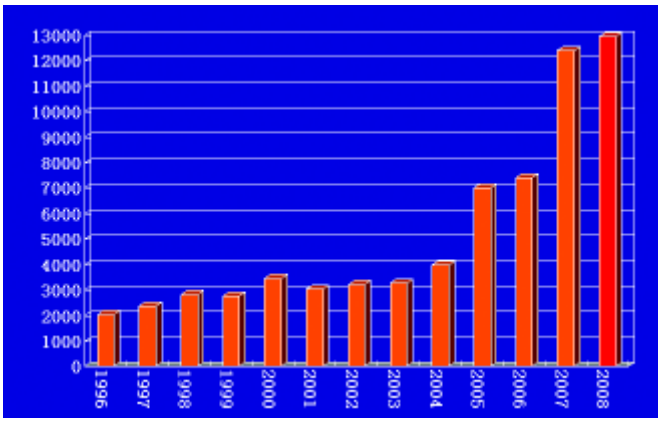
(All the above statistics are from *China Education Year Book* 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008 through the official website of the Ministry of Education of People's Republic of China: *http://www.moe.edu.cn*)

Accordingly, accompanying the national economic growth has been a huge investment in higher education by the Chinese government, especially towards the

construction of world-class universities. The launch of Project 985 has fuelled the number of state sponsored top students at the best universities in China to go and study in the best foreign institutions. Specific international academic exchange programmes are sponsored under the state funding support via the Project 985 ever since year 2006. And this kind of specific Project support will continue for five years (China Education Year Book, 2007). To take the year 2008 as an example, the State Sponsored Graduate Scholarship Programme of CSC recruited 4,892 students, of which 2,139 studied for a doctoral degree at an institution abroad, and another 2,753 were Ph.D. candidates jointly taught by the Chinese and foreign institutions. Also, the total number of recruitment for all types of state sponsored study abroad programmes has reached 12,957, which is a 5.3 times increase over 1996 when the number was just 2,044 (CSC, 2008). Figure 1 illustrates a microcosm of state sponsored figures indicating the growing paces of studying abroad in China.

Figure 1

Recruitment of the State Sponsored Study Abroad Programme 1996-2008 (CSC, 2008)



This phenomenon has brought not only prosperity to the generation of economic and social capital in the host nations, but raised a series of implications for researches on the growth and maturity of the Chinese students and scholars studying abroad. Given the large sum of capital, specific research from an individual intercultural perspective can serve as partial responses to its original aspirations. These were, to seek for academic excellence in the service of global citizenship, as well as to strengthen the common understanding of peoples around the world (MoE of PRC, CSC).

Since 1978, Chinese universities have attached great importance to exchange and cooperation with universities all over the world. In the early days, they mainly sent visiting scholars and students. In recent years, more and more foreign students come to study in China. In 2013, the total amount of foreign students from over 200 countries and regions to China reached 356,000. Foreign students study in 736 universities and research institutes in 31 provinces, autonomous regions and municipalities. Chinese government has established special scholarship to subsidize them.

From 1978 to 2013, the total amount of overseas students sent from China reached over 3 million, of which 413,000 in 2013 alone. Chinese students studying in Australia increased from 73,000 to 150,000, while Chinese students in Western Australia increased from 4000 to 9000, both doubled in the past decade. These data reflects the trend of international exchange in Chinese higher education. In addition, China's universities and overseas universities have carried out exchanges and cooperation in training programs and scientific research as well as other areas.

To sum up, this section described the development and reform of Chinese higher education. In the context of higher education reform, study abroad phenomenon was introduced and discussed. With increasing number of Chinese visiting scholars studying abroad, the examination of their intercultural experience and intercultural competence development has important implications.

Intercultural Competence and its Theoretical Frameworks

Due to the development of global economy and internationalization of education, intercultural competence has become increasingly important. Many researchers have examined the development of intercultural competence in different contexts (Applegate & Sypher, 1988; Baños, 2006; Fritz, Graf, Hentze, Möllenberg, & Chen, 2005; Fritz, Möllenberg, & Chen, 2002, 2003; Delia, 1987) and multiple theoretical frameworks have been proposed and empirically researched and validated (Arasaratnam & Doerfel, 2005; Bennett, 1986, 1993; Bennett & Bennett, 2003, 2004; Byram, 1997; Chen & Starosta, 1996, 2000; Gudykunst, 1993, 1998; Kim, 1993; Risager, 2007; Ruben, 1976; Ruben & Kealey, 1979; Ting-Toomey, 1993). This section critically reviews the construct of intercultural competence and its theoretical frameworks.

Throughout the literature, the following 19 terms have been used as alternatives for intercultural competence: transcultural communication, international communication, ethnorelativity, cross-cultural communication, intercultural interaction, biculturalism, cross-cultural awareness, intercultural sensitivity, multiculturalism, global competitive intelligence, intercultural cooperation,

pluralingualism, global competence, cultural sensitivity, cross-cultural adaptation, cultural competence, effective inter-group communication, international competence, and intercultural communicative competence (Fantini, 2006). Among them, intercultural communicative competence (ICC), intercultural sensitivity, and cross-cultural adaptation are the most frequent labels for intercultural competence and they are often used interchangeably, but "each alternative also implies additional nuances that are often only implicitly addressed in research" (Sinicrope, Norris, & Watanabe, 2007, p. 3). It is important to review these terms since they are used interchangeably.

The term *ICC* is often used to refer to the type of competence needed to communicate with people from different languages and cultures. Intercultural communication is simply communication between people from different cultural backgrounds (Chamberlain, Guerra, & Garcia, 1999). It can be viewed as the interaction among people of complex cultural and social identities (Byram, 1997; Elorza, 2008). When members of different cultural groups communicate, they must take into account numerous cultural differences that complicate the communication process.

From Ruben's (1976) perspective, ICC consists of the "ability to function in a manner that is perceived to be relatively consistent with the needs, capacities, goals, and expectations of the individuals in one's environment while satisfying one's own needs, capacities, goals, and expectations" (p. 336).

Byram, Nichols, and Stevens (2001) state that ICC can also be regarded as the ability to deal with differences that derive from everyday communication, which actually means the ability to handle the unknown. A person with some degree of ICC is able to see relationships between different cultures – both internal and external to a society – and is able to mediate, that is interpreted each in terms of the other, either for themselves or for other people (Elorza, 2008).

Intercultural sensitivity is another commonly used term in the literature (Hixson, 2003). The development of intercultural sensitivity occurs "through change of a sojourner's perception towards cultural differences" (Hixson, 2003, p. 21); and it contributes to the development of intercultural competence. Sensitivity to differences in social, political, and cultural realities has been identified as a component of intercultural competence (Cui & Awa, 1992; Hannigan, 1990; Kappler, 1998; Meggitt, 1994; Steglitz, 1993). An interculturally competent individual who develops cultural sensitivity is capable of functioning effectively in more than one culture (Gudykunst & Kim, 1997).

Chen and Starosta (1996, 2000) proposed an intercultural competence model, which represents a transformation process of symmetrical interdependence that can be explained in three dimensions: *intercultural sensitivity* (i.e., abilities to promote positive emotions before, during and after the intercultural contact), *cultural awareness* (i.e., understanding the conventions of the host culture that affect how people think and behave) and *intercultural adroitness* (i.e., behavioral skills that allow individuals to negotiate the multiple meanings and manage complexity in the global

context). This model tries to promote the aptitudes of recognition, respect, tolerance and integration of cultural differences to construct global citizenship (Baños, 2006).

The term *cross-cultural adaptation* is also commonly used in the literature. The development of intercultural competence can be perceived as a transformation but also as an adaptation process through interaction with the host members (Hixson, 2003). Cross-cultural adaptation considers people as interacting with and adjusting to the environment (Kim, 1995). It is presented as a "collaborative venture between newcomers and a host environment. Interacting with individuals from the same culture requires little adjustment because the participants share a common socialization process for communication. Effective interactions between culturally different individuals, however, necessitate adjustment by the newcomer to the new elements" (Hixson, 2003, p. 29).

Although there is extensive research about intercultural competence, there is not a generally accepted definition (Fritz et al., 2005). Fantini (2006) defines intercultural competence as: "…. a complex of abilities needed to perform effectively and appropriately when interacting with others who are linguistically and culturally different from oneself" (p. 12). Sinicrope et al (2007) further explained that intercultural competence is the: "….ability to step beyond one's own culture and function with other individuals from linguistically and culturally diverse backgrounds" (p. 1). Deardorff (2008) simply defines intercultural competence as "the ability to communicate effectively and appropriately in intercultural situations based on one's intercultural knowledge, skills, and attitudes" (p. 33).

In related literature, the construct of intercultural competence has been described as numerous lists of capabilities, skills and characteristics (Dinges & Baldwin, 1996; Fritz et al., 2005; Kealey & Ruben, 1983). For example, intercultural competence is operationalised as six competencies: a) language competence, b) adaptation, c) social decentering, d) communication effectiveness, e) social integration, and f) knowledge of the host culture (Redmond & Bunyi, 1993; Redmond, 2000). It is also classified into three dimensions including affective, cognitive, and behavioral; and these three dimensions must be developed for efficient intercultural communications (Bennett, 2001; Chen & Starosta, 1996; Fritz, 2001; Fritz et al., 2005; Graf, 2004a; Müller & Gelbrich, 2001; Spitzberg, 2000; Ting-Toomey, 1999).

Hammer, Bennet, and Wiseman (2003) attempt to make the following distinction between *intercultural sensitivity* and *intercultural competence*. Intercultural sensitivity is "the ability to discriminate and experience relevant cultural differences" whereas intercultural competence is "the ability to think and act in interculturally appropriate ways" (p. 422). Greater intercultural sensitivity creates the potential for increased intercultural competence (Applegate & Sypher, 1988; Delia, 1987). Further, individuals "who have received largely monocultural socialization normally have access only to their own *cultural worldview*, so they are unable to experience the difference between their own perception and that of people who are culturally different" (Bennett, 2004, p. 74).

Intercultural competence has also been identified as a critical capability in many studies focusing on "overseas effectiveness of international sojourners, international

business adaptation and job performance, international student adjustment, international transfer of technology and information, international study abroad and inter-ethnic relations within nations" (IDI, 2014). The concept of acculturation via sojourning has been discussed in the literature (Berry, 1990, 1997; Laroche, Kim, Hui, & Tomiuk, 1998; Ward, Bochner, & Furnham, 2001). The following section reviews this concept in current literature.

Acculturation via Sojourning

Given the internationalisation of higher education in today's world, the concept of acculturation has become increasingly crucial. A well known example is the intercultural capacity developed by way of acculturation via the sojourn of studying abroad. It contributes to the examination of how people react to exposure to new socio-cultural environment (Barnett, 2007; Gu, 2009; Kehm, 2005; Yates, 2002).

Individual intercultural capacity development exists in different ways (Alfred, Byram, & Fleming, 2003; Berry, 1997; Dörnyei, 2004; Gu, 2009; Hamza, 2010; Montgomery & McDowell, 2009; Tarique & Caligiuri, 2009; Ward & Kennedy, 1994). Study abroad as a practice embedded in the higher education tradition has been studied by a number of researchers (Barnett, 2007; Gu, 2009; Kehm, 2005; Yates, 2002). For example, Yates (2002) asserts that from the international experience, academics gain the opportunity to build extensive networks that can broaden their horizons. Gu (2009) identifies distinctive patterns of struggles, changes and achievements in maturity and interculturality among the Chinese students in British higher education. Barnett (2007) contends "it is made anew as the student comes into

a new place, a new sense of herself, her capacities and her relationship with the world" (p. 68). Kehm (2005) maintains that study abroad in a limited period of time contributes to human development and global understanding.

Acculturation was first studied by sociologists and anthropologists in reference to group-level phenomena and later at an individual level by psychologists (Berry & Kim, 1988; Berry, 1997; Ward, Bochner, & Furnham, 2001). This research mainly focuses on the individual level of developing characteristics in relation with socio-cultural capacity aspect in the acculturation process despite its complexity. The early definition of acculturation comes from the Social Science Research Council by Robert Redfield, Ralf Linton, and Melville Herskovitz (1936, p. 149):

> Acculturation comprehends those phenomena, which result when groups of individuals having different cultures come into continues first-hand contact, with subsequent changes in the original cultural patterns of either or both groups.

This definition indicates that acculturation is a process that entails contact between cultures, resulting in consequences of socio-cultural change and transformation. The notion implies that acculturation happens under the two conditions: (a) being between cultures or intercultural, and (b) sojourner as a transition from enculturation to acculturation. In this thesis, sojourner refers to those relatively more mature and older short-term visiting scholars abroad to new cultures for academic purposes. Sojourning relates to the sojourner being intercultural while attuning to a new host culture abroad by way of acculturation.

Nowadays, the most popular theoretical model to study acculturation is that by Berry (1997) with two primary dimensions: cultural adaptation – the degree of willingness to relations with other groups; and cultural maintenance – the degree to maintaining their heritage culture identity. Based on these two dimensions, four acculturation orientations have been distinguished: integration, separation, assimilation, and marginalization (Berry & Kim, 1998), which are illustrated as:

> …. specifically, individuals who value both cultural maintenance and intergroup relations are seen to endorse an integrationist approach. Those who cherish cultural maintenance but do not value intergroup relations are believed to adopt a separatist position. By contrast, those who value intergroup relations but are relatively unconcerned with cultural maintenance may be classified as assimilationist. Finally, those individuals who value neither cultural maintenance nor intergroup relations are said to be marginalized (Ward & Rana-Deuba, 1999, p. 423).

Hence, integration implies adherence to both one's own ethnic culture as well as the host culture. Separation refers that cultural adjustment to the host culture fails to take place, and one's orientation is still focused on his or her own cultural heritage. Assimilation involves the decline of one's own ethnic culture distinction and its corollary cultural differences. And finally, marginalization means the rejection of both home and host cultural orientations. These four orientations seem impossible without the sojourners formally or informally being between cultures that they seek to adapt to. On the other hand, sojourner adjustment investigators would describe these four

acculturation orientations as several stages of adjustment that sojourners go through in the host culture and return to their home culture (Adler, 1975; Kang, 2006; Ward & Searle, 1991). Given Oberg's (1960) four stages conceptual approach as verification:

> … a honeymoon stage – characterized by fascination and optimism with the new environment and culture; a second stage characterized by hostile and emotionally stereotyped attitudes toward the host country and increased association with fellow sojourners; a recovery stage characterized by increased language knowledge and ability to get around in the new culture, a superior attitude toward the host people, and an increased sense of humour; and a fourth stage in which adjustment is about as complete as possible, anxiety is largely gone, and new customs are accepted and enjoyed (cited in Church, 1982, p. 541).

These stages illustrate that sojourner adjustment to new host cultures can occur through one of the two ways: through observation, participation and communication; or through trial and error, often leading to negative consequences of inhibition. It may also fail to occur when defensive stereotypes exist, or where the home and host cultures differ widely in values.

Schumann (1986), with an academic view, defining acculturation as "the social and psychological integration of the learner with the target language group" (p. 379), also sees two dimensions of acculturation linked by learners' capacity to adapt to living abroad/sojourning and the consequences for personal development. It views the adjustment of the sojourning learner as a transitional enculturation, reflecting phases

of movement from encompassing to progressive changes in identity and cultural awareness, albeit differing in the degree to which the learners experience certain adjustment problems. Or it illustrates the two broad domains of enculturation: psychological and socio-cultural. The later, which is the research focus of this thesis, relates to the individual capacity to fit in the host culture due to a continuous first-hand contact. This definition permits both the social and affective components of the sojourning, and examines the outcomes of the transit enculturation experience. Specifically, the outcomes relate to variables of similarities between host and home cultures, positive expectations, and low incidence of depressive symptoms.

With regard to being intercultural through sojourning for study, research among learners coming from a different ethnic background reveals that acculturation is "a process that involves the development of relationships with new culture, independent from the maintenance of the original culture" (Wu & Mak, 2012, p. 66). It has been dedicated to the understanding of how learners manage psychological and behavioural changes as a result of sustained first-hand contact with other cultures. Being exposed to a new set of values, beliefs, and educational demands, these learners are challenged to acclimate themselves to a variety of cultural differences. In the light of Redfield, Linton, and Herskovitz (1936), acculturation may generate three possible outcomes: a) acceptance: entailing the assimilation of one group into the other; b) adaptation: entailing the merger of the two cultures; and c) reaction: entailing "contra-acculturative movements" (p. 152). Such significant changes in self-concept, attitudes and behaviour are termed as individual intercultural development in this

thesis. It means "the ability to behave appropriately in intercultural situations, the affective and cognitive capacity to establish and maintain intercultural relationships and the ability to stabilise one's self identity while mediating between cultures" (Jensen, Jaeger, & Lorentsen, 1995, cited in Alred & Byram, 2002, p. 340).

Being intercultural, the learners' socio-cultural development potentials may exist more in conjunction with social learning and cognitive perspectives. Although learners remained, in some respects, on the margin of the foreign society, the experience has become a process of temporary re-socialisation into a foreign culture and its practices and beliefs.

As for sojourner as a consequence for socio-cultural development, Alred, Byram and Fleming (2003) presume that human beings are cultural beings, shaped by their specific environment and experiences through processes of socialisation. "By nature, we are social and it is in the interaction with others that we develop" (p. 3). Being between cultures as a temporary sojourner in a foreign country, people's capacity of awareness of experiencing otherness and the ability to analyse the experience can act upon insights into one self and others. This inevitably leads people to reflect on their taken-for-granted values, conventions and one self. Whilst maintaining the distinctions of one's identity, the interaction between cultures creates a sense of empathy which joins rather than divides the groups. Or in another word, their curiosity about and empathy with people of other groups yet still without abandoning one's own social identity leads to a heightened awareness of the interaction between ownness and otherness. When such empathy becomes incorporated into one's sense of

self, a step towards being an intercultural person has been taken. Psychologically, the deeper sense of belongs to groups is matched with a more integrated sense of self, thus foster greater capacity and cause main changes of a person. Otherness becomes less prohibition and more gateways of possibility about oneself (Coleman, 1995). Personal outcomes such as increased self-confidence and self-reliance and changes in more superficial habits (e.g., dress, eating, drinking) appear to be more consistent sojourn outcomes (Allen & Arafat, 1971; Becker, 1971; Hull, 1978; Klineberg & Hull, 1979; Useem & Useem, 1955). However, religious beliefs seem to remain particularly stable (Hegazy, 1969; Hull, 1978; Klineberg & Hull, 1979).

Relating successful socio-cultural outcomes has also been extensively discussed, such as, more favorable or objective attitudes toward the host culture; an increased appreciation of the home culture ("patriotic reinforcement"); a broader worldview or perspective (e.g., international mindedness, cultural relativism, biculturalism); a reduction of ethnocentrism, intolerance, and stereotypes; increased cognitive complexity; and greater personal self-awareness, self-esteem, confidence, and creativity (Adler, 1975; Angell, 1969; Coelho, 1962; David, 1971; Flack, 1976; Mishler, 1965; Pace, 1959; Sampson & Smith, 1957; Smith, 1955; Triandis, 1975; Useem & Useem, 1955; Watson & Lippitt, 1955). It seems that socio-cultural development potentials rely more on difficulties in performing daily tasks, and is more dependent upon variables such as length of residence in a new culture, culture distance, and quantity of interactions with host nationals (Ward & Kennedy, 1994).

The existing literature has provided different definitions and addressed different aspects of intercultural competence as well. The use of multiple terms may cause confusions and misunderstandings. Further, the discussions of intercultural competence are scattered all over the place. However, it seems that the role of acculturation via sojourning for study abroad has been firmly established in the literature. Thus all articulate the same voice backing up this thesis – there are potentials for one's intercultural competence development via sojourning whilst studying abroad. Furthermore, it is important to understand the major theoretical frameworks for intercultural competence.

Four Major Theoretical Frameworks for Intercultural Competence

Historically, according to Sinicrope et al. (2007), the concept of intercultural competence emerged out of research related to the experiences of westerners working abroad in the 1950s, 1960s, and early 1970s. In the late 1970s and 1980s, the intercultural competence research expanded to include study abroad, international business, cross-cultural training, expatriates living overseas, and immigrant acculturation. During these years, intercultural competence research basically examined "individuals' attitudes, personalities, values, and motives, usually through short self-reports, surveys, or open-ended interviews" (Sinicrope et al., 2007, p. 2). Intercultural competence research today "spans a wide spectrum, from international schools to medical training, from short study abroad programs to permanent residency in foreign cultures" (Sinicrope et al., 2007, p. 2).

Sinicrope et al. (2007) summarised and discussed four major theoretical frameworks for intercultural competence: a) Ruben's Behavioral Approach to the conceptualization and measurement of intercultural communicative competence (Ruben, 1976; Ruben & Kealey, 1979); b) European Multidimensional Models of Intercultural Competence theorized by Byram (1997) and Risager (2007); c) Bennett's Developmental Model of Intercultural Sensitivity (DMIS) (Bennett, 1993; Hammer, Bennett, & Wiseman, 2003); and d) A Culture-generic Approach to Intercultural Competence developed by Arasaratnam and Doerfel (2005). In the following section, each theoretical framework for the construct of intercultural competence is briefly described.

a) Ruben's Behavioral Approach to Intercultural Communicative Competence

Ruben's (1976) behavioral approach to the conceptualization and measurement of intercultural communicative competence was one of the earliest comprehensive frameworks (Ruben & Kealey, 1979). Ruben "advocated a behavioral approach to linking the gap between knowing and doing, that is, between what individuals know to be interculturally competent and what those individuals actually do in intercultural situations" (Sinicrope et al., 2007). Ruben (1976) argued that to understand and assess individuals' behaviors, it would be necessary to employ "measures of competency that reflect an individual's ability to display concepts in his behavior rather than intentions, understandings, knowledges, attitudes, or desires" (p. 337).

Ruben (1976) identified the following seven dimensions of intercultural competence:

1. *Display of respect* describes an individual's ability to "express respect and positive regard" for other individuals.

2. *Interaction posture* refers to an individual's ability to "respond to others in a descriptive, nonevaluative, and nonjudgmental way."

3. *Orientation to knowledge* describes an individual's ability to "recognize the extent to which knowledge is individual in nature." In other words, orientation to knowledge describes an individual's ability to recognize and acknowledge that people explain the world around them in different ways with differing views of what is "right" and "true."

4. *Empathy* is an individual's ability to "put [himself] in another's shoes."

5. *Self-oriented role behavior* expresses an individual's ability to be flexible and to function in initiating or harmonizing roles. In this context, initiating refers to requesting information and clarification and evaluating ideas for problem solving. Harmonizing, on the other hand, refers to regulating the group status quo through mediation.

6. *Interaction management* is an individual's ability to take turns in discussion and initiate and terminate interaction based on a reasonably accurate assessment of the needs and desires of others.

7. Lastly, *tolerance for ambiguity* describes an individual's ability to "react to new and ambiguous situations with little visible discomfort" (Ruben, 1976, cited in Sinicrope et al., 2007, pp. 4-5).

b) European Multidimensional Models of Intercultural Competence

Based on their experiences in the European context, Byram (1997) and Risager (2007) have also theorized multidimensional models of intercultural competence. In *Teaching and assessing intercultural communicative competence*, Byram (1997) proposed a five-factor model of intercultural competence comprising the following:

1. The *attitude* factor refers to the ability to relativize one's self and value others, and includes "curiosity and openness, readiness to suspend disbelief about other cultures and belief about one's own" (Byram, 1997, p. 91).

2. *Knowledge* of one's self and others means knowledge of the rules for individual and social interaction and consists of knowing social groups and their practices, both in one's one culture and in the other culture.

3. The first skill set, the *skills of interpreting and relating*, describes an individual's ability to interpret, explain, and relate events and documents from another culture to one's own culture.

4. The second skill set, the *skills of discovery and interaction*, allows the individual to acquire "new knowledge of culture and cultural practices," including the ability to use existing knowledge, attitudes, and skills in cross-cultural interactions (ibid, p. 98).

5. The last factor, *critical cultural awareness*, describes the ability to use perspectives, practices, and products in one's own culture and in other cultures to make evaluations. (Sinicrope et al., 2007, pp. 5-6)

Byram further clarified that "the interaction factor (skills of discovery and interacting) includes a range of communication forms, including verbal and non-verbal modes and the development of linguistic, sociolinguistic, and discourse competencies" (Sinicrope et al., 2007, p. 6).

Based on Byram's work, Risager (2007) proposed an expanded conceptualization of intercultural competence and argued that a model for intercultural competence must include the broad resources an individual possesses as well as the narrow competences that can be assessed. The following 10 elements of linguistic developments and proficiencies, for example, are outlined in her model:

1. Linguistic (languastructural) competence
2. Languacultural competences and resources: semantics and pragmatics
3. Languacultural competences and resources: poetics
4. Languacultural competences and resources: linguistic identity
5. Translation and interpretation
6. Interpreting texts (discourses)
7. Use of ethnographic methods
8. Transnational cooperation
9. Knowledge of language as critical language awareness, also as a world citizen
10. Knowledge of culture and society and critical cultural awareness, also as a world citizen. (Risager, 2007, cited in Sinicrope et al., 2007, p. 6)

c) Bennett's Developmental Model of Intercultural Sensitivity (DMIS)

In the North American context, Bennett's Developmental Model of Intercultural Sensitivity (DMIS) (Bennett, 1986, 1993; Bennett & Bennett, 2003, 2004) has been widely discussed, researched, and explored in recent years (Sinicrope et al., 2007). Building on research in the 1970's and 1980's, Bennett developed "a dynamic model to explain how individuals respond to cultural differences and how their responses evolve over time" (Sinicrope et al., 2007, p. 8).

The DMIS outlined the following six stages of intercultural competence development: denial, defense, minimization, acceptance, adaptation, and integration (Bennett, 1986). As argued by Bennett (2004), these six stages of intercultural competence development can be viewed as the move from *ethnocentrism* (i.e., the experience of one's own culture as "central to reality") to *ethnorelativism* (i.e., the experience of one's own beliefs and behaviors as just one organization of reality among many viable possibilities). Six distinct kinds of experience seem to spread across the continuum from *ethnocentrism* and *ethnorelativism*: *Denial* of cultural differences, *Defense* against cultural difference, *Minimization* of cultural difference, *Acceptance* of cultural difference, *Adaptation* to cultural difference, and *Integration* of cultural difference into identity.

Bennett (2004) offered the following explanation about the stages of intercultural competence development:

> In general, the more ethnocentric orientations can be seen as ways of *avoiding cultural difference,* either by denying its existence, by raising defenses against it, or by minimizing its importance. The more ethnorelative

> worldviews are ways of *seeking cultural difference*, either by accepting its importance, by adapting perspective to take it into account, or by integrating the whole concept into a definition of identity (p. 63).

Together, "these six stages comprise a continuum from least culturally competent to most culturally competent, and they illustrate a dynamic way of modeling the development of intercultural competence" (Sinicrope et al., 2007, p. 9).

d) A Culture-Generic Approach to Intercultural Competence

The most recent developments in intercultural competence theory have emerged in the research of Arasaratnam and Doerfel (2005). In their work, Arasaratnam and Doerfel call for a new, culture-wide model of intercultural communication competence (Sinicrope et al., 2007). Using a bottom-up approach, Arasaratnam and Doerfel (2005) conducted a semantic network analysis of interview transcripts with 37 (12 U.S. students and 25 international students from 14 different countries) interculturally competent participants, who were selected based on their involvement in international student organizations, study abroad programs, and international friendship/host programs. During the interview, participants responded to the following prompts:

> Q1: How would you define intercultural communication?
>
> Q2: Can you identify some qualities or aspects of people who are competent in intercultural communication?

Q3: Can you identify some specific individuals whom you think are particularly competent in intercultural communication and say why you perceive them as such?

Q4: What are aspects of good communication in your culture/opinion?

Q5: What are aspects of bad communication in your culture/opinion?

(Arasaratnam & Doerfel, 2005, cited in Sinicrope et al., 2007, p. 10).

Based on semantic analyses for all the above five questions, Arasaratnam and Doerfel (2005) identified 10 unique dimensions of intercultural communicative competence: heterogeneity, transmission, other-centered, observant, motivation, sensitivity, respect, relational, investment, and appropriateness. Although this approach has not led to the development of widely practiced assessment tools and methods, it "promises a culture-generic, bottom-up approach to eliciting definitions and dimensions of intercultural competence that may be used in future assessment tools" (Sinicrope et al., 2007, pp. 10-11).

These theoretical frameworks conceptualize intercultural competence as several dimensions, factor models, competencies, skills, and stages. They were developed for various contexts by researchers from different background. The general purpose of these frameworks was to quantify the concept of intercultural competence and measure it as specific competencies that reflect an individual's ability to communicate interculturally. From an assessment perspective, these specific competencies may be difficult to measure. However, it is important to examine the specific factors affecting the development of intercultural competence of individuals sojourning abroad.

Factors Affecting the Development of Intercultural Competence

Research has shown that the following seven major factors affect the development of intercultural competence of individuals sojourning abroad including Chinese students studying for academic degrees in foreign universities: linguistic factors, socio-cultural factors, psycho-cultural factors, cognitive factors, educational factors, affective factors, and personal factors (Bennett, 2004; Bouton, 1994; Chen & Starosta, 1998; Chang, 2009; Huang & Tavano , 2013; Huang & Brown, 2009; Huang & Klinger, 2006; Huang & Rinaldo, 2009; Lin, Su, & Ho, 2009; Olshtain & Cohen, 1990; Redmond, 2000; Roh, 2014; Sercu, 2006; Shaheen, 2004; Tanck, 2002; Williaume, 2009). Under each major factor, specific factors are listed in Table 3. Each of these major factors is reviewed below, beginning with linguistic factors.

Table 3

Seven Majors Factors Affecting an Individual's Intercultural Competence Development

No.	Major Factors	Specific Factors
1	Linguistic factors	foreign language skills or proficiency; first language
2	Socio-cultural factors	interaction with peers from different cultures; cultural differences; culture shock
3	Psycho-cultural *factors*	ethnocentrism; stereotypes; prejudice
4	Cognitive factors	respect for the host country/culture; curiosity about discovering the host country/culture; knowledge about the host country/culture
5	Educational factors	pre-departure preparation; training and orientation for overseas sojourners; guided reflection
6	Affective factors	feeling lonely; academic anxiety; feeling stressful
7	Personal factors	interaction confidence; open-mindedness; being non-judgemental; experiences with cultural difference; self-confidence; self-efficacy, self-esteem; social skills; financial difficulties; tolerance of ambiguity; family and institution support; having prolonged negative experiences with international people; time spent with their international peers; previous travelling experience; growing up in a multicultural home; having accompanying spouses and children; previous experience abroad; family international experience; having the goal of gaining cultural understanding; past international experiences; having studied language overseas; living with a host family; having an international perspective

Table compiled by author

Linguistic Factors

During the past two decades, there has been a significant growth in the number of international students (i.e., English is not their native language) pursuing academic studies at North American universities; and among these international students Chinese students from China are the largest single group (Huang & Rindaldo, 2009).

Research with Chinese students studying at North American universities has indicated that many factors affect their academic studies and intercultural competence development due to their different educational and cultural background; for example, linguistic factors, socio-cultural factors, educational factors, cognitive factors, affective factors, and even financial factors (Chen, 1999; Feng, 1991; Huang, 1998; Huang, 2004, 2005; Liu, 1994; Sun & Chen, 1997; Upton, 1989; Yuan, 1982; Zhong, 1996). Their English language proficiency as well as Chinese language influence has been identified as the major linguistic factors (Feng, 1991; Huang & Rindaldo, 2009; Huang, 2004, 2005).

First of all, due to their limited English listening and speaking proficiency Chinese students have difficulties understanding academic lectures, American idioms and jokes, and in taking notes (Feng, 1991; Huang, 2006). Su and Chen (1997) indicate that the English language problem was identified as the biggest obstacle in the process of Chinese students' intercultural adjustment although they came to the United States with high TOEFL (Test of English as a Foreign Language) and GRE (Graduate Record Examination) scores. Further, their lack of English language proficiency has a strong negative impact on their communication with North Americans academically and socially (Huang & Rinaldo, 2009; Huang 1998).

Using semi-structured interviews, Huang and Rinaldo (2009) explored the factors impacting four (two attending an American university and the other two attending a Canadian university) Chinese graduate students' cross-cultural learning as well as intercultural competence development. The results of this study indicated that

both Chinese (L1) and English (L2) had an effect on their academic learning and intercultural competence development at these two North American universities. The effect could be both positive and negative. On the one hand, Chinese can both help and impede their English academic learning and communication. Two of the four participants believed that the structure of their mother tongue (i.e., Chinese) assisted them in organizing ideas in English. On the other hand, although the four Chinese graduate students had scored very high on TOEFL (a required English test for non-native speakers of English who want to pursue academic studies at English-speaking universities), they were not very confident in their English language proficiency. They all agreed that their insufficient English proficiency negatively affected both their academic and social activities and communications. Further, they often found it uncomfortable to express themselves either socially or in class (Huang & Rinaldo, 2009).

Socio-cultural Factors

Cultural differences and cultural variability can cause problems in developing and maintaining social relationships and effective communication. They can also a leading factor that contributes to cultural shock (Redmond, 2000). Both cultural differences and cultural shock are factors that impact on the development of intercultural competence. Further, as Chitakornkijsil (2010) argued, culture strongly affects individuals' values, beliefs, worldviews, nonverbal behaviors, languages, social skills, and how to deal with others; and therefore, learning to understand and interact with people from different cultural background is challenging. Cultural

differences can potentially make intercultural communication very difficult, and sometimes even impossible.

Using a self-report instrument Redmond (2000) investigated the effects of cultural variability on the amount of stress, the handling of stress, and intercultural competence. The participants were 644 international students enrolled in a large Midwestern university in the United States. Participants were grouped into two different groups according to their cultural values: those whose values were nearest to the United States' values, and those that were farthest. Regression analysis was performed in this study. Regression analysis generates beta weights which show how much each of the intercultural communication competencies contributes to an equation that predicts the amount of stress or handling of stress. Regression analysis indicated differences between those participants from cultures closest to the United States in cultural values and other participants who were farthest. The reliability and validity of the values (collected during the 1960s and 1970s) associated with each country and the representativeness of the sample used in the study might have limited the interpretation and generalization of the results of this study.

Most recently, Marx and Moss (2011) conducted a qualitative case study to explore a preservice teacher's intercultural development during a semester-long teacher-education program in London. The participant was a preservice teacher from an American university and she was enrolled in a teacher education study abroad program. Both participant observation and in-depth open-ended interviews were used for data collection. The results indicated that the participant's lack of understanding of

the cultural differences between the United States and the United Kingdom before the study abroad program was a challenge to her intercultural development. During the study abroad she became more interculturally sensitive; and by the end of the study she was "developing richer and more complex cultural constructs, exploring her own cultural identity, accepting and recognizing fundamental cultural differences in herself and others, and actively seeking out intercultural experiences as an avenue to continue her intercultural development" (p. 40). The results also show that the intercultural guide or cultural translator and cultural reflection played an important role in her intercultural development and facilitated her intercultural development. It is suggested that study abroad students need an intercultural guide or a cultural translator to support their intercultural development.

Psycho-cultural Factors

In addition to linguistic and socio-cultural factors, Han (2004) proposed that it is important to examine psycho-cultural factors that impact the effectiveness of intercultural effectiveness. Psycho-cultural factors, as the name suggests, refer to culture-related factors in the domain of psychology (Han, 2004). Earlier, Kim and Gudykunst (1992) identified that "psycho-cultural factors influencing communication with outgroups include stereotypes of and attitudes (e.g., ethnocentrism and prejudice) toward outgroups" (cited in Han, 2004, p. 2).

Han (2004) reviewed the following psycho-cultural factors that have an impact on intercultural communication: ethnocentrism, prejudice, and stereotypes. First, Han (2004) define ethnocentrism as "a kind of defensive attitudinal tendency to view the

values, and norms of one's culture as superior to other cultures, and people perceive their cultural ways of living as the most reasonable and proper ways to conduct their lives" (p. 2). Ethnocentrism has both positive and negative effects on intercultural competence development. Positively, ethnocentrism is often "a source of cultural and personal identity" (Han, 2004, p. 3). Negatively, it "takes on a negative condition and becomes destructive when it is used to shut others out, provide the bases for derogatory evaluation, and rebuff changes" (Samovar, Porter, & Stefani, 1998, cited in Han, 2004, p. 3). Therefore, a high level of ethnocentrism can cause people to interpret outgroup's behaviours using their own cultural frame of reference (Han, 2004).

Second, prejudice is thought to have negative effects on intercultural communication by most people (Han, 2004). Plotnik (1986) defined prejudice as "an unfair, biased, or intolerant attitude towards another group of people" (cited in Han, 2004, p. 4). Therefore, in the context of intercultural communication, prejudice "places the object of the prejudice as some disadvantages that is not directly related to the actual conduct of the person, but rather is part of the misjudgement of the person holding the prejudiced views" (Han, 2004, p. 4).

Finally, stereotyping is another psycho-cultural factor that affects the intercultural communication. The early definition of stereotyping is from Lippman (1957), who stated that stereotypes are "a means of organizing people's images into fixed and simple categories that they use to stand for the entire collection of people" (cited in Han, 2004, p. 6). Like ethnocentrism and prejudice, stereotyping is natural

during the intercultural communication process. However, inaccurate stereotypes can lead to intercultural miscommunications and misunderstandings (Han, 2004; Stephan & Rosenfield, 1982).

Cognitive Factors

Success with intercultural communication depends on an understanding of cultural differences and the influences culture has on communication (Chamberlain et al., 1999). According to Byram (2000), intercultural communicative competence involves the following cognitive components: "a) attitudes (curiosity and openness, readiness to suspend disbelief about other cultures and belief about one's own); b) knowledge (of social groups and openness, readiness to suspend disbelief about other cultures and belief about one's own); c) skills of interpreting and relating (ability to interpret a document or event from another culture, to explain it and relate to operate knowledge, attitudes and skills under the constraints of real-time communication and interaction); and d) critical cultural awareness (an ability to evaluate critically and on the basis of explicit criteria perspectives, practices and products in one's own and other cultures and countries" (p. 10).

Attitudes play a very important role in development of intercultural competence. To become successful intercultural communicators, as argued by Parmenter (2003), students need to develop attitudes of openness to the unfamiliar and curiosity about other cultures and people. While sojourning abroad, it is vital that students are willing to question their own cultural assumptions and beliefs and be willing to accept other ways of acting and thinking without prejudice or discrimination.

Further, Parmenter (2003) argued that there are two types of knowledge required for intercultural competence. The first is knowledge about social groups and cultures in one's own country and in the countries of those they communicate with. In addition to the foreign language classroom, this knowledge is also gained from social studies classes, the media, friends and family members. The second type of knowledge is the processes of interaction at societal and individual levels. This type of knowledge is essential for intercultural competence because if students speak grammatically correct English but have no knowledge of the processes of interaction, then communication will be a failure.

Furthermore, Byram (1997) divides skills into two categories. The first is the "ability to interpret a document or event from another culture, to explain it and relate it to documents from one's own" (p. 52). The second skill refers to the "ability to acquire new knowledge of a culture and cultural practices and the ability to operate knowledge, attitudes and skills under the constraints of real-time communication and interaction" (p. 52). The development of intercultural competence is required in order to master both sets of skills. Parmenter (2003) further states that skills of analysis and interpretation are necessary, as are skills of relating between different cultures, and the ability to put all these knowledge and skills into practice in real situations.

Finally, critical cultural awareness refers to the ability to think about things actively and intelligently rather than just accept them passively without question (Byram, 2000; Parmenter, 2003). According to Parmenter (2003), students must acquire the ability to identify and interpret values in another culture, the ability to

critically analyze and evaluate cultural practices or documents from another culture, and the ability to interact and mediate in intercultural exchanges, drawing on one's knowledge, skills and attitudes. It means being able to go beyond surface stereotypes and false images of a culture.

Empirically, Vogt (2006) attempted to measure attitudinal factors in computer-mediated intercultural communication. Data were collected from three e-mail projects between 2001 and 2002. *Sixty-four participants from* three different upper-secondary classes at a vocational school in Mainz, Germany exchanged e-mails with 57 students from two groups of US-American undergraduate students in Ohio and *30* undergraduate students of English from Tokyo (n=30). The major research question addressed in this study is whether attitudinal components of intercultural competence can be measured quantitatively in telecollaborative environments. To do this, specifications and implementation of learning objectives for attitudes as put forward by Byram (1997) are applied to different instruments within the framework of the email projects, including a triangulation of instruments. Instruments include e-mails, critical incidents, essays and interaction journals. In addition, when data were ambiguous or incomplete, follow-up interviews were conducted with the participants. Results of the study suggest that it is not possible to measure attitudes with the instruments described. However, they can help teachers to describe evidence of attitudes in interaction and trace developments to provide a basis for feedback.

Educational Factors

Educational factors refer to the training and preparation received by individuals before they study abroad and orientation and guided reflection after they arrive abroad. For example, regular students have to take the required language tests before they study for academic degrees in foreign universities, these language proficiency tests provide evidence that they have met the minimum language requirements for their study abroad although high test scores do not necessarily indicate successful intercultural competence development (Huang, 2013). Visiting scholars might have received specific training through professional development opportunities before their departure or orientation after they have arrived abroad (Shaheen, 2004). Research has started to show that such educational factors have an impact on the development of intercultural competence (Hixson, 2003; Huang, 2013; Lough, 2010).

Fang (2010) argued that "The more knowledge learners know about target language's culture, the easier it will be for them to reach effective communication (p.43)." Through educational procedures students can develop their cultural awareness. One of options is to provide the international students with an orientation program at the beginning of their study abroad so that they can understand a culture's demands, values, beliefs, and socially appropriate behaviours (Sherry, Thomas, & Chui, 2010). This orientation program can provide an opportunity for students to feel comfortable in the new culture as well.

Shaheen (2004) investigates the effect of pre-departure preparation on student intercultural competence development when they study abroad, especially on shorter

length programs. Thirty-nine students (Groups 1 and 2) who studied at an American university and also accepted for the summer 2003 study abroad programs in Lyon, Nice, and Paris were asked to participate in the study. This whole group was asked to participate in the treatment of the pre-departure class and approximately half of the group volunteered to take the pre-departure study abroad course. The third group was selected based on their status of being enrolled in French language classes for summer quarter and remaining on campus for summer 2003. Shaheen (2004) conducted a mixed method comparative study with these three groups of students. The Intercultural Development Inventory (IDI) based on the Developmental Model of Intercultural Sensitivity (DMIS) (IDI Manual, 2001) was employed for data collection. A pre-test/post-test measured change in participant behavior.

The IDI and DMIS scores showed change in intercultural development. Further, if students have parents who have had overseas experiences or they are non-minority students (racial and ethnic minorities as well as international students), there is a likelihood that these students would have a significant increase in sensitivity. Finally, the following five factors "encouraged intercultural growth including: 1) significant intercultural interactions with international peers, 2) not having prolonged negative experiences with international people, 3) having the goal of gaining cultural understanding and students seeing an applicable use in their future career for their experience, 4) the chance to speak with international peers in English on a variety of cultural topics, and finally, 5) being members of the majority race and ethnic groups in the U.S." (Shaheen, 2004, p. iii).

Further, Lough (2010) examined international volunteers' perceptions of the following factors affecting their intercultural competence: duration of service, cultural immersion, guided reflection, and contact reciprocity. The study design is cross-sectional and retrospective and employs international volunteering impacts survey (IVIS) to collect self-reported responses from 291 international volunteers. A three-step hierarchical multiple regression was performed to assess the relationship among the four independent variables and intercultural competence, controlling for other individual and institutional effects. The findings suggest that the service duration, cultural immersion, guided reflection, and contact reciprocity are all positively related to intercultural competence. In addition, guided reflection appears to moderate the relationship between duration and intercultural competence.

Affective Factors

Research has also shown that affective factors affect an individual's intercultural competence development as well as cross-cultural learning (Huang & Klinger, 2006; Huang & Rinaldo, 2009). Affective factors are emotional factors which influence learning. They can have a negative or positive effect.

Using a qualitative research method, Huang and Rinaldo (2009) examined the affective factors affecting four Chinese graduate students' cross-cultural learning and intercultural communication at two North American universities. For the four participants, North America is filled with pressures. Loneliness and anxiety were often connected to the absence of family and friends and they have become the two major affective factors that negatively affected their graduate study abroad.

In another qualitative study, Huang (2011) examined whether or not four Chinese Ph.D. students were experiencing high levels of academic anxiety at two North American universities. The results show that two participants were experiencing high levels of academic anxiety. "Majors that involve more language usage, such as education, political studies, and religious studies, seem to cause greater levels of academic anxiety than those majors that rely more on graphs, tables, numbers and symbols, such as mathematics, biology, and chemistry" (p. 35). The major sources of high levels of academic anxiety, as reported by these two participants, are "… language barriers, cultural differences, being away from family and friends ..." (p. 35). Academic anxiety decreases their self-confidence and also has a negative impact on their academic learning, social life, personal feelings, and intercultural communication competence.

Similar to anxiety, stress has also been reported as a factor affecting the development of intercultural competence (Kim, 1995; Redmond & Bunyi, 1993). Stress is not always a bad thing. Stress sometimes leads to adaptation and intercultural competence development, as argued by Kim (1995), "… defensive (or protective) stress reactions…are generally temporary and counterproductive to the stranger's effective functioning in the host environment" (Kim, 1995, p. 177).

Redmond and Bunyi (1993) examined the relationships among intercultural competence (operationalised as the following six competences: language competence, adaptation, social decentering, communication effectiveness, social integration and knowledge of the host culture), the amount of stress experienced, and how well the

stress was handled as reported by international students attending a large Midwestern university in the United States. The results indicate that adaptation and social decentering explained 16% of the variance in the amount of stress reported, and communication effectiveness, adaptation, and social integration accounted for 46% of the variance in how well that stress was handled. Further, significant differences were found among 18 countries and regions in the reported amount of stress, the handling of stress, and five of the six competences (Redmond & Bunyi, 1993, Redmond, 2000).

Using Chen and Starosta *Intercultural Sensitivity Scale* (2000), Baños (2006) examined the affective aspects that are under *intercultural sensitivity* (i.e., the sensitivity of the students in intercultural communication). The participants of this study were 638 teenagers from seven different secondary state schools in Catalonia region of Barcelona in Spain, where Catalan and Spanish are the official languages. The final scale was translated to Spanish and Catalan and adapted to teenagers. The results indicate that students with a positive perception of linguistic competence in diverse languages (Catalan, Spanish, French, English, and Arabic) obtained higher scores in intercultural sensitivity scale. Further, students who spoke Catalan, French or English obtained higher scores in intercultural sensitivity scale than those spoke only Spanish. Finally, students who identified different cultures among their friends obtained higher scores in intercultural communication scale than students who identified their friends with the same cultural reference (Baños, 2006).

Personal Factors

Research on intercultural competence has shown that many personal factors affect the development of an individual's intercultural competence and these personal factors include self-confidence, tolerance of ambiguity; social skills; self-esteem; self-efficacy; open-mindedness; being non-judgemental; experiences with cultural difference; having prolonged negative experiences with international people; having the goal of gaining cultural understanding; time spent with international peers; growing up in a multicultural home; having accompanying spouses and children; previous experience abroad; family and organizational support; family international experience; previous experience abroad; having studied language overseas; living with a host family; having an international perspective (Cash, 1993, Hixson, 2003; Laubscher 1994).

For example, Hixson (2003) studied how adult educators from the United States became interculturally competent practitioners to teach adults in Peru in Latin America. A qualitative, phenomenological research design was used. Fourteen adult educators originally from the United States but with intercultural teaching experience in Peru participated in in-depth interviews. Three important findings are reported. First, be ready prior to the intercultural teaching experience and this readiness involves the influence of family and friends, personal commitment, training and education, and previous intercultural experiences. Second, immerse into the host culture by adopting a role of a learner, communicating in the local language, acting in the community, and teaching in the host culture. Finally, reflect on experiences in

immersion and make changes based on what has been learned about the host culture. This study also suggests that the following three factors impact their intercultural competence development: family and organizational support, the sojourner's teaching philosophy, and the reception of the adult educator by the hosts.

Milstein (2005) empirically examines communication self-efficacy as a possible profound payoff of sojourning. Questionnaire data from an international sample of 212 Japan Exchange and Teaching Programme (JET) alumni were used to test hypotheses about the sojourn and perceived changes in communication self-efficacy. The results indicate that 95.5% of the sample retrospectively reported a perceived increase in self-efficacy. Further, positive correlations "were found between self-reported challenge of sojourn and reported perceived change in self-efficacy, and between self-reported success of sojourn and perceived communication self-efficacy scores" (p. 217).

The criticism to most of the above studies would be the representativeness of the selected samples, which were relatively small. The generalization of these findings would then be problematic. For example, in their study Huang and Rinaldo (2009) interviewed only four individuals representing two universities across two countries. It would be impossible to generalize the results to larger contexts.

To sum up, this section reviewed seven major factors that are found to affect an individual's intercultural competence development while sojourning abroad. It is important to note that these factors can have both positive and negative effects on intercultural competence development.

The Conceptual Framework

The purpose of this study is to examine Chinese visiting scholars' perceptions of the factors affecting their intercultural competence development during their sojourning abroad, it is appropriate to use Mezirow's transformative learning theory (1990, 1991, 1997, 2000) to guide the study as the conceptual framework.

Chinese visiting scholars study abroad for a relatively short period of time. Sojourning abroad for study provides them with significant transformative potentials. There is a common saying: to be educated is not to arrive, it is to travel with a different view; or travel broadens the mind. No longer do people view sojourning whilst study abroad as acquiring knowledge or skills solely, it leads to capacity-related and self-related change, such as, in the amount of knowledge individuals have, in competence development people understand each other, and in the sense of oneself. It yields a potentially fruitful multiplication of perspectives. The sojourning learners find the multiplicity of their worlds and contexts; they need to understand and be understood within their new cultural environment. They wish to manipulate what they have learned rather than simply acquire it. To them, sojourning whilst study abroad means more than a single subject mastery, but competencies of a threefold "stress-adaptation-growth" intercultural learning process (Gill, 2007).

Therefore, sense-making potentials of identity reconstruction, inter-culturality, and personal growth are among the interests of the researchers (Gu, 2005, 2009; Hoffman, 2009; Hamza, 2010; Barnett, 2007; Sanderson, 2008; Murphy-Lejeune, 2003). These dialectical modes of research start a move to argue that human beings

are by nature active, and that international academic sojourning inevitably experiences change and transformation in different aspects. Then questions concerning how the sojourning learners lead for change and transformation are raised. This thesis will theoretically apply the transformative learning theory from the works of Mezirow (1990, 1991, 2000) and his followers to elaborate these challenged questions.

By transformative learning it meant: "… the process of learning through critical self-reflection, which results in the reformulation of a meaning perspective to allow inclusive, discriminating, and integrative understanding of one's experience" (Mezirow, 1990, p. xvi) or "…transformative learning is the process of effecting change in a *frame of reference* ... frames of reference are the structures of assumptions through which we understand our experiences" (Mezirow, 1997, p. 5). A frame of reference, primarily the result of cultural assimilation, means two dimensions: habits of mind and a point of view (Mezirow, 1997, pp. 5-6):

> Habits of mind are broad, abstract, orienting, habitual ways of thinking, feeling, and acting influenced by assumptions that constitute a set of codes. These codes may be cultural, social, educational, economic, political, or psychological. Habits of mind become articulated in a specific point of view – the constellation of belief, value judgement, attitude, and feeling that shapes a particular interpretation.

Mezirow (1997) offers a framework for distinguishing between different types of learning and change. He interprets change as "…occurs in one of four ways: by

elaborating existing frames of reference, by learning new frames of reference, by transforming points of view, or by transforming habits of mind" (Mezirow, 2000, p. 19). Thus transformation lies on experiential learning which can be defined as the sense-making process of active engagement between the inner world of the sojourning learner and the outer world of environment. It can elucidate how the sojourning learners incorporate new knowledge, perspectives or practices into their world outlook of engagement, and reflect that pragmatic shift of contexts may engage the learners in validating their familiar values, beliefs, and assumptions. It is a common learning experience, but the change and transformation require the learners to engage in a meta-cognitive standpoint that differs from other types of change. The focus of this theory is on how individuals learn to negotiate and act on their own values, feelings, and meanings rather than uncritically assimilated from others. Such experiences can result in reconfirming their current perspectives or making new interpretations that further differentiate their deeply-rooted frames of reference:

> As mentioned earlier, we transform frames of reference – our own and those of others – by becoming critically reflective of their assumptions and aware of their context – the source, nature, and consequences of taken-for-granted beliefs (Mezirow, 2000, p. 19).

Mezirow's transformative learning is characterized as either a dramatic or a gradual shift in a person's frame of reference. It is considered as a process that makes meaning of the sojourners' experience and that is helpful in supporting the emergence of multiple ways of knowing and deepened states of consciousness. It is also a goal that

makes sojourning learners become autonomous and responsible thinkers. Thus sojourning abroad for study via encounter with otherness can affect transformation of kinds of "habits of mind", such as, socio-culturality, epistemic reflexivity, or ethnic identity. And the process of making meaning, often portrayed as both rational and creative, follows some variations of the following phases (Mezirow, 2000:22):

1. A disorienting dilemma
2. Self-examination with feelings of fear, anger, guilt, or shame
3. A critical assessment of assumptions
4. Recognition that one's discontent and the process of transformation are shared
5. Exploration of options for new roles, relationships, and actions
6. Planning a course of action
7. Acquiring knowledge and skills for implementing one's plan
8. Provisional trying of new roles
9. Building competence and self-confidence in new roles and relationships
10. A reintegration into one's life on the basis of condition dictated by one's new Perspective

These phases draw basic concepts from Mezirow's theoretical framework (2000) named as "disorientating dilemma", "point of view", "habit of mind", and" incremental transformation". These phases describe transformative learning as a practice of process and experience that are unique to each learner and context. These also posit that existential frames of reference or "habits of mind" are somehow disrupted through this learning process by some forms of challenge or "disorienting

dilemma". Hence to acquire a sense of identity and international socio-cultural awareness require a disorientating dilemma of practice sojourning abroad. Transformative learning of a learner sheds light on a value of diverse interpretations, and enhances self-knowledge and capacity.

Within the recent decade, there has emerged a second wave of more integrated and holistic contribution to provide perspectives on the process of transformative learning (Illeris, 2004; Taylor, 2005; Kegan, 2000; Gunnlaugson, 2006, Kitchenham, 2008, Dirkx et al., 2006, Erichsen, 2011, Poutiatine, 2009). Transformation is deemed as something more than mere change: "Those who take seriously the 'transformative' in transformative learning are interested in a 'deep' learning that challenges existing, taken-for-granted assumptions, notions and meaning of what learning is about" (Dirkx et al., 2006, p. 4). It is a process that results in an ability to conceptualize personal understanding of self in relation to multiple contexts. For the sojourning learners, exploration of the conception of self and the meaning of that identity within the foreign context of study abroad comes to the fore (Erichsen, 2011). It involves a generative dialogue between the unconscious contexts that shape our frame of reference and the conscious ego of the sojourning learners, thus contribute to the development of capacity-related socio-cultural competences.

For a clear understanding of the process of transformation, the nine basic principles presented by Poutiatine (2009, p. 192) take the first step:

1. Transformation is not synonymous with change

2. Transformation requires assent to change

3. Transformation always requires second-order change
4. Transformation always involves all aspects of an individual's or organization's life
5. Transformation change is irreversible
6. Transformation change involves a letting go of the myth of control
7. Transformation change always involves some aspect of risk, fear, and loss
8. Transformation change always involves a broadening of the scope of worldview
9. Transformation is always a movement towards a greater integrity of identity – a movement toward wholeness.

These nine principles provide a starting point from which the exploration of transformative learning can be furthered. Transformative change ought to challenge the existing taken-for-granted frames of reference. It is more than an extension of our past, but a disruption of our "habits of mind". Transformation is a very particular type of change; it is discontinuous and must be engaged actively by the individuals. It is an internal process that can be driven cognitively through affective understandings with a disorienting dilemma or experience. The sojourning learners encounter something that does not fit into their dominant worldview; this forces them to reorder with the new concept, and experiences a multi-level and qualitative second-order change involving an altering fundamental shift in multiple dimensions of human identity and competencies. It is a process of barriers removal that creates a sense of alienation, fear and loss, or a process of suspending the past beliefs or thought structure. The

suspension then offers a framework for learners to explore the different ways of knowing and allows an expanding larger vision of the worldview rather than discarding the old structure. Thus transformation always means the growth toward wholeness of being.

Other studies on the process of transformative learning insist that the international academic mobility can make the sojourners find the multiplicity of their worlds and see the necessity of their personal change and the reorganization of their habits of mind. Conceptually, Erichsen (2011, p. 109) argues:

> That the experience of study as an international student engenders deeply reflective learning and influences shifting conceptions of self. Transformative learning within an international context is about integration and finding connection (adaptation and perspectival shift) but also about differentiation and reinventing oneself within a new context (identity development).

Gill's (2007) study has identified a threefold "stress-adaptation-growth" intercultural learning process of those sojourning learners' experience in the United Kingdom. Taylor (2000) contends, to adult sojourners, transformative learning is as a recursive process of a perspective transformation or an interdependency of critical reflection and affective learning. The trans-national social field theory (Schiller, 2005; Schiller & Levitt, 2006; Gargano, 2009) insists that sojourning abroad provides spaces for the exchange, organization, and transformation of ideas, practices, and social network. Or in another words, when sojourners encounter a range of

socio-cultural diversities, those spaces can recognize simultaneously in locality and multiplicity in identities as well as reveal the socio-cultural sense-making potentials. These sense-making potentials are penetrated throughout the socio-cultural processes that extend beyond geographical borders. Robinson (2004) puts forward that mediation can be functioned as a process for the constructed nature of the egoic self and can be a gateway into which belief structures are solidified, defended, and let go. It is mediation - a path for walking through the fear of the disorienting experience - that helps develop deep insights transforming the frames of reference toward a more inclusive worldview. All these studies describe a process that results in an ability to conceptualize personal understandings of self in relation to multiple contexts domestic and abroad. And the process theory manifests that the topics about intercultural development, personal change, and perceptions of self must be discussed.

Research Gaps in Existing Literature

Based upon the review of literature, three major research gaps are evident. First, many studies have examined a specific factor that has an impact on the development of intercultural competence; however, not a single study has examined all these factors systematically in terms of their positive and/or negative impact on intercultural competence development.

Second, there was an imbalance by both program levels and countries. Most studies examined the factors affecting the intercultural competence development in the context of regular Chinese students studying for academic degrees in American colleges and universities. Very few studies, however, examined these factors in the

context of Chinese visiting scholars sojourning in the United States in comparison with Chinese visiting scholars sojourning in the United Kingdom. Chinese visiting scholars are different from regular Chinese students studying for academic degrees in foreign universities in terms of linguistic and cultural competence (Huang, 2013). Further, although the United States and the United Kingdom are both English speaking countries, there are cultural differences between them (Marx & Moss, 2011).

Finally, due to the qualitative nature of analyzing and reporting these factors affecting the development of intercultural competence, most studies employed qualitative approaches to investigating these factors. However, very few studies examined these factors quantitatively and attempted to examine these factors comparatively between the United States and the United Kingdom.

Therefore, this study attempts to bridge these gaps. Given the increasing number of Chinese scholars being sent to foreign countries to study as visiting scholars as well as limited research focusing on examining their intercultural competence development while sojourning abroad, using a mixed-methods design this thesis study will be to examine Chinese visiting scholars' perceptions of the factors affecting their intercultural competence development during their sojourning abroad by country (in the United States versus in the United Kingdom).

Specifically, the following five research questions guide this thesis study: a) Are there any significant differences (e.g., by sex, age, country of study, and length of study) in rating the impact of the factors on the Chinese visiting scholars' intercultural competence development? b) What are the sources of rating variation of the impact of

the factors on Chinese visiting scholars' intercultural competence development? c) How does Chinese culture influence the Chinese visiting scholars' intercultural competence development during their sojourning abroad? d) How does the host country (i.e., the United States versus the United Kingdom) culture influence the Chinese visiting scholars' intercultural competence development during their sojourning abroad? and e) How does the study abroad experience influence their interpersonal communication after they have come back to China?

Summary

This chapter first provides a brief historical overview of study abroad and higher education reform in China. It then thoroughly explains the concept of intercultural competence and its major theoretical frameworks. It also systematically reviews the existing literature on the factors affecting the development of intercultural competence while an individual is sojourning abroad. Further, this chapter presents the conceptual framework that will guide this thesis study. Finally, it identifies the research gaps and states the specific research questions that will guide this study. Next chapter will describe the methodology and methods of the thesis.

CHAPTER THREE
METHODOLOGY AND METHOD

This chapter describes the methodology and method used to explore the research questions and provides an overview of the research protocol and study designs. It first describes the purpose of the study and restates the research questions. It then describes the study participants and explains the research instruments used. The chapter then defines the data collection procedures and explains the data analysis methods. Finally it describes the computer programmes that will be used for data analysis.

Purpose of Study and Research Questions

Considering the increasing number of Chinese scholars being sent to foreign countries to study as visiting scholars as well as limited research focusing on examining their intercultural competence development while sojourning abroad, it is important to examine their perceptions of the factors affecting their intercultural competence development during their sojourning abroad by country (in the United States versus in the United Kingdom). A mixed-methods design was employed for this thesis study. Quantitatively, using generalizability (*G*-) theory (Cronbach, Gleser, Nanda, & Rajaratnam, 1972) as a theoretical framework, this study examined differences in the ratings of the factors affecting Chinese visiting scholars' development of intercultural competence during their sojourning abroad across sex (i.e., male and female), age (i.e., younger than 30 years old, 30-40 years old, 40-50 years old, and older than 50 years old), country of study (i.e., the United States and

the United Kingdom), and length of study (i.e., less than 3 months, 3-6 months, 7-12 months, and more than 12 months). Qualitatively, this study used ten semi-structured interviews (i.e., 5 interviews with Chinese visiting scholars studying in the United States and 5 interviews with Chinese visiting scholars studying in the United Kingdom) to gain Chinese visiting scholars' perceptions of the factors affecting their intercultural competence development during their sojourning abroad.

Specifically, the following five research questions guide this thesis study: a) Are there any significant differences (e.g., by sex, age, country of study, and length of study) in rating the impact of the factors on the Chinese visiting scholars' intercultural competence development? b) What are the sources of rating variation of the impact of the factors on Chinese visiting scholars' intercultural competence development? c) How does Chinese culture influence the Chinese visiting scholars' intercultural competence development during their sojourning abroad? d) How does the host country (i.e., the United States versus the United Kingdom) culture influence the Chinese visiting scholars' intercultural competence development during their sojourning abroad? and e) How does the study abroad experience influence their interpersonal communication after they have come back to China?

Major Considerations of Research Design

Qualitative and quantitative research methods are the two general categories of methods currently being used in educational research. The general purpose of qualitative research is to probe deeply into the research setting to obtain in-depth understandings about the way things are, why they are like that, and how participants

perceive them. However, quantitative research is to collect and analyze numerical data to explain, predict, or control phenomena of interest (Creswell, 2014). Both research methods have their advantages and disadvantages.

Advantages and Disadvantages of Qualitative Research

Qualitative research has the following major advantages: a) it can create a sustained and in-depth research context that allows the researcher to uncover subtle and less overt personal understandings; b) Phenomena are examined as they exist in a natural context, and they are viewed from the participants' perspectives; and c) it has flexibility in terms of data collection, analysis, and interpretation. However, it has several major disadvantages: a) it is the difficulty in interpreting information collected from different participants; b) the interpretation of research findings is subjective; and c) the research findings are hardly generalized to large context (Creswell, 2014; Hoy, 2010; Matveev, 2002).

Advantages and Disadvantages of Quantitative Research

Quantitative research has the following major strengths: a) it can test hypotheses and validate already constructed theories because of its ability to measure data using statistics; b) it can provide precise numerical data; c) the researcher is more objective about the findings of the research; and d) the research findings can be generalizable. However, it has several major disadvantages: a) it cannot provide more in-depth information to explain the research finding; b) the theories might not reflect the research context; and c) the findings might be too abstract and general for

interpretation and application (Creswell, 2014; Hoy, 2010; Matveev, 2002).

A Mixed Methods Approach

To overcome the weaknesses of a single quantitative or qualitative research method, this study used a mixed methods approach to determine the factors affecting their intercultural competence development during their sojourning abroad as perceived by Chinese visiting scholars. Mixed methods research focuses on collecting and analyzing both qualitative and quantitative data. This method's foundation is based upon the premises that when mixing methods of inquiry the researcher can explore and explain the problem better if only quantitative or qualitative procedures alone were selected. Mixed methods research, as argued by Creswell (2014), is an "approach to inquiry involving collecting both quantitative and qualitative data, integrating the two forms of data, and using distinct designs that may involve philosophical assumptions and theoretical frameworks" (p. 4).

Triangulation of different sources of data was a major consideration in designing this study. Both quantitative and qualitative methodologies in this study could provide triangulated data for the analyses, which would ultimately allow the investigation of the factors impacting Chinese visiting scholars' development of intercultural competence. Further, the use of triangulated methodologies and data analyses added validity and generalizability of the results.

A number of factors are commonly identified to have an impact on individuals' intercultural competence development. However, the impact that these factors have can be evaluated differently by Chinese visiting scholars across sex, age, country of

study, and length of study. Since the focus of this study was on Chinese visiting scholar perceptions of the factors affecting their intercultural competence development during their sojourning abroad, it was appropriate to use *G*-theory (Cronbach et al., 1972) as a theoretical framework.

G-theory is a statistical method that can simultaneously identify different sources of error variance and estimate the impact of these sources on score variability and reliability (Shavelson & Webb, 1991). In the case of evaluating the factors affecting the development of Chinese visiting scholars' intercultural competence development, it apportions variance in assigned impact scores to factors, Chinese visiting scholars (raters), error, and interaction components.

G-theory provides researchers with a flexible, practical framework for examining behavioural measurements and their dependability (Shavelson, Webb, & Rowley, 1989). While many researchers rely on the use of classical test theory (*CTT*), *G*-theory acts to extend its application by estimating the magnitude of multiple sources of measurement error and isolating major sources of error (Brennen, 2000). *G*-theory is an approach to estimating measurement dependability and it offers researchers the ability to assess both comprehensively and simultaneously, various sources of measurement error; further, *G*-theory application could identify the conditions that contribute most substantially to error and offers remedies to enhance dependability (Burns, 1998).

Therefore, *G*-theory is a stronger framework than *CTT*. In addition to taking into consideration multiple variances simultaneously, *G*-theory also estimates the

magnitude of each source of error (Huang, 2008, 2011, 2012; Elorbany & Huang, 2012; Huang & Foote, 2010, 2001; Lewis & Huang, 2012). This feature of *G*-theory allows researchers to reduce the error observed in an observed measurement score as it specifically pinpoints the sources of error. Therefore, *G*-theory was used as the theoretical framework to guide this study.

Further, ten individual interviews were conducted to examine more in-depth information about how Chinese culture as well as host country culture impact a Chinese visiting scholar's development of intercultural competence during their sojourning abroad. These interviews could provide insights into how people think and provide a deeper understanding of the phenomena being studied (Nagle & Williams, 2013).

Data Collection

Ethical Approval

Before collecting the data, it was necessary to obtain ethical approval from the School of Education at the University of Nottingham. Appropriate documentation was provided, which included the letter of information letter (see Appendix A) and a consent form (see Appendix B). Both the letter of information and the consent form explained that participation in the study was strictly voluntary and responses would be kept confidential. Participants could withdraw from the study without reasons at any point. Access to the data was restricted to the researcher. Any written materials that originated from the research did not contain the names of individuals and institutions. The ethical approval was granted in July 2010. There have been no significant

changes to the research which would have required fresh consideration of these issues.

Quantitative Data Collection

Participants and Data Collection Procedures

Due to the increasing number of Chinese visiting scholars sent to English speaking universities, it is important that these scholars have acquired adequate English proficiency prior to their sojourning abroad. For this study, the participants encompassed two distinct groups of Chinese visiting scholars studied in the United Kingdom and the United States because they are the two major English speaking countries that most Chinese visiting scholars choose as their study abroad destination.

This study used a non-random and purposive sampling strategy. The participants selected for this study were Chinese visiting scholars who have studied at either British universities or American universities. A 40-item 10-point scale rating form (see Appendix C) was distributed to 150 Chinese visiting scholars who had studied in the United States and the United Kingdom. In total 100 completed rating forms were returned to the researcher, with a response rate of approximately 67%. Among these returned forms, 15 did not complete their demographic information and therefore were considered invalid and excluded from the final data analysis of this study. The final valid number of participants of this study was 85.

Instrument

The instrument used for quantitative data collection was a 40[1]-item 10-point

[1] These 40 specific factors were selected by two independent individuals from the existing literature that were found to have an impact on an individual's intercultural competence development.

scale rating form (see Appendix C), which required the participants to rate the impact of these factors on their intercultural competence development during their sojourning abroad on a 1-10 point scale (1 = the least positively impacts intercultural competence development, and 10 = the most positively impacts intercultural competence development)[2]. The key terms were explained in Chinese and the instructions provided on the rating form. In addition, the rating form also collected the participants' background information about their sex (i.e., male and female), age (i.e., younger than 30 years old, 30-40 years old, 40-50 years old, and older than 50 years old), country of study (i.e., the United States and the United Kingdom), and length of study (i.e., less than 3 months, 3-6 months, 7-12 months, and more than 12 months).

This rating form was field-tested using a convenience sample of 10 Chinese scholars who had overseas visiting scholar experiences. They were required to complete the rating form for the purpose of ensuring the data collection protocol was suitable prior to formal data collection. These 10 participants were also asked to review the rating form to ensure that the language was clear and understandable. This field-testing procedure was important because it could add both reliability and validity to the rating form.

Qualitative Data Collection

Participants and Data Collection Procedures

Semi-structured interviews were conducted between the researcher and the ten

[2] It is important to note that there was no option offered for "no opinion" on the instrument, which may be interpreted as a limitation by some researchers.

participants who were purposefully selected (i.e., 5 Chinese visiting scholars studied/studying abroad in the United States and 5 Chinese visiting scholars studied/studying abroad in the United Kingdom) from the 85 participants for the quantitative component of the study (see Table 4).

Table 4

Interviewees' Demographic Information

Participant ID	Sex	Country of Study
A	Male	The United States
B	Male	The United States
C	Female	The United States
D	Male	The United States
E	Female	The United States
F	Male	The United Kingdom
G	Female	The United Kingdom
H	Male	The United Kingdom
I	Female	The United Kingdom
J	Female	The United Kingdom

Table compiled by author

As shown in Table 4, altogether five female and five male participants were interviewed by the researcher. These ten participants should be fairly representative in terms of country of study, age, and length of study. These interviews allowed the researcher to obtain in-depth information about how Chinese culture as well as the host country culture could impact their intercultural competence development during their sojourning abroad.

Participants were given instructions at the start of the interview and each interview was audio recorded. Further, each interview was limited to 45 minutes in duration. Audio recordings were transcribed and evaluated for accuracy before data analysis.

Major Questions for Interviews

Six major interview questions were asked in each interview (see Appendix D): 1) How did Chinese culture positively affect their intercultural competence development during their sojourning abroad? 2) How did Chinese culture negatively affect their intercultural competence development during their sojourning abroad? 3) How did the host country culture positively affect their intercultural competence development during their sojourning abroad? 4) How did the host country culture negatively affect their intercultural competence development during their sojourning abroad? 5) What is the overall impact of your study abroad experience on your interpersonal communication after you have come back to China? And 6) what specific changes have you noticed in your interpersonal communication after you have come back to China? These interview questions are aimed to find answers to research questions #3 (How does Chinese culture influence the Chinese visiting scholars' intercultural competence development during their sojourning abroad?), #4 (How does the host country culture influence the Chinese visiting scholars' intercultural competence development during their sojourning abroad?), and #5 (How does the study abroad experience influence their interpersonal communication after they have come back to China?), respectively.

Data Analysis

Both quantitative and qualitative data analyses were performed to find answers to the five research questions of this study. Specifically, SPSS (Statistical Package for Social Sciences) and GENOVA (*G*-theory computer program) analyses were first

performed for research questions #1 and #2. Qualitative interview data analysis was then performed for research questions #3, #4, and #5.

Quantitative Data Analysis for Research Questions #1 and #2

Both SPSS and GENOVA analyses were performed for research questions #1: Are there any significant differences (e.g., by gender, country, and personal and educational experiences) in rating the impact of the factors on the Chinese visiting scholars' intercultural competence development? and #2: What are the sources of rating variation of the impact of the factors on Chinese visiting scholars' intercultural competence development?

The SPSS analyses included: a) demographic characteristics of the participants; b) reliability of the rating form of the 40 factors impacting Chinese visiting scholars' intercultural competence development; c) descriptive statistical analysis (i.e., mean and standard deviation) for all 40 factors; d) descriptive statistical analysis for top five factors that positively impact their intercultural competence development as rated by the Chinese visiting scholars; e) descriptive statistical analysis for top five factors that negatively impact their intercultural competence development as rated by the Chinese visiting scholars; f) independent samples *t*-tests for the comparison of the significant mean impact score differences for the demographic variable gender (i.e., male and female) and country of study (i.e., the United States and the United Kingdom), respectively; and g) one-way ANOVA analyses for independent variables of age (i.e., younger than 30 years old, 30-40 years old, 40-50 years old, and older than 50 years old) and length of study (i.e., less than 3 months, 3-6 months, 7-12 months, and more

than 12 months) will be conducted to examine the significant group differences. For significant ANOVAs, Bonferroni *post hoc* multiple comparisons will be performed to examine exact group differences.

The GENOVA analyses (see Appendix E for control cards) included: a) a factor-by-rater nested within gender (*f x r: g*) mixed effects *G*-study; b) two factor-by-rater random effects *G*-studies for male and female raters, respectively; c) a factor-by-rater nested within country of study (*f x r: c*) mixed effects *G*-study; d) two factor-by-rater random effects *G*-studies for the United Kingdom and the United States, respectively; e) a factor-by-rater nested within age (*f x r: a*) mixed effects *G*-study; f) four factor-by-rater random effects *G*-studies for younger than 30 years old, 30-40 years old, 40-50 years old, and older than 50 years old raters, respectively; g) a factor-by-rater nested within length of study (*f x r: l*) mixed effects *G*-study; and h) four factor-by-rater random effects *G*-studies for participants having less than 3 months, 3-6 months, 7-12 months, and more than 12 months study overseas, respectively.

Qualitative Interview Data Analysis for Research Question #3 and #4

Ten face-to-face or QQ interviews were conducted between the researcher and the participants (5 Chinese visiting scholars studied abroad in the United States and 5 Chinese visiting scholars studied abroad in the United Kingdom). Interview questions were developed based on research questions #3 (How does Chinese culture influence the Chinese visiting scholars' intercultural competence development during their sojourning abroad?), #4 (How does the host country culture influence the Chinese

visiting scholars' intercultural competence development during their sojourning abroad?), and #5 (How does the study abroad experience influence their interpersonal communication after they have come back to China?) as described above. These interviews allowed for the identification of the Chinese visiting scholars' perceptions of how Chinese culture as well as host country culture impacts their intercultural competence development during their sojourning abroad. A coding and classifying approach (Gay & Airasian, 2012) was used for data analysis. The interview data was first coded by the researcher and then checked for accuracy and consistency by another individual. Participants' responses relevant to research questions #3, #4, and #5 were grouped together and subsequently categorized and analyzed according to the recurring themes.

Specifically, the following qualitative analysis were performed: a) the alignment of interview questions with research questions #3, #4, and #5; b) the main themes of interview data analysis results under research questions #3, #4, and #5; and c) major findings for research questions #3, #4, and #5.

Computer Programs

Microsoft EXCEL was used for data preparation. Further, SPSS (IBM, 2015) was used to conduct both descriptive and inferential (e.g., independent samples *t*-tests) statistical analyses. SPSS is a popular data-analysis program used by researchers in social sciences. SPSS can be used for manipulating data, analyzing data, and generating graphs and tables.

In addition, the computer program GENOVA (Crick & Brennan, 1983) was used for the *G*-theory analyses of the data. GENOVA is a computer program used to estimate the variance components for the main and interaction effects as well as their standard errors where the design is balanced.

CHAPTER FOUR
THE RESEARCH FINDINGS

This chapter reports both the quantitative and the qualitative findings and results. It first describes the purpose of the study and restates the research questions. It then presents the quantitative results. The quantitative results are presented in the following order: a) demographic characteristics of the participants; b) reliability of the rating form; c) descriptive and inferential statistical results; and d) *G*-theory analyses results. Finally, it presents the qualitative results. The qualitative results are presented in the following order: a) demographic characteristics of the interviewees; b) the alignment of interview questions with research questions; c) the main themes of interview results; and d) the major qualitative findings.

Purpose of the Study and the Research Questions

Considering the increasing number of Chinese scholars being sent to English speaking countries as visiting scholars, as well as limited research examining their intercultural competence development while sojourning abroad, it is important to examine their perceptions of the factors affecting this experience. A mixed-methods design was employed for this study. First, using generalizability (*G*-) theory (Cronbach, Gleser, Nanda, & Rajaratnam, 1972) as a theoretical framework for quantitative analysis, this study examined differences in the ratings of the factors affecting Chinese visiting scholars' development of intercultural competence sojourning abroad across sex, age, country of study, and length of study. Qualitatively, ten semi-structured interviews were conducted between the researcher and Chinese

visiting scholars studying in the United States and the United Kingdom to gain their perceptions of the factors affecting their intercultural competence development during their sojourning abroad.

Specifically, the following five research questions were considered: a) Are there any significant differences in rating the impact of the factors on the Chinese visiting scholars' intercultural competence development? b) What are the sources of rating variation of the impact of the factors on Chinese visiting scholars' intercultural competence development? c) How does Chinese culture influence the Chinese visiting scholars' intercultural competence development during their sojourning abroad? d) How does the host country (i.e., the United States or the United Kingdom) culture influence the Chinese visiting scholars' intercultural competence development during their sojourning abroad? And e) how does the study abroad experience influence their interpersonal communication after they have come back to China?

Quantitative Findings

Demographic Characteristics of the Participants

The purpose of demographic information section of the rating form (see Appendix C) was to collect personal and demographic information of the participants including sex, country of study, age, and length of study. The information was intended to help us better understand Chinese visiting scholars' perceptions of the impact of each factor on their intercultural competence development while studying abroad.

The rating form was distributed to 150 Chinese visiting scholars who had studied either in the United States or in the United Kingdom. In total 100 completed rating forms were returned to the researcher, with a response rate of approximately 67%. Among these returned forms, 15 did not complete their demographic information and therefore were considered invalid and excluded from the final data analysis of this study. The final valid number of participants of this study was 85. Table 5 presents a summary of the 85 valid participants.

Table 5

A Summary of the Participants

Demographic Information		Number of Participants	Percentage
Sex	Male	41	48.2%
	Female	44	51.8%
Country of Study	United States	49	57.6%
	United Kingdom	36	42.4%
Age	< 30	2	2.4%
	30-40	32	37.6%
	40-50	42	49.4%
	> 50	9	10.6%
Length of Study	< 3 months	0	0
	3-6 months	10	11.8%
	7-12 months	68	80.0%
	> 12 months	7	8.2%
	Total	85	100%

Table compiled by author

As shown in Table 5, among the 85 participants 41 were males (48.2%) and 44 were females (51.8%). The number of male and female participants was distributed evenly. Further, 49 had study abroad experience in the United States (57.6%) and 36 of them had study abroad experience in the United Kingdom (42.4%). There were slightly more participants with study abroad experience in the United States than in

the United Kingdom. Among the 85 participants, two of them were aged under thirty years old (2.4%); 32 were aged between 30 and 40 (37.6%); 42 were aged between 40 and 50 (49.4%); and 9 of them were aged over 50 (10.6%). Finally, in terms of length of study, none of them studied less than 3 months; 10 of them studied for 3-6 months (11.8%); 68 studied for 7-12 months (80.0%); and only 7 of them studied for over 12 months (8.2%).

Table 6

A Summary of the Participants for Final Data Analysis

Demographic Information		Number of Participants	Percentage
Sex	Male	41	48.2%
	Female	44	51.8%
Country of Study	United States	49	57.6%
	United Kingdom	36	42.4%
Age	< 40	34	40.0%
	40-50	42	49.4%
	> 50	9	10.6%
Length of Study	3-6 months	10	11.8%
	7-12 months	68	80.0%
	> 12 months	7	8.2%
	Total	85	100%

Table compiled by author

For the purpose of statistical analysis, participants under the variable of age were regrouped into the following three new groups: less than 40 years old (< 40); between 40 and 50 years old (40-50); and over 50 years old (> 50). Further, since none of the participants had less than three months (< 3 months) study abroad experience, the category of "< 3 month" was then deleted for final data analysis. The demographic information of the final participants was summarized in Table 6. As shown in Table 6, for the age variable, 34 were aged less than 40 years old (40%); 42 were aged

between 40 and 50 years old (49.4%); and 9 were aged over 50 years old (10.6%). Obviously most participants were aged either over 40 or between 40 and 50 years old.

Reliability of the Rating Forms

The instrument used for quantitative data collection was a 40-item 10-point scale rating form (see Appendix C), which required the participants to rate the impact of these factors on their intercultural competence development during their sojourning abroad on a 1-10 point scale (10 = the most positively impacts intercultural competence development, and 1 = the least positively impacts intercultural competence development).

Descriptive Statistical Results

As mentioned above, all 85 participants rated the impact of these factors on their intercultural competence development during their sojourning abroad on a 1-10 point scale (10 = the most positively impacts intercultural competence development, and 1 = the least positively impacts intercultural competence development). The higher the number they chose indicated that the MORE this factor positively impacts on their intercultural competence development. The lower the number they chose suggested that the LESS this factor positively impacts on their intercultural competence development. Table 7 provides the descriptive statistical results (i.e., the mean and standard deviation of the ratings of each factor assigned by the 85 participants).

Table 7

Descriptive Statistics of 40 Factors Affecting Intercultural Competence Development

Factor	Mean	SD
interaction with peers from different cultures	6.27	2.107
cultural differences	6.11	1.655
culture shock	5.52	2.119
interaction confidence	6.78	1.960
foreign language skills or proficiency	7.44	1.893
pre-departure preparation	5.02	1.946
first language	5.26	1.733
stereotypes	5.26	1.684
prejudice	4.87	1.831
ethnocentrism	4.66	1.912
respect for the host country/culture	6.15	1.694
open-mindedness	7.05	1.542
being non-judgemental	6.54	1.836
curiosity about discovering the host country/culture	6.56	1.880
knowledge about the host country/culture	6.80	1.778
experiences with cultural difference	6.79	1.619
self-confidence	7.49	1.836
having prolonged negative experiences with international people	5.33	1.491
self-efficacy	6.45	1.687
time spent with their international peers	6.65	1.791
social skills	6.38	2.064
training and orientation for overseas sojourners	5.99	1.829
guided reflection	5.55	1.555
financial difficulties	3.26	2.042
previous travelling experience	4.80	2.028
growing up in a multicultural home	5.52	1.881
having accompanying spouses and children	5.26	2.421
academic anxiety	4.39	2.252
previous experience abroad	5.38	1.845
family international experience	4.89	1.655
having the goal of gaining cultural understanding	5.88	1.755
past international experiences	5.48	1.906
having studied language overseas	5.25	1.838
living with a host family	6.40	2.455
having an international perspective	6.07	1.703
family and institution support	6.40	1.612
tolerance of ambiguity	5.72	1.652
feeling lonely	3.73	2.157
self-esteem	5.45	1.836
feeling stressful	4.06	1.990
Valid N = 85		

Table compiled by author

The results shown in Table 7 indicate that the 85 Chinese visiting scholars rated the following as the top fifteen factors that most impact their intercultural competence development: a) *self-confidence* (*m* = 7.49; *sd* = 1.84); b) *foreign language skills or*

proficiency (*m* = 7.44; *sd* = 1.89); c) *open-mindedness* (*m* = 7.05; *sd* = 1.54); d) *knowledge about the host country/culture* (*m* = 6.80; *sd* = 1.78); e) *experiences with cultural difference* (*m* = 6.79; *sd* = 1.62); f) *interaction confidence* (*m* = 6.78; *sd* = 1.96); g) *time spent with international peers* (*m* = 6.65; *sd* = 1.79); h) *curiosity about discovering the host country/culture* (*m* = 6.56; *sd* = 1.88); i) *being non-judgemental* (*m* = 6.54; *sd* = 1.84); j) *self-efficacy* (*m* = 6.45; *sd* = 1.69); k) *living with a host family* (*m* = 6.40; *sd* = 2.46); l) *family and institution support* (*m* = 6.40; *sd* = 1.61); m) *social skills* (*m* = 6.38; *sd* = 2.06); n) *interaction with peers from different cultures* (*m* = 6.27; *sd* = 2.11); and o) *respect for the host country/culture* (*m* = 6.15; *sd* = 1.69).

The results shown in Table 7 also indicate that the 85 Chinese visiting scholars rated the following as the top fifteen factors that least impact their intercultural competence development: a) *financial difficulties* (*m* = 3.26; *sd* = 2.04); b) *feeling lonely* (*m* = 3.73; *sd* = 2.16); c) *feeling stressful* (*m* = 4.06; *sd* = 1.54); d) *academic anxiety* (*m* = 4.39; *sd* = 2.25); e) *ethnocentrism* (*m* = 4.66; *sd* = 1.91); f) *previous traveling experience* (*m* = 4.80; *sd* = 2.03); g) *prejudice* (*m* = 4.87; *sd* = 1.83); h) *family international experience* (*m* = 4.89; *sd* = 1.66); i) *pre-departure preparation* (*m* = 5.02; *sd* = 1.95); j) *having studied language overseas* (*m* = 5.25; *sd* = 1.84); k) *having accompanying spouses and children* (*m* = 5.26; *sd* = 2.42); l) *stereotypes* (*m* = 5.26; *sd* = 1.68); m) *first language* (*m* = 5.26; *sd* = 1.73); n) *having prolonged negative experiences with international people* (*m* = 5.33; *sd* = 1.49); and o) *previous experience abroad* (*m* = 5.38; *sd* = 1.85).

It is very important to note that the ratings of each factor had a very large standard deviation. This result indicated that these 85 Chinese visiting scholars had very different perceptions of these 40 factors in terms of their impact on their intercultural competence development.

Inferential Statistical Results

Using SPSS the following two types of inferential statistical analyses were performed to examine group differences: a) independent samples *t*-tests for independent variables "sex" and "country of study"; and b) one-way ANOVAs for independent variables "age" and "length of study". The significant results are presented in Tables 8-11.

Independent Samples t-tests for Variable "Sex"

Independent samples *t*-tests were conducted between male and female participants in terms of their ratings of the 40 factors that affect the development of Chinese visiting scholars' intercultural competence development. The results are presented in Table 8.

As shown in Table 8, there were significant differences in the ratings of the following 20 factors by male and female participants ($p < .05$): *interaction with peers from different cultures* (male mean = 6.90; female mean = 5.68), *interaction confidence* (male mean = 7.24; female mean = 6.34), *foreign language skills or proficiency* (male mean = 7.88; female mean = 7.02), *pre-departure preparation* (male mean = 5.71; female mean = 4.39), *first language* (male mean = 5.66; female mean = 4.89), *respect for the host country/culture* (male mean = 6.63; female mean

= 5.70), *open-mindedness* (male mean = 7.49; female mean = 6.64), *experiences with cultural difference* (male mean = 7.34; female mean = 6.27), *self-efficacy* (male mean = 6.90; female mean = 6.02), *time spent with their international peers* (male mean = 7.15; female mean = 6.18), *social skills* (male mean = 6.95; female mean = 5.84), *training and orientation for overseas sojourners* (male mean = 6.54; female mean = 5.48), *guided reflection* (male mean = 6.02; female mean = 5.11), *previous travelling experience* (male mean = 5.41; female mean = 4.23), *family international experience* (male mean = 5.37; female mean = 4.45), *having the goal of gaining cultural understanding* (male mean = 6.34; female mean = 5.45), *past international experiences* (male mean = 6.07; female mean = 4.93), *family and institution support* (male mean = 6.78; female mean = 6.05), *tolerance of ambiguity* (male mean = 6.17; female mean = 5.30), *and self-esteem* (male mean = 6.00; female mean = 4.93). It is interesting to indicate that male participants rated these factors significantly higher than the female participants.

Table 8

Significant Independent Sample t-Tests Results for Independent Variable Sex

Factor	Male Mean	Female Mean	t	Sig.
interaction with peers from different cultures	6.90	5.68	2.774	.007
interaction confidence	7.24	6.34	2.202	.031
foreign language skills or proficiency	7.88	7.02	2.125	.037
pre-departure preparation	5.71	4.39	3.308	.001
first language	5.66	4.89	2.069	.042
respect for the host country/culture	6.63	5.70	2.615	..011
open-mindedness	7.49	6.64	2.631	.010
experiences with cultural difference	7.34	6.27	3.204	.002
self-efficacy	6.90	6.02	2.475	.015
time spent with their international peers	7.15	6.18	2.562	.012
social skills	6.95	5.84	2.558	.012
training and orientation for overseas sojourners	6.54	5.48	2.772	.007
guided reflection	6.02	5.11	2.807	.006
previous travelling experience	5.41	4.23	2.769	.007
family international experience	5.37	4.45	2.624	.010
having the goal of gaining cultural understanding	6.34	5.45	2.365	.021
past international experiences	6.07	4.93	2.874	.006
family and institution support	6.78	6.05	2.145	.035
tolerance of ambiguity	6.17	5.30	2.517	.014
self-esteem	6.00	4.93	2.739	.008

DF = 83

Table compiled by author

Independent Samples t-tests for Variable "Country of Study"

Similarly, independent samples *t*-tests were conducted between participants having UK and US study abroad experiences in terms of their ratings of the 40 factors that affect the development of Chinese visiting scholars' intercultural competence development. The results are presented in Table 9.

Table 9

Significant Independent Sample t-Tests Results for Independent Variable Country of Study

Factor	UK Mean	USA Mean	t	Sig.
interaction confidence	7.61	6.16	3.596	.001
Ethnocentrism	4.17	5.02	-2.074	.041
time spent with their international peers	7.47	6.04	3.944	.000
training and orientation for overseas sojourners	6.53	5.59	2.298	.025
having accompanying spouses and children	4.44	5.86	-2.761	.007
academic anxiety	3.33	5.16	-4.021	.000
having studied language overseas	4.47	5.82	-3.554	.001
having an international perspective	6.56	5.71	2.308	.023
family and institution support	6.89	6.04	2.468	,016
tolerance of ambiguity	6.53	5.12	4.251	.000
DF = 83				

Table compiled by author

As shown in Table 9, participants having UK study abroad experience rated the following factors significantly higher than participants having US study abroad experience ($p < .05$): *interaction confidence* (UK mean = 7.61; US mean = 6.16), *time spent with international peers* (UK mean = 7.47; US mean = 6.04), *training and orientation for overseas sojourners* (UK mean = 6.53; US mean = 5.59), *having an international perspective* (UK mean = 6.56; US mean = 5.71), *family and institution support* (UK mean = 6.89; US mean = 6.04), and *tolerance of ambiguity* (UK mean = 6.53; US mean = 5.12).

However, participants having US study abroad experience rated the following factors significantly higher than participants having UK study abroad experience ($p < .05$): *ethnocentrism* (UK mean = 4.17; US mean = 5.02), *having accompanying spouses and children* (UK mean = 4.44; US mean = 5.86), *academic anxiety* (UK

mean = 3.33; US mean = 5.16), and *having studied language overseas* (UK mean = 4.47; US mean = 5.82).

One-way ANOVA for Independent Variable of Age

For independent variable of age (i.e., less than 40, 40-50, and above 50) one-way ANOVAs were conducted to examine the significant mean score differences for the 40 factors given by the participants from different age groups. For significant ANOVAs, Bonferroni *post hoc* multiple comparisons were performed to examine exact group differences. The significant results are presented in Table 10.

As shown in Table 10, the independent variable of age was found to have significant effects on the following 19 factors: *Cultural differences, foreign language skills or proficiency, respect for the host country/culture, open-mindedness, being non-judgmental, experiences with cultural difference, self-confidence, self-efficacy, time spent with their international peers, training and orientation for overseas sojourners, guided reflection, previous travelling experience, previous experience abroad, family international experience, having the goal of gaining cultural understanding, past international experiences, having an international perspective, tolerance of ambiguity*, and *self-esteem*.

Table 10

One-way ANOVA and Post Hoc Results for Independent Variable of Age

Bonferroni Multiple Comparison						
Item	Source	N	F	*p*	Mean	Significantly Different Groups
Cultural differences	< 40	34	3.541	.034	5.74	< 40 & > 50
	40-50	42			6.14	
	> 50	9			7.33	
foreign language skills or proficiency	< 40	34	5.074	.008	6.71	< 40 & > 50
	40-50	42			7.81	< 40 & 40-50
	> 50	9			8.44	
respect for the host country/culture	< 40	34	5.082	.008	5.97	< 40 & > 50
	40-50	42			5.95	40-50 & > 50
	> 50	9			7.78	
open-mindedness	< 40	34	5.633	.005	6.50	< 40 & > 50
	40-50	42			7.24	
	> 50	9			8.22	
being non-judgmental	< 40	34	3.158	.048	6.06	< 40 & > 50
	40-50	42			6.69	
	> 50	9			7.67	
experiences with cultural difference	< 40	34	5.260	.007	6.35	< 40 & > 50
	40-50	42			6.83	40-50 & > 50
	> 50	9			8.22	
self-confidence	< 40	34	5.082	.008	6.82	< 40 & > 50
	40-50	42			7.79	
	> 50	9			8.67	
self-efficacy	< 40	34	5.135	.008	5.91	< 40 & > 50
	40-50	42			6.60	
	> 50	9			7.78	
time spent with their international peers	< 40	34	7.017	.002	6.03	< 40 & > 50
	40-50	42			6.79	40-50 & > 50
	> 50	9			8.33	
training and orientation for overseas sojourners	< 40	34	4.776	.011	5.53	< 40 & > 50
	40-50	42			6.02	
	> 50	9			7.56	
guided reflection	< 40	34	5.784	.004	5.26	< 40 & > 50
	40-50	42			5.45	40-50 & > 50
	> 50	9			7.11	
previous travelling experience	< 40	34	8.111	.001	4.29	< 40 & > 50
	40-50	42			4.71	40-50 & > 50
	> 50	9			7.11	
previous experience abroad	< 40	34	4.883	.010	4.79	< 40 & > 50
	40-50	42			5.55	
	> 50	9			6.78	
family international experience	< 40	34	5.434	.006	4.50	< 40 & > 50
	40-50	42			4.88	40-50 & > 50
	> 50	9			6.44	
having the goal of gaining cultural understanding	< 40	34	3.541	.033	5.44	< 40 & > 50
	40-50	42			5.98	
	> 50	9			7.11	
past international experiences	< 40	34	6.798	.002	4.88	< 40 & > 50
	40-50	42			5.57	40-50 & > 50
	> 50	9			7.33	
having an international perspective	< 40	34	4.174	.019	5.82	< 40 & > 50
	40-50	42			5.95	40-50 & > 50
	> 50	9			7.56	
tolerance of ambiguity	< 40	34	9.232	.000	5.24	< 40 & > 50
	40-50	42			5.69	40-50 & > 50
	> 50	9			7.67	
self-esteem	< 40	34	5.416	.006	5.38	< 40 & > 50
	40-50	42			5.12	40-50 & > 50
	> 50	9			7.22	

Table compiled by author

As shown in Table 10, for these 19 factors participants aged above 50 assigned significantly higher scores than participants aged below 40 (p <.05). Further, participants aged above 50 also assigned significantly higher scores than participants aged between 40 and 50 (p <.05): *respect for the host country/culture*, *experiences with cultural difference*, *time spent with their international peers*, *guided reflection*, *previous travelling experience*, *family international experience*, *past international experiences*, *having an international perspective*, *tolerance of ambiguity*, and *self-esteem*.

One-way ANOVA for Independent Variable of Length of Study

For independent variable of length of study (i.e., 3-6 months, 7-12 months, and over 12 months) one-way ANOVAs were conducted to examine the significant mean score differences for the 40 factors given by the participants having different study abroad time. For significant ANOVAs, Bonferroni *post hoc* multiple comparisons were performed to examine exact group differences. The significant results are presented in Table 11.

Table 11

One-way ANOVA and Post Hoc Results for Independent Variable of Length of Study

Bonferroni Multiple Comparison						
Item	Source	N	F	*p*	Mean	Significantly Different Groups
Prejudice	3-6 months	10	3.183	.047	4.70	7-12 months & > 12 months
	7-12 months	68			5.06	
	> 12 months	7			3.29	
knowledge about the host country/culture	3-6 months	10	3.430	.037	6.50	7-12 months & > 12 months
	7-12 months	68			6.68	
	> 12 months	7			8.43	
financial difficulties	3-6 months	10	3.149	.048	2.70	3-6 months & > 12 months
	7-12 months	68			3.16	
	> 12 months	7			5.00	
previous travelling experience	3-6 months	10	3.359	.040	4.20	3-6 months & > 12 months
	7-12 months	68			4.71	
	> 12 months	7			6.57	
having an international perspective	3-6 months	10	6.628	.002	6.20	3-6 months & > 12 months
	7-12 months	68			5.84	7-12 months & > 12 months
	> 12 months	7			8.14	
feeling lonely	3-6 months	10	3.309	.041	2.50	3-6 months & > 12 months
	7-12 months	68			3.76	
	> 12 months	7			5.14	
self-esteem	3-6 months	10	3.445	.037	5.30	-12 months & > 12 months
	7-12 months	68			5.29	
	> 12 months	7			7.14	

Table compiled by author

For factors *prejudice*, *knowledge about the host country/culture*, *having an international perspective*, and *self-esteem*, participants having over 12 months study abroad time assigned significantly higher scores than participants having 7-12 months of study time (p <.05). Further, for factors *financial difficulties*, *previous travelling experience*, *having an international perspective*, and *feeling lonely*, participants having over 12 months study abroad time assigned significantly higher scores than participants having 3-6 months of study time (p <.05).

G-Theory Analyses Results

The following section presents the G-theory analyses results. Specifically, for each variable (i.e., sex, country of study, age, and length of study) results of the

factor-by-rater (nested within sex/country of study/age/length of study) mixed effects G-studies were presented first, followed by the factor-by-rater random effects G-studies results for each rater group across sex, country of study, age, and length of study. Finally, the G-coefficients for each rater group were reported.

G-theory Results for Sex

The factor-by-rater nested within sex (*f x r:s*) mixed effects *G*-study yielded the following five sources of variation: factor (*f*), sex (*s*), rater nested within sex (*r:s*), factor-by-sex (*fs*), and factor-by-rater nested within sex (*fr:s*). Table 12 presents the results.

The results presented in Table 12 show that the residual (*fr:s*) yielded the largest variance component (59.19% of the total variance). The residual contains the variability due to the interaction between sex, rater, factors, and other unexplained systematic and unsystematic sources of error. Factor (*f*), the object of measurement yielded the second largest variance component (20.07% of the total variance), suggesting that the 40 factors are different in terms of their impact on Chinese visiting scholars' intercultural competence development. Rater nested within sex (*r:s*) yielded the third largest variance component (15.39% of the total variance), suggesting that raters within sex differed considerably from one another in terms of rating consistency. Sex (*s*) variance component yielded only 5.27% of the total variance, suggesting that there was some difference in the rating of the impact of these factors on intercultural competence development that could be attributed to sex. The factor-by-sex (*fs*) variance component explained less than 1% of the total variance.

Table 12

Variance Components for the Mixed Effects f x r:s G-Study for Sex

Source of Variability	Df	σ^2	%
f	39	0.9112	20.07
s	1	0.2392	5.27
r:s	80	0.6989	15.39
fs	39	0.0037	0.08
fr:s	3120	2.6880	59.19
Total	3279	4.5410	100

Table compiled by author

The factor-by-rater (*f x r*) random effects *G*-studies for male and female raters for these 40 factors yielded the following variance components for each rater group: factor (*f*), rater (*r*), and factor-by-rater (*fr*). Table 13 presents the results for these two *G*-studies.

As shown in Table 13, the results for male raters show that the residual yielded the largest variance (58.03% of the total variance). The residual contains the variability due to the interaction between raters and factors, and other unexplained systematic and unsystematic sources of error. Rater (*r*) yielded the second largest variance component (21.25% of the total variance), suggesting that the male raters differed greatly from one another in terms of rating consistency. Factors (*f*), the object of measurement yielded the third largest variance component (20.72% of the total variance), suggesting that the 40 factors are different in terms of their impact on Chinese visiting scholars' intercultural competence development while studying abroad.

Table 13

Variance Components for Random Effects f x r G-studies Design for Sex

Gender	Source of Variability	Df	σ^2	%
Male	*f*	39	0.9740	20.72
	r	40	0.9989	21.25
	fr	1560	2.7278	58.03
	Total	1639	4.7007	100
Female	*f*	39	0.8559	21.93
	r	40	0.3989	10.22
	fr	1560	2.6482	67.85
	Total	1639	3.9030	100

Table compiled by author

The results for female raters indicated that the residual yielded the largest variance (67.85% of the total variance). Factors (*f*), the object of measurement yielded the second largest variance component (21.93% of the total variance), Rater (*r*) yielded the third largest variance component (10.22% of the total variance), suggesting that the female raters differed fairly from one another in terms of rating consistency.

G-theory Results for Country of Study

The factor-by-rater nested within country of study *f x r:c* mixed effects *G*-study yielded the following five sources of variation: factor (*f*), country of study (*c*), rater nested within factor (*r:f*), factor-by-country of study (*fc*), and factor-by-rater nested within country of study (*fr:c*). Table 14 presents the results.

Table 14

Variance Components for the Mixed Effects f x r:c G-Study for Country of Study

Source of Variability	Df	σ^2	%
f	39	0.8059	18.50
c	1	0	0
r:c	70	0.7928	18.20
fc	39	0.2810	6.45
fr:c	2730	2.4765	56.85
Total	2879	4.3562	100

Table compiled by author

The results presented in Table 14 show that the residual (*fr:c*) yielded the largest variance component (56.85% of the total variance). The residual contains the variability due to the interaction between country of study, rater, factor, and other unexplained systematic and unsystematic sources of error. Factor (*f*), the object of measurement yielded the second largest variance component (18.50% of the total variance), suggesting that the 40 factors are different in terms of their impact on intercultural competence development. Rater nested within country of study (*r:c*) yielded the third largest variance component (18.20% of the total variance), suggesting that raters within country of study differed considerably from one another in terms of rating consistency. The factor-by-country of study (*fc*) variance component explained 6.45% of the total variance, showing the inconsistency of the impact of the 40 factors across the two countries of study. The country of study (*c*) variance component explained 0% of the total variance.

The factor-by-rater (*a x r*) random effects *G*-studies for UK and US raters for the 40 factors yielded the following variance components for each rater group: factor (*f*), rater (*r*), and factor-by-rater (*fr*). Table 15 presents the results for these two *G*-studies.

Table 15

Variance Components for Random Effects f x r G-studies Design for Country of Study

Country of Study	Source of Variability	Df	σ^2	%
UK	*f*	39	1.4470	31.58
	r	35	0.7109	15.52
	fr	1365	2.4241	52.90
	Total	1439	4.5820	100
USA	*f*	39	0.7268	17.60
	r	35	0.8746	21.18
	fr	1365	2.5289	61.22
	Total	1439	4.1303	100

Table compiled by author

As shown in Table 15, the results for UK raters show that the residual yielded the largest variance (52.90% of the total variance). The residual contains the variability due to the interaction between raters and factors, and other unexplained systematic and unsystematic sources of error. Factors (*f*), the object of measurement yielded the second largest variance component (31.58% of the total variance), suggesting that the 40 factors are different in terms of their impact on Chinese visiting scholars' intercultural competence development. Rater (*r*) yielded the third largest variance component (15.52% of the total variance), suggesting that the UK raters differed considerably from one another in terms of rating consistency.

The results for US raters indicated that residual yielded the largest variance (61.22% of the total variance). Rater (*r*) yielded the second largest variance component (21.18% of the total variance), suggesting that the US raters differed greatly from one another in terms of rating consistency. Factors (*f*), the object of

measurement yielded the third largest variance component (17.60% of the total variance).

G-theory Results for Age

The factor-by-rater nested within age (*f x r:a*) mixed effects *G*-study yielded the following five sources of variation: factor (*f*), age (*a*), rater nested within age (*r:a*), factor-by-age (*fa*), and factor-by-rater nested within age (*fr:a*). Table 16 presents the results.

The results presented in Table 16 show that the residual (*fr:a*) yielded the largest variance component (54.31% of the total variance). The residual contains the variability due to the interaction between age, rater, factro, and other unexplained systematic and unsystematic sources of error. Factors (*f*), the object of measurement yielded the second largest variance component (25.22% of the total variance), suggesting that the 40 factors are greatly different in terms of their impact on the development of intercultural competence. Rater nested within age (*r:a*) yielded the third largest variance component (12.56% of the total variance), suggesting that raters within age groups differed considerably from one another in terms of rating consistency. Age (*a*) variance component yielded 7.42% of the total variance, suggesting that suggesting that there was a fairly large difference in the ratings that could be attributed to age group. The factor-by-age (*fa*) variance component yielded less than 1% of the total variance.

Table 16

Variance Components for the Mixed Effects f x r:a G-Study for Age

Source of Variability	Df	σ^2	%
f	39	1.2479	25.22
a	2	0.3670	7.42
r:a	24	0.6211	12.56
fa	78	0.0244	0.49
fr:a	936	2.6868	54.31
Total	1079	4.9472	100

Table compiled by author

The factor-by-rater (*f x r*) random effects *G*-studies for raters from different age groups (i.e., less than 40, 40-50, and over 50) for the factors yielded the following variance components for each rater group: factor (*f*), rater (*r*), and factor-by-rater (*fr*). Table 17 presents the results for these three *G*-studies.

As shown in Table 17, the results for raters aged under 40 show that the residual yielded the largest variance (67.24% of the total variance). The residual contains the variability due to the interaction between raters and factors, and other unexplained systematic and unsystematic sources of error. Factors (*f*), the object of measurement yielded the second largest variance component (26.20% of the total variance), suggesting that the 40 factors are different in terms of their impact on intercultural competence development. Rater (*r*) yielded the third largest variance component (6.56% of the total variance), suggesting that the raters aged under 40 differed slightly from one another in terms of rating consistency.

Table 17

Variance Components for Random Effects f x r G-studies Design for Age

Age	Source of Variability	Df	σ^2	%
< 40	*f*	39	0.9130	26.20
	r	8	0.2286	6.56
	fr	312	2.3436	67.24
	Total	359	3.4852	100
40-50	*f*	39	1.1818	32.94
	r	8	0.1765	4.92
	fr	312	2.2291	61.14
	Total	359	3.5874	100
> 50	*f*	39	1.7220	25.82
	r	8	1.4581	21.87
	fr	312	3.4877	52.31
	Total	359	6.6678	100

Table compiled by author

The results for raters aged 40-50 show that the residual yielded the largest variance (61.14% of the total variance). Factors (*f*) yielded the second largest variance component (32.94% of the total variance), suggesting that the 40 factors are greatly different in terms of their impact on intercultural competence development. Rater (*r*) yielded the third largest variance component (4.92% of the total variance), suggesting that the raters aged 40-50 differed slightly from one another in terms of rating consistency.

The results for raters aged above 50 show that the residual yielded the largest variance (52.31% of the total variance). Again, the residual contains the variability due to the interaction between raters and factors, and other unexplained systematic and unsystematic sources of error. Factors (*f*), the object of measurement yielded the second largest variance component (25.82% of the total variance), suggesting that the 40 factors are different in terms of their impact on intercultural competence

development. Rater (*r*) yielded the third largest variance component (21.87% of the total variance), suggesting that the raters aged above 50 differed greatly from one another in terms of rating consistency.

G-theory Results for Length of Study

The factor-by-rater nested within length of study (*f x r:l*) mixed effects *G*-study yielded the following five sources of variation: factor (*f*), length of study (*l*), rater nested within length of study (*r:l*), factor-by-length of study (*fl*), and factor-by-rater nested within length of study (*fr:l*). Table 18 presents the results.

Table 18

Variance Components for the Mixed Effects f x r:l G-Study for Length of Study

Source of Variability	Df	σ^2	%
f	39	0.8719	16.43
l	2	0.0712	1.34
r:l	18	0.8951	16.87
fl	78	0.2776	5.23
fr:l	702	3.1915	60.13
Total	839	5.3073	100

Table compiled by author

The results presented in Table 18 show that the residual (*fr:l*) yielded the largest variance component (60.13% of the total variance). The residual contains the variability due to the interaction between length of study, rater, factor, and other unexplained systematic and unsystematic sources of error. Rater nested within length of study (*r:l*) yielded the second largest variance component (16.87% of the total variance), suggesting that raters within different groups differed greatly from one another in terms of rating consistency. Factors (*c*), the object of measurement yielded the third largest variance component (16.43% of the total variance), suggesting that

the 40 factors are different in terms of their impact on intercultural competence development. The factor-by-length of study (*fl*) variance component explained 5.23% of the total variance, showing the inconsistency of the impact of the 40 factors across the three groups of the length of study (i.e., 3-6 months, 7-12 months, and over 12 months). The variance component associated with length of study (*l*) yielded 1.34% of the total variance.

The factor-by-rater (*f x r*) random effects *G*-studies for raters with different length of study yielded the following variance components for each rater group: factor (*f*), rater (*r*), and factor-by-rater (*fr*). Table 19 presents the results for these three *G*-studies.

Table 19

Variance Components for Random Effects f x r G-studies Design for Length of Study

Length of Study	Source of Variability	Df	σ^2	%
3-6 months	*f*	39	1.6502	42.35
	r	6	0.1462	3.75
	fr	234	2.1002	54.90
	Total	279	3.8966	100
7-12 months	*f*	39	0.5482	13.33
	r	6	0.8348	20.31
	fr	234	2.7283	66.36
	Total	279	4.1113	100
Over 12 months	*f*	39	1.2502	16.24
	r	6	1.7042	22.13
	fr	234	4.7458	61.63
	Total	279	7.7002	100

Table compiled by author

As shown in Table 19, the results for raters having 3-6 months of study time show that the residual yielded the largest variance (54.90% of the total variance). The residual contains the variability due to the interaction between raters and factors, and

other unexplained systematic and unsystematic sources of error. Factors (*a*), the object of measurement yielded the second largest variance component (42.35% of the total variance), suggesting that the 40 factors are greatly different in terms of their impact on intercultural competence development. Rater (*r*) variance component explained 3.75% of the total variance, suggesting that the raters having 3-6 months of study time differed slightly from one another in terms of rating consistency.

The results for raters having 7-12 months of study time show that the residual yielded the largest variance (66.36% of the total variance). Again, the residual contains the variability due to the interaction between raters and factors, and other unexplained systematic and unsystematic sources of error. Rater (*r*) variance component explained 20.31% of the total variance, suggesting that the raters having 7-12 months of study time differed greatly from one another in terms of rating consistency. Factors (*a*), the object of measurement yielded the third largest variance component (13.33% of the total variance), suggesting that the 40 factors are different in terms of their impact on intercultural competence development.

Further, the results for raters having over 12 months of study time show that the residual yielded the largest variance (61.63% of the total variance). Rater (*r*) variance component explained 22.13% of the total variance, suggesting that the raters having over 12 months of study time differed greatly from one another in terms of rating consistency. Factors (*a*), the object of measurement yielded the third largest variance component (16.24% of the total variance), suggesting that the 40 factors are different in terms of their impact on intercultural competence development.

The above quantitative findings provided the answers to the first two research questions of the study. The following section presents the qualitative findings for the last three research questions of the study.

Qualitative Findings

As described in Chapter 3, ten semi-structured interviews were conducted by the researcher with ten participants who were purposefully selected (i.e., five Chinese visiting scholars who had studied in the United States and five Chinese visiting scholars who had studied in the United Kingdom) from the 85 participants for the quantitative component of the study. The data derived from these interviews were used to answer research questions #3) How does Chinese culture influence the Chinese visiting scholars' intercultural competence development during their sojourning abroad? #4) How does the host country culture influence the Chinese visiting scholars' intercultural competence development during their sojourning abroad? and #5) How does the study abroad experience influence their interpersonal communication after they have come back to China?

In this section, the following results are presented: a) demographic characteristics of the interviewees; b) the alignment of interview questions with research questions #3, #4 and #5; c) the main themes of interview results under research questions #3, #4, and #5; and d) major findings for research questions #3, #4, and #5.

Demographic Characteristics of the Focus Group Participants

In total, ten Chinese visiting scholars studied in UK or USA were selected to

participate in the interviews with the researcher. Table 20 presents the demographic data for the interviewees.

Table 20

Interviewees' Demographic Information

Participant ID	Sex	Age Range	Length of Study	Country of Study
A	Male	> 50	Over 12 months	UK
B	Male	> 50	3-6 months	UK
C	Female	< 40	7-12 months	USA
D	Male	40-50	Over 12 months	USA
E	Female	40-50	7-12 months	USA
F	Male	> 50	7-12 months	UK
G	Female	< 40	7-12 months	UK
H	Male	> 50	Over 12 months	UK
I	Female	> 50	7-12 months	USA
J	Female	40-50	3-6 months	USA

Table compiled by author

As shown in Table 20, among these ten participants, five of them (A, B, D, F, and H were male participants) and five of them (C, E, G, I, and J were female participants); five of them (A, B, F, H, and I are aged over 50 years old), three of them (D, E, and J are aged between 40 and 50, and two of them (C and G) are aged under 40; three of them (A, D, and H) studied abroad for over 12 months, five of them (C, E, F, G, and I) studied abroad for 7-12 months, and two of them (B and J) studied abroad for 3-6 months; and finally five of them (A, B, F, G, and H) studied abroad in UK and the other five (C, D, E, I, and J) studied abroad in USA.

The result shows that the numbers of participants are fairly evenly distributed across sex, age, length of study, and countries of study. Therefore, they are representative of the entire 85 participants of the study.

Alignment of Interview Questions with Research Questions #3, #4 and #5

The following six major questions were asked in each individual interview. The responses to these interview questions were used to generate answers to research questions #3, #4 and #5 of this thesis. Table 21 is the alignment of the six major interview questions with research questions # 3, #4, and #6.

Table 21

Alignment of Interview Questions with Research Questions #3, #4 and #5

Interview Questions	Research Questions
• How did Chinese culture positively affect your intercultural competence development during your study abroad in the United States/United Kingdom?	3) How does Chinese culture influence the Chinese visiting scholars' intercultural competence development during their sojourning abroad?
• How did Chinese culture negatively affect your intercultural competence development during your study abroad in the United States/United Kingdom?	
• How did the American culture/British culture positively affect your intercultural competence development during your study abroad in the United States/United Kingdom?	4) How does the host country culture influence the Chinese visiting scholars' intercultural competence development during their sojourning abroad?
• How did the American culture/British culture negatively affect your intercultural competence development during your study abroad in the United States/United Kingdom?	
• What is the overall impact of your study abroad experience on your interpersonal communication after you have come back to China?	5) How does the study abroad experience influence their interpersonal communication after they have come back to China?
• What specific changes have you noticed in your interpersonal communication after you have come back to China?	

Table compiled by author

As shown in Table 21, two major interview questions were asked for research questions #3, #4, and #5, respectively. Specifically, for research question #3 (i.e., How does Chinese culture influence the Chinese visiting scholars' intercultural competence development during their sojourning abroad?), the participants were asked to describe how Chinese culture positively affected their intercultural competence development as well as how Chinese culture negatively affected their intercultural competence development during your study abroad in the United States/United Kingdom; similarly for research question #4 (i.e., How does the host country culture influence the Chinese visiting scholars' intercultural competence development during their sojourning abroad?), the participants were asked to describe how the American culture/British culture positively affected their intercultural competence development as well as how the American culture/British culture negatively affected their intercultural competence development during your study abroad in the United States/United Kingdom? Finally, for research question #5 (i.e., How does the study abroad experience influence their interpersonal communication after they have come back to China?), the participants were asked to describe the overall impact of their study abroad experience on their interpersonal communication as well as the specific changes they have noticed in their interpersonal communication after their have come back to China.

Main Themes of Interview Results under Research Questions #3, #4 and #5

Using coding and grouping, the interview data were analyzed. From these ten interviews, the following main themes were generated under research questions #3, #4,

and #5. Tables 22, 23, and 24 summarize the main themes of the interview data.

Table 22

Main Themes of Interview Data under Research Question #3

Research Questions	Interview Questions	Main Themes
3) How does Chinese culture influence the Chinese visiting scholars' intercultural competence development during their sojourning abroad?	a) How did Chinese culture positively affect your intercultural competence development during your study abroad in the United States/United Kingdom?	a) Perseverance; b) being friendly and nice; c) being helpful; d) being polite; e) being self-confident, f) being hard working; g) being easy to get along with other people; h) sharing Chinese culture with American and British people; j) being humble and eager to learn; k) being tolerant; l) developing strategies to cope with challenges; m) visiting local people and making friends; n) being proud of being Chinese; o) showing mutual respect; p) keeping a positive attitude.
	b) How did Chinese culture negatively affect your intercultural competence development during your study abroad in the United States/United Kingdom?	a) Being nervous and anxious; b) being afraid of losing face; c) having poor English listening and speaking skills; d) being not active; e) being not direct; f) refusing help; g) having no religious beliefs; and h) being together with Chinese people.

Table compiled by author

As shown in Table 22, as reported by the ten interviewees, the following 15 factors associated with Chinese culture positively affect Chinese visiting scholars' intercultural communication while studying abroad: a) Perseverance; b) being friendly and nice; c) being helpful; d) being polite; e) being self-confident, f) being hard working; g) being easy to get along with other people; h) sharing Chinese culture with American and British people; j) being humble and eager to learn; k) being tolerant; l) developing strategies to cope with challenges; m) visiting local people and making

friends; n) being proud of being a Chinese; o) showing mutual respect; p) keeping a positive attitude.

Table 22 also shows that the following nine factors associated with Chinese culture negatively affect Chinese visiting scholars' intercultural communication while studying abroad: a) Being nervous and anxious; b) being afraid of losing face; c) having poor English listening and speaking skills; d) being not active; e) being not direct; f) refusing help from strangers; g) having no religious beliefs; and h) being together with Chinese people.

Table 23

Main Themes of Interview Data under Research Question #4

Research Questions	Interview Questions	Main Themes
4) How does the host country culture influence the Chinese visiting scholars' intercultural competence development during their sojourning abroad?	a) How did the American culture/British culture positively affect your intercultural competence development during your study abroad in the United States/United Kingdom?	a) Being friendly and helpful; b) being good at communication; c) being tolerant; d) being patient; e) being self-confident; f) being open-minded; and g) showing respect for and appreciation of Chinese culture.
	b) How did the American culture/British culture negatively affect your intercultural competence development during your study abroad in the United States/United Kingdom?	a) Using colloquial and slang language; b) stereotyping, c) being religious; and d) culture shock.

Table compiled by author

As shown in Table 23, as reported by the ten interviewees, the following six factors associated with American and British cultures positively affect Chinese visiting scholars' intercultural communication while studying abroad: a) Being friendly and helpful; b) being good at communication; c) being tolerant; d) being

patient; e) being self-confident; and f) showing respect for and appreciation of Chinese culture.

Table 23 also shows that the following four factors associated with American and British cultures negatively affect Chinese visiting scholars' intercultural communication while studying abroad: a) Using colloquial and slang language; b) stereotyping, c) being religious; and d) culture shock.

Table 24

Main Themes of Interview Data under Research Question #5

Research Questions	Interview Questions	Main Themes
5) How does the study abroad experience influence their interpersonal communication after they have come back to China?	a) What is the overall impact of your study abroad experience on your interpersonal communication after you have come back to China?	a) Positive impact; and b) negative impact (reverse culture shock).
	b) What specific changes have you noticed in your interpersonal communication after you have come back to China?	a) Becoming a good listener; b) becoming more effective in communication; and d) becoming more strategic in communication.

Table compiled by author

As shown in Table 24, as reported by the ten interviewees, the overall impact of Chinese visiting scholars' study abroad experience on their interpersonal communication after they have come back to China can be both positive and negative. Further, as also shown in Table 24, the specific changes they have noticed in their interpersonal communication after they have come back to China include: a) Becoming a good listener; b) becoming more effective in communication; and c) becoming more strategic in communication.

Major Findings for Research Question #3

Research question #3 asked about how Chinese culture influenced Chinese visiting scholars' intercultural competence development both positively and negatively during their study abroad in the United States/United Kingdom. The following section first presents the positive impact and then the negative impact of Chinese culture on Chinese visiting scholars' intercultural competence development during their study abroad.

Positive Impact of Chinese Culture on Intercultural Competence Development

The ten Chinese visiting scholars reported that the following 15 factors associated Chinese culture impacted their intercultural competence development positively during their study abroad: *a) Perseverance; b) being friendly and nice; c) being helpful; d) being polite; e) being self-confident, f) being hard working; g) being easy to get along with other people; h) sharing Chinese culture with American and British people; j) being humble and eager to learn; k) being tolerant; l) developing strategies to cope with challenges; m) visiting local people and making friends; n) being proud of being Chinese; o) showing mutual respect; p) keeping a positive attitude*. It is important to note that these factors are not necessarily only related to Chinese culture. However, the ten interviewees perceived them as factors that positively impacted their intercultural competence development.

Perseverance. Three out of ten participants reported that they experienced considerable intercultural communication challenges in their study abroad. Due to their perseverance, they overcame their difficulties and finally became confident and

effective in their communication with British and American professors and colleagues. *Participant A* made the following comment:

> … I experienced many difficulties in communicating with people while studying in UK due to the cultural differences; for example, I had challenges [in] express[ing] myself in proper English; sometimes I had to think in Chinese and responded in Chinglish … I strongly believed that perseverance is an important characteristic in Chinese culture. I studied very hard and developed several strategies to cope with intercultural communication difficulties ….

Participant F mentioned that it was because of his Chinese spirit of persistent pursuit for knowledge that even if he met differences and difficulties sojourning abroad, this embedded Chinese cultural characteristics naturally led him to face those diversities and problems with his strong willpower.

Being friendly and nice. Several participants commented that they were nice and friendly and therefore, could easily get along well with American and British colleagues. They practiced speaking English with them, trying to learn how to say things in English. Eventually they have become inter-culturally competent.

Being helpful. *Participants I and J* were studying abroad at the same American university. They commented that they often helped their American professors with their research and secretarial work; and their American professors felt very grateful and spent a lot of time with them practising English. *Participant J* further commented that, "I had a very positive study abroad experience in this American university. I

often help my professors and have developed a good relationship with them. I have gained more opportunities to practice my oral English and my intercultural competence has also been improved."

Being polite. Politeness is often associated with Chinese culture, as commented by *participants C, F, and H.* They tried to be very polite when they spoke to their American and British colleagues. These Chinese visiting scholars felt that their American and British colleagues wanted to speak with them and were interested in Chinese culture. Participant C mentioned "I am a very traditional Chinese. I am all the time mild, gentle and courteous. These make it easy for me to get along well with my foreign colleagues and friends".

Being self-confident. Most participants agreed that self-confidence positively influenced their intercultural competence development while they were studying abroad. These Chinese visiting scholars were outstanding scholars in China before they were sent abroad. They were very self-confident in their research and their self-confidence played a very important role when they were communicating with their American and British colleagues. Participant J made the following comments:

> … I was very self-confident when I communicated with my American professors and colleagues. I am a full professor in China and also the principal investigator of a state-funded half a million dollar research project related to environmental development. When I made presentations, my American colleagues showed great interest in my project and asked me many questions. Both my English skills and my

intercultural communication competence were improved by answering their questions and discussing my research findings …

Being hard working. Several participants commented that Chinese people are hard working; they usually spent a lot of time practising their English and exploring American and British culture so that they could communicate with American and British people effectively. Participant *B* commented that:

> … My English speaking was very poor, especially my pronunciation was terrible. To be honest, my Chinese pronunciation was very bad. My poor English pronunciation caused a lot of problems and misunderstanding when I tried to communicate with British people. I never gave it up and spent hours every day to practice my English speaking. I tried to start conversations with strangers on the train, on the bus … my English was improved rapidly and I also gained self-confidence.

Being easy to get along with other people. Participants *C*, *E*, *F*, and *I* reported that they were very easy to get along with other people and they made several friends while studying abroad. They asked for help if they needed it. They also offered help to their American and British friends. They were getting very well along with each other and therefore, their intercultural competence was getting better and better. Participant C illustrated:

> … Before I went to study in the USA, I had a negative attitude towards certain Chinese culture, I even felt like to reject some traditional Chinese

culture, such as, having some interpersonal network. While I was in the USA, I realized that this Chinese culture was already embedded in my blood. My disposition was easy-going and well-oiled, these helped me to be a part of my colleagues just within a short period of time.

Sharing Chinese culture with American and British people. Participants *A, C, G,* and *H* reported that sharing Chinese culture with American and British people could help develop their intercultural competence. Participant *H* made the following comment:

> … Chinese culture is rich and diverse. Foreign people have shown great interest in Chinese culture. We have our traditions and they have their culture. By communicating with foreign people we can find things in common and identify things different between Chinese culture and foreign culture[s]. At the same time we have achieved intercultural understanding and therefore, our intercultural communicative competence have been developed and improved.

Being humble and eager to learn. Participants *C, D, I,* and *J* reported that being humble and showing a great desire for learning could positively impact their intercultural competence development. It is very interesting to mention that all these participants studied abroad in the United States. They further explained that their American colleagues and professors were willing to provide them with help, suggestions, and directions in their research as well as in their daily routine work because they always asked for suggestions and were eager to learn new things.

Being tolerant. Being tolerant for American and British can be helpful in developing their intercultural competence, as commented by participants *E* and *H*. When they were studying abroad, they were very tolerant for the host country culture and at the same time tried to learn about their culture. Therefore, they gained respect from their roommates and landlords in the host countries. At the same time their communicative skills were also developed. "When I met some difficulties and I found it was hard for me to overcome, I would let it be for a while. Being tolerant made me understand better."

Developing strategies to cope with challenges. All participants reported that Chinese people could always find ways to overcome their challenges. While they studied abroad, they had to face all kinds of challenges. They developed strategies to deal with these challenges. In this process they learned how to communicate with people from different cultures; and therefore, their intercultural communicative competence was developed.

Visiting local people and making friends. In Chinese culture, people enjoy visiting each other; for example, in China people often visit relatives, friends, and even neighbours. A few participants mentioned that their intercultural competence was developed through visiting local people and making friends in the community where they lived. Participant *I* made the following comment:

> … My landlord was a British American. I learned both American and British culture from her … she often took me to her friends for parties and get-togethers. Sometimes she encouraged me to go to the local

church and make friend in the local community. By meeting with these people, I had a better understanding about their culture. At the same my language and communicative skills were improved.

Being proud of being Chinese. Several participants reported that they felt very proud of being Chinese. They always tell their foreign friends and colleagues that China is a great country with splendid culture and its economy is developing extremely fast. While telling the people in their host countries what was happening in China they felt proud and confident; they became good speakers and their skills in using English for communication were getting more and more proficient.

Showing mutual respect. Participants *D*, *F*, and *J* commented that the two parties in the process of communication should show mutual respect of each other. In Chinese culture, there is an old saying "if you respect me, I will respect you ten time more." There should be a positive relationship between the speaker and the listener(s). "The communication can last longer and become more effective if both parties treat each other respectfully," as commented by participant *J*.

Keeping a positive attitude. A few participants mentioned that a good communicator should have a good and positive attitude. Sometimes a good and positive attitude can simply be a "could you please …?" or "if you don't mind …" between the speaker and the listener(s). "A speaker with a good attitude is ready to answer the questions from the listener(s). Similarly, a listener with a positive attitude shows great enthusiasm in the conversation, asks more information from the speaker,

and therefore makes the conversation more fruitful and enjoyable." commented by participant *I*.

Negative Impact of Chinese Culture on Intercultural Competence Development

The ten Chinese visiting scholars reported that the following eight factors associated Chinese culture impacted their intercultural competence development negatively during their study abroad: *a) Being nervous and anxious; b) being afraid of losing face; c) having poor English listening and speaking skills; d) being not active; e) being not direct; f) refusing help from strangers; g) having no religious beliefs; h) being together with Chinese people; and i) being unable to seek help*. Again, it is important to note that these factors are not necessarily only related to Chinese culture. However, the ten interviewees perceived them as factors that negatively impacted their intercultural competence development while studying abroad.

Being nervous and anxious. All participants reported that they became nervous and anxious when they communicated with the American and British when they studied abroad. The major source of their nervousness was their poor oral English skills (i.e., listening and speaking) and lack of the understanding of the culture of the host countries. "Being nervous has become a factor that negatively impacts my intercultural communication," as commented by one participant who studied abroad in the United Kingdom. "I could not express myself clearly when I was nervous and was often misunderstood by my American professor," as commented by another participant who studied abroad in the United States.

Being afraid of losing face. Chinese people are typically afraid of "losing their face". A few participants mentioned that they were afraid of making mistakes and tried to avoid speaking English with their American and British colleagues. They thought that if they made mistakes in speaking English; they would lose their face. One participant studied in the United States made the following comment:

> "I felt like I had lost my face if I made mistakes when I communicated with my friends and colleagues. In order to save my face I tried not to talk to them [American friends and colleagues]. Instead, I went to my Chinese friends for assistance if I needed it."

Having poor English skills. Participants *B*, *F*, *H*, and *J* mentioned that they had poor English skills in listening and speaking because they did not receive adequate training in English listening and speaking in China. Their poor listening and speaking skills prevented them from communicating effectively with their American and British colleagues and professors.

Being not active. All participants mentioned that they were generally not very active while studying abroad. They did not participate in school activities regularly; they did not usually go to parties hosted by their American and British friends and colleagues. This inactivity impacted their intercultural competence development, as commented by several participants.

Being not direct. Chinese people are usually not as direct as American and British people. They do not accept compliments directly; they do not tell other people what they really want either. Being not direct caused Chinese visiting scholars many

problems and misunderstandings. The following comment is made by one Chinese visiting scholar studied in the United States:

> "… at the end of my presentation, my American colleagues offered very positive comments and gave me their compliments. Without any hesitation, I replied that there were still a lot of problems with my research project. In Chinese culture we do not usually accept compliments in order to show our modesty. They felt very surprised and could not really understand the way I responded to compliments."

Refusing help from strangers. In Chinese culture people usually do not accept help from strangers. This is because people do not understand why strangers offer help and assistance. Sometimes the good intention of the helper cannot be well received and may also be misunderstood. However, refusing help from strangers can have a negative impact on Chinese visiting scholars' intercultural competence development while they studied abroad; as commented by participant *E*, who described the following story:

> "… I was travelling in Grand Canyon with my husband. We were standing at the edge of a cliff when a stranger came to us and wanted to help us take a picture. Without further thinking I refused his help immediately as most people would do the same thing when it happened in China. Afterwards I thought the stranger simply just wanted to help us. However his good intention was misunderstood.…"

Having no religious beliefs. Chinese scholars do not usually have any religious

background and beliefs. However, in both the United States and United Kingdom, religion is an important part of their culture. All participants reported that having no religious beliefs prevented them from communicating with American and British people. Participant *I* made the following comment:

> "… My landlord always wanted me to go to the church with her every Sunday. She gave me the Bible and wanted me to spend time reading it. Sometimes I felt very frustrated because I showed little interest in religion and did not know how to tell her that. I strongly felt that having no religious background prevented me from communicating with my landlord easily."

Being together with Chinese people. All the participants agreed that they usually spent a lot of time with Chinese colleagues and students while studying abroad. Being together with Chinese people has become part of Chinese culture for visiting scholars studying abroad. This is because they speak the same language and come from the same cultural background. However, "spending time with Chinese people while studying abroad limit their exposure to the English language as well as the British culture," as commented by one participant studied in the United kingdom.

Major Findings for Research Question #4

Research question #4 asked about how the host country culture influences the Chinese visiting scholars' intercultural competence development both positively and negatively during their study abroad in the United States/United Kingdom. The following section first presents the positive impact and then the negative impact of

host country culture on Chinese visiting scholars' intercultural competence development during their study abroad.

Positive Impact of Host Country Culture on Intercultural Competence Development

The ten Chinese visiting scholars reported that the following six factors associated American and British cultures impacted their intercultural competence development positively during their study abroad: a) Being friendly and helpful; b) being good at communication; c) being tolerant; d) being patient; e) being self-confident; and f) showing respect for and appreciation of Chinese culture. It is important to note that these factors are not necessarily only related to American and British cultures. However, the ten interviewees perceived them as factors that positively impacted their intercultural competence development.

Being friendly and helpful. All participants reported that both American and British people are very friendly and helpful, which facilitated their intercultural competence development. The American and British people helped Chinese visiting scholars with their English; taught them American and British cultures; and offered them assistance in their daily life.

Being good at communication. Several participants commented that their American and British colleagues are good at communication. They use simplified English as well as body language when they were communicating with Chinese scholars for better understanding of each other.

Being tolerant. A few participants commented that American and British people are very tolerant of them. For example, Chinese visiting scholars often made mistakes

in communication due to lack of English proficiency and limited understanding of American and British cultures. However, they are tolerant for Chinese scholars' English mistakes and ignorance of American and British cultures, which positively impacted Chinese scholars' intercultural competence development.

Being patient. Patience is often associated with American and British cultures, as commented by *participants C, F, and H*. They reported that their American and British professors were very patient. They listened to Chinese scholars' questions and concerns and provided them with assistance. "My British professor was very patient and his patience helped develop my intercultural competence." as commented by participant *H*.

Being self-confident. Most participants agreed that their American and British colleagues' self-confidence positively influenced their intercultural competence development while they were studying abroad. They mentioned that they would be influence by their American and British colleagues' self-confidence and then became self-confident themselves.

Showing respect for and appreciation of Chinese culture. Participants *B*, *I*, and *J* commented that their American and British colleagues and professors showed respect for and appreciation of Chinese culture, which made them feel comfortable in communicating with them; and therefore, their intercultural competence was developed. The following comment was made by participant *B*:

> "… My British colleagues were interested in Chinese culture. I felt comfortable in speaking with them about Chinese culture. They were

good listeners when I told them about Chinese culture. By sharing them with Chinese culture, my English communicative skills are improved too."

Negative Impact of Host Country Culture on Intercultural Competence Development

The ten Chinese visiting scholars reported that the following four factors associated American and British cultures impacted their intercultural competence development negatively during their study abroad: a) Using colloquial and slang language; b) stereotyping, c) being religious; and d) culture shock. Again, it is important to note that these factors are not necessarily only related to American and British cultures. However, the ten interviewees perceived them as factors that negatively impacted their intercultural competence development while studying abroad.

Using colloquial and slang language. A few participants reported that their American and British colleagues often used colloquial and slang language in conversations with Chinese scholars. The colloquial and slang language has created Chinese visiting scholars many problems and challenges in their intercultural competence development.

Stereotyping. Chinese students and scholars are sometimes stereotyped by American and British professionals as quiet and surface learners. Stereotyping makes some Chinese visiting scholars feel uncomfortable and therefore, can negatively impact their intercultural competence development. Several participants who studied in the United Kingdom specifically expressed this concern.

Being religious. Religion is an important part of American/British culture. However, as mentioned above Chinese visiting scholars had no religious background and beliefs. This lack of common interest had a negative impact on Chinese visiting scholars' intercultural competence development.

Culture shock. All participants mentioned that they had experienced culture shock while studying abroad. Culture shock caused them frustrations in intercultural communication because there are differences between the Chinese culture and the host country culture. One participant made the following comment:

> "… I could not quite understand the differences between Chinese culture and American culture; and therefore, I experienced great challenges in communicating with my American colleagues and friends in the first few months."

Major Findings for Research Question #5

Research question #5 asked about how the study abroad experience in the United States/United Kingdom influences Chinese visiting scholars' interpersonal communication after they have come back to China. The following section first presents the overall impact of their study abroad experience on their interpersonal communication after they have come back to China and then the specific changes they have noticed in their interpersonal communication after they have come back to China.

Overall Impact of Study Abroad on Personal Communication

The ten Chinese visiting scholars reported that the overall impact of their study abroad experience on their interpersonal communication after they have come back to China can be both positive and negative.

Positive impact. All participants commented that their study abroad experience had positive impact on their interpersonal communication after they have come back to China. One participant commented that "I have learned how to better communicate with my colleagues after I have come back to China." Another participant added that "I have become more effective in the communication with my colleagues."

Negative impact (reverse culture shock). Many participants also stated that their study abroad experience had negative impact on their interpersonal communication after they have come back to China. For example, they experience reverse culture shock. Reverse culture shock was experienced when these Chinese visiting scholars returning to China. Reverse culture shock was difficult to deal with because it was unexpected and unanticipated. One participant commented that "I felt very difficult to understand my former colleagues in China. The interpersonal relationship became so unpredictable."

Specific Changes in Their Interpersonal Communication

The ten Chinese visiting scholars reported that they have noticed the following three specific changes in their interpersonal communication after they have come back to China: a) Becoming a good listener; b) becoming more effective in communication; and c) becoming more strategic in communication.

Becoming a good listener. Several participants reported that they have become good listeners and are willing to listen to their colleagues before they make responses or provide feedback. "Effective communication requires one party to be a good listener," as commented by one participant.

Becoming more effective in interpersonal communication. All participants agreed that they have become more effective communicators after they have come back to China. The study abroad experience had very positive impacts on the interpersonal communications with their colleagues and friends in China. "Effective interpersonal communication requires the speaker and the listener(s) to understand each other and be frank to each other," as one participant mentioned.

Becoming more strategic in interpersonal communication. Strategies for effective interpersonal communication play a very important role. Good communicators must have good strategies for communication. All participants reported that their study abroad experience helped them develop strategies for effective interpersonal communication.

Summary

This chapter reports both the quantitative and the qualitative results of the study. The quantitative results include both SPSS and G-theory analyses results. The qualitative results are presented by research questions and under the main themes of interview data. Chapter 5 discusses these results of this study.

CHAPTER FIVE

DISCUSSION OF RESULTS

This chapter summarizes and discusses the results of the study. It begins with a brief description of the study. It then summarizes the quantitative and qualitative findings by research questions. Following that, it discusses the quantitative results, which are related to the first two research questions. Finally, it summarizes and discusses the qualitative results, which are related to the last three research questions. This chapter attempts to make links to the previous published literature and identifies both similarities and differences so that new understandings about intercultural competence development are revealed.

A Brief Description of the Study

Using a mixed-methods design, this study examined the perceptions of Chinese visiting scholars of the factors affecting their intercultural competence development during their sojourning abroad in the United States and the United Kingdom. Quantitatively, using generalizability (*G*-) theory (Cronbach, Gleser, Nanda, & Rajaratnam, 1972) as a theoretical framework, this study examined differences in the ratings of the factors affecting Chinese visiting scholars' development of intercultural competence during their sojourning abroad across sex (i.e., male and female), age (i.e., younger than 40 years old, 40-50 years old, and older than 50 years old), country of study (i.e., the United States and the United Kingdom), and length of study (i.e., 3-6 months, 7-12 months, and more than 12 months). Qualitatively, this study used ten

semi-structured interviews (i.e., 5 interviews with Chinese visiting scholars studied in the United States and 5 interviews with Chinese visiting scholars studied in the United Kingdom) to gain Chinese visiting scholars' perceptions of the factors affecting their intercultural competence development during their sojourning abroad.

Specifically, the following five research questions guide this thesis study: a) Are there any significant differences (e.g., by sex, age, country of study, and length of study) in rating the impact of the factors on the Chinese visiting scholars' intercultural competence development? b) What are the sources of rating variation of the impact of the factors on Chinese visiting scholars' intercultural competence development? c) How does Chinese culture influence the Chinese visiting scholars' intercultural competence development during their sojourning abroad? d) How does the host country (i.e., the United States versus the United Kingdom) culture influence the Chinese visiting scholars' intercultural competence development during their sojourning abroad? and e) How does the study abroad experience influence their interpersonal communication after they have come back to China?

Summary of Major Findings by Research Questions

The First Research Question

The first research question attempted to determine if there were any significant differences in the ratings of the factors in terms of their impact on the Chinese visiting scholars' intercultural competence development as rated by participants across sex (i.e., male and female), country of study (i.e., the United States and the United

Kingdom), age (i.e., < 40 years old, 40-50 years old, and > 50 years old), and length of study (i.e., 3-6 months, 7-12 months, and over 12 months). The following results are summarized.

First, the 85 participants rated the following as the top 15 factors most positively impacting their intercultural competence development: a) self-confidence; b) foreign language skills or proficiency; c) open-mindedness; d) knowledge about the host country/culture; e) experiences with cultural difference; f) interaction confidence; g) time spent with international peers; h) curiosity about discovering the host country/culture; i) being non-judgemental; j) self-efficacy; k) living with a host family; l) family and institution support; m) social skills; n) interaction with peers from different cultures; and o) respect for the host country/culture. The rating of each of these 15 factors had a mean score of over 6.15 (out of 10); however, the ratings of each factor had a very large standard deviation, indicating that these 85 Chinese visiting scholars had very different perceptions of these factors in terms of their impact on their intercultural competence development.

Self-confidence, open-mindedness, interaction confidence, and self-efficacy were rated as the factors that had the large positive impact on their intercultural competence development. Further, foreign language skills or proficiency was rated as another factor that had the most positive impact on their intercultural competence development. In addition, knowledge about the host country/culture, experiences with cultural difference, curiosity about discovering the host country/culture, being non-judgemental, and respect for the host country/culture were rated as factors that

had the most positive impact on their intercultural competence development. Finally, time spent with international peers, living with a host family, family and institution support, social skills, and interaction with peers from different cultures were rated as factors that had the most positive impact on their intercultural competence development.

Second, the 85 participants rated the following as the top 15 factors least impacting their intercultural competence development: a) financial difficulties, b) feeling lonely, c) feeling stressful, d) academic anxiety, e) ethnocentrism, f) previous traveling experience, g) prejudice, h) family international experience, i) pre-departure preparation, j) having studied language overseas, k) having accompanying spouses and children, l) stereotypes, m) first language, n) having prolonged negative experiences with international people, and o) previous experience abroad. The rating of each of these 15 factors had a mean score of less than 5.38 (out of 10); however, the ratings of each factor had a very large standard deviation, indicating that these 85 Chinese visiting scholars had very different perceptions of these factors in terms of their impact on their intercultural competence development.

Further, feeling lonely, feeling stressful, academic anxiety, and having accompanying spouses and children were rated as factors that least impact their intercultural competence development. In addition, ethnocentrism, prejudice, stereotypes, and having prolonged negative experiences with international people were rated as factors that least impact their intercultural competence development. Finally, previous traveling experience, family international experience, pre-departure

preparation, having studied language overseas, first language and previous experience abroad were rated as factors that least impact their intercultural competence development.

Third, the independent samples t-tests results for the independent variable of sex indicate that male participants rated the following factors significantly higher than the female participants ($p < .05$): interaction with peers from different cultures, interaction confidence, foreign language skills or proficiency, pre-departure preparation, first language, respect for the host country/culture, open-mindedness, experiences with cultural difference, self-efficacy, time spent with their international peers, social skills, training and orientation for overseas sojourners, guided reflection, previous travelling experience, family international experience, having the goal of gaining cultural understanding, past international experiences, family and institution support, tolerance of ambiguity, and self-esteem.

Further, the independent samples t-tests results for the independent variable of country of study indicate that participants who studied in the United Kingdom rated the following factors significantly higher than participants who studied in the United States ($p < .05$): interaction confidence, time spent with international peers, training and orientation for overseas sojourners, having an international perspective, family and institution support, and tolerance of ambiguity. However, participants who studied in the United States rated the following factors significantly higher than participants who studied in the United Kingdom ($p < .05$): ethnocentrism, having accompanying spouses and children, academic anxiety, and having studied language overseas.

Fourth, for the independent variable of age, the one-way ANOVAs results show that participants aged above 50 rated the following 19 factors significantly higher than participants aged below 40 ($p < .05$): Cultural differences, foreign language skills or proficiency, respect for the host country/culture, open-mindedness, being non-judgmental, experiences with cultural difference, self-confidence, self-efficacy, time spent with their international peers, training and orientation for overseas sojourners, guided reflection, previous travelling experience, previous experience abroad, family international experience, having the goal of gaining cultural understanding, past international experiences, having an international perspective, tolerance of ambiguity, and self-esteem.

Further, participants aged above 50 also assigned significantly higher scores than participants aged between 40 and 50 ($p < .05$): respect for the host country/culture, experiences with cultural difference, time spent with their international peers, guided reflection, previous travelling experience, family international experience, past international experiences, having an international perspective, tolerance of ambiguity, and self-esteem.

Finally, for the independent variable of length of study, the one-way ANOVAs results show that participants who studied abroad for over 12 months rated the following factors significantly higher than participants who studied abroad for 7-12 months ($p < .05$): prejudice, knowledge about the host country/culture, having an international perspective, and self-esteem. Further, participants who studied abroad for over 12 months rated the following factors significantly higher than participants who

studied abroad for 3-6 months (p <.05): financial difficulties, previous travelling experience, having an international perspective, and feeling lonely.

The Second Research Question

The second research question aimed to examine the sources of rating variation of the impact of the factors on Chinese visiting scholars' intercultural competence development. The following results are summarized.

First, the factor-by-rater nested within sex (*f x r:s*) mixed effects G-study results show that the residual (*fr:s*) yielded the largest variance component (59.19% of the total variance). Factor (*f*), the object of measurement yielded the second largest variance component (20.07% of the total variance). Rater nested within sex (*r:s*) yielded the third largest variance component (15.39% of the total variance). Sex (*s*) variance component yielded only 5.27% of the total variance. The factor-by-sex (*fs*) variance component explained less than 1% of the total variance.

Further, the results for male raters show that the residual yielded the largest variance (58.03% of the total variance). Rater (*r*) yielded the second largest variance component (21.25% of the total variance). Factors (*f*), the object of measurement yielded the third largest variance component (20.72% of the total variance). The results for female raters indicated that the residual yielded the largest variance (67.85% of the total variance). Factors (*f*), the object of measurement yielded the second largest variance component (21.93% of the total variance), Rater (*r*) yielded the third largest variance component (10.22% of the total variance).

Second, the factor-by-rater nested within country of study *f x r:c* mixed effects

G-study results show that the residual (*fr:c*) yielded the largest variance component (56.85% of the total variance). Factor (*f*), the object of measurement yielded the second largest variance component (18.50% of the total variance). Rater nested within country of study (*f:c*) yielded the third largest variance component (18.20% of the total variance). The factor-by-country of study (*fc*) variance component explained 6.45% of the total variance. The country of study (*c*) variance component explained 0% of the total variance.

In addition, the results for UK raters show that the residual yielded the largest variance (52.90% of the total variance). Factors (*f*), the object of measurement yielded the second largest variance component (31.58% of the total variance). Rater (*r*) yielded the third largest variance component (15.52% of the total variance). The results for US raters indicated that residual yielded the largest variance (61.22% of the total variance). Rater (*r*) yielded the second largest variance component (21.18% of the total variance). Factors (*f*), the object of measurement yielded the third largest variance component (17.60% of the total variance).

Third, the factor-by-rater nested within age (*f x r:a*) mixed effects *G*-study results show that that the residual (*fr:a*) yielded the largest variance component (54.31% of the total variance). Factors (*f*), the object of measurement yielded the second largest variance component (25.22% of the total variance). Rater nested within age (*r:a*) yielded the third largest variance component (12.56% of the total variance). Age (*a*) variance component yielded 7.42% of the total variance. The factor-by-age (*fa*) variance component yielded less than 1% of the total variance.

Further, the results for raters aged under 40 show that the residual yielded the largest variance (67.24% of the total variance). Factors (*f*), the object of measurement yielded the second largest variance component (26.20% of the total variance). Rater (*r*) yielded the third largest variance component (6.56% of the total variance). The results for raters aged 40-50 show that the residual yielded the largest variance (61.14% of the total variance). Factors (*f*) yielded the second largest variance component (32.94% of the total variance). Rater (*r*) yielded the third largest variance component (4.92% of the total variance). The results for raters aged above 50 show that the residual yielded the largest variance (52.31% of the total variance). Factors (*f*), the object of measurement yielded the second largest variance component (25.82% of the total variance). Rater (*r*) yielded the third largest variance component (21.87% of the total variance).

Finally, the factor-by-rater nested within length of study (*f x r:l*) mixed effects *G*-study results show that the residual (*fr:l*) yielded the largest variance component. Rater nested within length of study (*r:l*) yielded the second largest variance component (16.87% of the total variance). Factors (*c*), the object of measurement yielded the third largest variance component (16.43% of the total variance). The factor-by-length of study (*fl*) variance component explained 5.23% of the total variance. The variance component associated with length of study (*l*) yielded 1.34% of the total variance.

Further, the results for raters having 3-6 months of study time show that the residual yielded the largest variance (54.90% of the total variance). Factors (*a*), the

object of measurement yielded the second largest variance component (42.35% of the total variance). Rater (*r*) variance component explained 3.75% of the total variance. The results for raters having 7-12 months of study time show that the residual yielded the largest variance. Rater (*r*) variance component explained 20.31% of the total variance. Factors (*a*), the object of measurement yielded the third largest variance component (13.33% of the total variance). Further, the results for raters having over 12 months of study time show that the residual yielded the largest variance. Rater (*r*) variance component explained 22.13% of the total variance. Factors (*a*), the object of measurement yielded the third largest variance component (16.24% of the total variance).

The Third Research Question

The third research question intended to investigate the impact of Chinese culture on Chinese visiting scholars' intercultural competence development during their sojourning abroad. The following results are summarized.

First, the following 15 factors associated with Chinese culture positively affect Chinese visiting scholars' intercultural communication while studying abroad: *a) Perseverance; b) being friendly and nice; c) being helpful; d) being polite; e) being self-confident, f) being hard working; g) being easy to get along with other people; h) sharing Chinese culture with American and British people; j) being humble and eager to learn; k) being tolerate; l) developing strategies to cope with challenges; m) visiting local people and making friends; n) being proud of being a Chinese; o) showing mutual respect; p) keeping a positive attitude*.

Second, that the following nine factors associated with Chinese culture negatively affect Chinese visiting scholars' intercultural communication while studying abroad: *a) Being nervous and anxious; b) being afraid of losing face; c) having poor English listening and speaking skills; d) being not active; e) being not direct; f) refusing help from strangers; g) having no religious beliefs; and h) being together with Chinese people*.

The Fourth Research Question

The fourth research question asked about how the host country culture influences the Chinese visiting scholars' intercultural competence development during their sojourning abroad. The following results are summarized.

First, the following six factors associated with American and British cultures positively affect Chinese visiting scholars' intercultural communication while studying abroad***:*** *a) Being friendly and helpful; b) being good at communication; c) being tolerate; d) being patient; e) being self-confident; and f) showing respect for and appreciation of Chinese culture.*

Second, the following four factors associated with American and British cultures negatively affect Chinese visiting scholars' intercultural communication while studying abroad*: a) Using colloquial and slang language; b) stereotyping, c) being religious; and d) culture shock*.

The Last Research Question

The last research question asked about how the study abroad experience

influences their interpersonal communication after they have come back to China. The following results are summarized.

First, the ten Chinese visiting scholars reported that the overall impact of their study abroad experience on their interpersonal communication after they have come back to China can be both positive and negative. For example, all participants commented that their study abroad experience had positive impact on their interpersonal communication after they have come back to China. Further, many participants also stated that their study abroad experience had negative impact on their interpersonal communication after they have come back to China. For example, they experience reverse culture shock. Reverse culture shock was experienced when these Chinese visiting scholars returning to China. Reverse culture shock was difficult to deal with because it was unexpected and unanticipated.

Second, the ten Chinese visiting scholars reported that they have noticed the following three specific changes in their interpersonal communication after they have come back to China: a) Becoming a good listener; b) becoming more effective in communication; and c) becoming more strategic in communication.

Discussion of Major Findings by Research Questions

The First Research Question

The following four similarities were found between the findings of this study and the previous published studies. **First**, similar to research findings reported by Hixson (2003), Milstein (2005), and Redmond and Bunyi (1993), self-confidence, open-mindedness, interaction confidence and self-efficacy were the factors that had

the most positive impact on Chinese visiting scholars' intercultural competence development. For example, Milstein (2005) reported that self-confidence was positively correlated with success of sojourn and effectiveness of communication. If they are self-confident, the Chinese visiting scholars feel comfortable in the new linguistic and cultural environment and begin to communicate with their English-speaking peers (Feng, 1991; Huang, 2004, 2005).

Second, foreign language skills or proficiency was identified as another factor that had the most positive impact on Chinese visiting scholars' intercultural competence development. This finding was also consistent with previous studies with Chinese students studying at North American universities (Feng, 1991; Huang & Rindaldo, 2009; Huang, 2004, 2005). These studies indicated that their English language proficiency affect Chinese students academic studies and intercultural competence development.

Third, similar to the findings of previous studies (Chitakornkijsil, 2010; Fang, 2010; Sherry, Thomas, & Chui, 2010), factors such as knowledge about the host country/culture, curiosity about discovering the host country/culture, and respect for the host country/culture were identified as factors that had the most positive impact on Chinese visiting scholars' intercultural competence development in this study. This is because "the more knowledge learners know about target language's culture, the easier it will be for them to reach effective communication (Fang, 2010, p.43)."

Finally, the results of this study indicate that if they spend time with international peers, live with a host family, and interact with peers from different

cultures; Chinese visiting scholars are more likely to develop their intercultural competence. Similar findings were also reported in previous research (Cash, 1993, Hixson, 2003; Laubscher 1994). For example, Hixson (2003) studied how adult educators from the United States became interculturally competent practitioners to teach adults in Peru in Latin America and reported that the support from family and friends, personal commitment, training and education, previous intercultural experiences, and immersion into the host culture by adopting a role of a learner and communicating in the local language all impact their intercultural competence development.

The following four differences were found between the findings of this study and the previous published studies. **First**, it is very important to note that financial difficulties were reported as a factor that had the most negative impact on Chinese students' academic learning and intercultural competence development at North American universities (Huang & Kling, 2006; Huang & Rinaldo, 2009). However, this study indicated that Chinese visiting scholars did not think it as a factor most impacting their intercultural competence development. This is perhaps because Chinese visiting scholars receive full financial support from either their Chinese institutions or the Chinese government, whereas regular Chinese students do not receive such financial support while studying abroad.

Second, different from previous research findings, such affective factors as "feeling lonely and stressful" and "academic anxiety" have the least impact on Chinese visiting scholars' intercultural competence development. The previous

research with regular Chinese students studying at North American universities reported that these factors had the most impact on their academic learning and intercultural competence development (Huang, 2011; Huang & Klinger, 2006; Huang & Rinaldo, 2009). For example, Huang and Rinaldo (2009) examined the affective factors affecting four Chinese graduate students' cross-cultural learning and intercultural communication at two North American universities. For the four participants, North America is filled with pressures. Loneliness and anxiety were often connected to the absence of family and friends and they have become the two major affective factors that negatively affected their graduate study abroad. This is perhaps because Chinese visiting scholars do not have to take courses as regular Chinese students; and therefore, they do not have the pressures and anxiety associated with academic work. Further, with the changing technologies, particularly online social networks appear to be shrinking the world in the sense that studying and working abroad may have less emotional effect on Chinese visiting scholars than in the past.

Third, ethnocentrism, prejudice, stereotypes, and having prolonged negative experiences with international people were identified as factors that have the least impact on Chinese visiting scholars' intercultural competence development. These findings were different from previous published studies (Earlier, Kim & Gudykunst, 1992; Han, 2004; Stephan & Rosenfield, 1982). For example, Han (2004) reported that ethnocentrism, prejudice, and stereotypes all have an impact on intercultural communication.

Finally, previous traveling experience, pre-departure preparation, and previous experience abroad were found not to impact Chinese visiting scholars' intercultural competence development. Again, these findings were different from previous published studies (Cash, 1993, Hixson, 2003; Laubscher 1994; Milstein, 2005). This is perhaps because these Chinese visiting scholars are in their forties and fifties; they have had varied personal and educational experiences and therefore, they perceived these factors as factors that least impact their intercultural competence development.

In addition to the above similarities and differences, this study had the following four findings that were never reported in the published literature. **First**, there were significant differences between the male and female Chinese visiting scholars in terms of the impact of some factors on their intercultural competence development. Since no previous research has reported sex differences, they need to be further examined.

Second, there were significant differences between the Chinese visiting scholars who studied in the United States and those who studied in the United Kingdom in terms of the impact of some factors on their intercultural competence development. This may be due to the slightly different linguist and cultural contexts between these two countries. Again, since no previous research has reported these country differences, they need to be further examined.

Third, this study found age-related differences. For example, the Chinese visiting scholars aged above 50 had stronger perceptions about the impact of many factors on their intercultural competence development than the younger visiting scholars. This may be because the older visiting scholars are less easily to become acculturated in the

host cultures than the younger ones. However, previous research did not examine any age-related differences; further examination of these age differences is needed.

Finally, this study found significant differences between Chinese visiting scholars who studied abroad for over 12 months and those for only 7-12 months. It seemed that these Chinese visiting scholars who studied abroad longer perceived some factors to have more impact on their intercultural competence development than those who studied abroad for a shorter period of time. However, further examination of these differences is needed.

The Second Research Question

Generalizability (G-) theory analyses were used to examine the sources of rating variation of the impact of the factors on Chinese visiting scholars' intercultural competence development. Since no previous related research employed G-theory as a research method, the following findings reveal new understandings of intercultural competence development.

First, the G-studies results indicate that the variable *sex* did generate fairly different results in terms of the sources of rating variation of the impact of the factors on Chinese visiting scholars' intercultural competence development. The variance component of rater was twice larger for male participants than for female participants, indicating that male raters were twice more inconsistent than the female raters in rating these factors. Further, there were more unexplained variances in the female raters' ratings than the male raters' ratings. However, the *G*-coefficient obtained for

male raters was .94, and the *G*-coefficient for the female raters was .93, suggesting that the male and female raters' ratings of the 40 factors in terms of their impact on the development of intercultural competence were similar.

Second, the G-studies results indicate that the variable *country of study* did generate some different results in terms of the sources of rating variation of the impact of the factors on Chinese visiting scholars' intercultural competence development. The UK participants were more consistent than the US participants in rating these factors. Finally, there was more unexplained variance in the US participants' ratings than the UK participants' ratings. As a result, the *G*-coefficient obtained for the UK participants was .96, whereas the *G*-coefficient for the US participants was .91, suggesting that UK participants' ratings of the 40 factors were more reliable than those of the US participants.

Third, the G-studies results indicate that the variable *age* did generate very different results in terms of the sources of rating variation of the impact of the factors on Chinese visiting scholars' intercultural competence development. The participants aged 40-50 were more consistent than participants younger than 40 and over 50 years old. Finally, there was more unexplained variance in the younger than 40 participants' ratings than the other two age groups. As a result, the *G*-coefficients obtained for participants aged under 40, between 40 and 50, and above 50 were .78, .83, and .82, respectively, suggesting that the reliabilities of ratings of the 40 factors in terms of their impact on the development of Chinese visiting scholars' intercultural competence across three age groups were slightly different.

Finally, the G-studies results indicate that the variable *length of study* did generate considerably different results in terms of the sources of rating variation of the impact of the factors on Chinese visiting scholars' intercultural competence development. The raters having 3-6 months of study time were over five times more consistent than raters having 7-12 and over 12 months of study time in rating these factors. Finally, there was less unexplained variance in raters having 3-6 months of study time than raters having 7-12 and over 12 months of study time. As a result, the *G*-coefficients obtained for raters having 3-6 months, 7-12 months, and over 12 months of study time were .85, .58, and .65, respectively, suggesting that raters having 3-6 months of study time rated the 40 factors considerably more reliably than raters having 7-12 and over 12 months of study time.

The Third Research Question

The third research question intended to investigate the impact of Chinese culture on Chinese visiting scholars' intercultural competence development during their sojourning abroad. The following results are discussed.

First, the following 15 factors associated with Chinese culture positively affect Chinese visiting scholars' intercultural communication while studying abroad: *a) Perseverance; b) being friendly and nice; c) being helpful; d) being polite; e) being self-confident, f) being hard working; g) being easy to get along with other people; h) sharing Chinese culture with American and British people; j) being humble and eager to learn; k) being tolerant; l) developing strategies to cope with challenges; m) visiting local people and making friends; n) being proud of being a Chinese; o)*

showing mutual respect; p) keeping a positive attitude. It is very important to note that these factors are not necessarily only related to the Chinese culture. However, they help these Chinese visiting scholars develop their intercultural competence development while they studied in the United States and the United Kingdom. Previous research did indicate that some of these factors facilitate Chinese students' cross-cultural learning and intercultural communication when they study at English speaking universities (Huang, 2004, 2005; Huang & Klinger, 2006; Huang & Rinaldo, 2009).

Second, that the following nine factors associated with Chinese culture negatively affect Chinese visiting scholars' intercultural communication while studying abroad: *a) Being nervous and anxious; b) being afraid of losing face; c) having poor English listening and speaking skills; d) being not active; e) being not direct; f) refusing help from strangers; g) having no religious beliefs; and h) being together with Chinese people.* These findings were consistent with previous research (Huang, 2004, 2005; Huang & Klinger, 2006; Huang & Rinaldo, 2009). For example, as Huang and Rinaldo (2009) claimed, insufficient English proficiency negatively affected both their academic and social activities and communications as reported by Chinese students who studied at English speaking universities. Further, they often found it uncomfortable to express themselves either socially or in class because of their poor English listening and speaking skills (Huang & Rinaldo, 2009).

The Fourth Research Question

The fourth research question asked about how the host country culture influences

the Chinese visiting scholars' intercultural competence development during their sojourning abroad. The following results are discussed.

First, the following six factors associated with American and British cultures positively affect Chinese visiting scholars' intercultural communication while studying abroad: *a) Being friendly and helpful; b) being good at communication; c) being tolerant; d) being patient; e) being self-confident; and f) showing respect for and appreciation of Chinese culture.*

Second, the following four factors associated with American and British cultures negatively affect Chinese visiting scholars' intercultural communication while studying abroad: *a) Using colloquial and slang language; b) stereotyping, c) being religious; and d) culture shock*. These findings did confirm the previous research related to Chinese students studying at English speaking countries (Huang, 2004, 2005; Huang & Brwon, 2009).

The Last Research Question

The last research question asked about how the study abroad experience influences Chinese visiting scholars' interpersonal communication after they have come back to China. Since no previous related research examined this topic, the following findings reveal new understandings of intercultural competence development.

First, the overall impact of Chinese visiting scholars' study abroad experience on their interpersonal communication after they have come back to China can be both positive and negative. For example, the Chinese visiting scholars have become more

effective in the communication with colleagues after they have come back to China.

However, several participants also stated that their study abroad experience had negative impact on their interpersonal communication after they have come back to China. For example, they experience reverse culture shock, which made it harder to communicate with former colleagues. Research indicated that reverse culture shock is difficult to deal with because it is unexpected and unanticipated.

Second, the specific changes they have noticed in their interpersonal communication after they have come back to China include: a) Becoming a good listener; b) becoming more effective in communication; and c) becoming more strategic in communication. For example, several participants reported that they have become good listeners and are willing to listen to their colleagues before they make responses or provide feedback. In addition, they reported that their study abroad experience helped them develop strategies for effective interpersonal communication.

In summary, this chapter discusses both quantitative and qualitative results. On the one hand, this study did find consistent results with the previous research related to Chinese students studying at English speaking countries. On the other hand, this study did find different results from the previous research. These new findings reveal new understandings of the factors affecting Chinese visiting scholars" intercultural competence development.

CHAPTER SIX

CONCLUSION

This chapter begins with a re-statement of the research questions and a brief description of the methods used in this study. It then highlights the major findings. The limitations of the study are then presented. The conclusions and implications for Chinese visiting scholars and American and British professors and administrators are then discussed in light of the limitations. The chapter concludes with recommendations for future research in the area of intercultural competence development of Chinese visiting scholars sojourning abroad. Finally, this chapter makes a final personal reflection on what the researcher has learned about the research process.

Summary of Research Questions and Methods

Qualitative and quantitative research methods are the two general categories of methods currently being used in educational research. However, both research methods have their advantages and disadvantages. To overcome the weaknesses of a single quantitative or qualitative research method, this study used a mixed methods approach to determine the factors affecting their intercultural competence development during their sojourning abroad as perceived by Chinese visiting scholars. Mixed methods research focuses on collecting and analyzing both qualitative and quantitative data. This method's foundation is based upon the premises that when mixing methods of

inquiry the researcher can explore and explain the problem better if only quantitative or qualitative procedures alone were selected.

Triangulation of different sources of data was a major consideration in designing this study. A mixed-methods approach could provide triangulated data for the analyses, which would ultimately allow the investigation of the factors impacting Chinese visiting scholars' development of intercultural competence. Further, the use of triangulated methodologies and data analyses added validity and generalizability of the results.

Using a mixed-methods design, this study examined the perceptions of Chinese visiting scholars of the factors affecting their intercultural competence development during their sojourning abroad in the United States and the United Kingdom. Quantitatively, using generalizability (*G*-) theory (Cronbach, Gleser, Nanda, & Rajaratnam, 1972) as a theoretical framework, this study examined differences in the ratings of the factors affecting Chinese visiting scholars' development of intercultural competence during their sojourning abroad across sex (i.e., male and female), age (i.e., younger than 40 years old, 40-50 years old, and older than 50 years old), country of study (i.e., the United States and the United Kingdom), and length of study (i.e., 3-6 months, 7-12 months, and more than 12 months). Qualitatively, this study used ten semi-structured interviews (i.e., 5 interviews with Chinese visiting scholars studied in the United States and 5 interviews with Chinese visiting scholars studied in the United Kingdom) to gain Chinese visiting scholars' perceptions of the factors affecting their intercultural competence development during their sojourning abroad.

Specifically, the following five research questions guide this thesis study: a) Are there any significant differences (e.g., by sex, age, country of study, and length of study) in rating the impact of the factors on the Chinese visiting scholars' intercultural competence development? b) What are the sources of rating variation of the impact of the factors on Chinese visiting scholars' intercultural competence development? c) How does Chinese culture influence the Chinese visiting scholars' intercultural competence development during their sojourning abroad? d) How does the host country (i.e., the United States versus the United Kingdom) culture influence the Chinese visiting scholars' intercultural competence development during their sojourning abroad? and e) How does the study abroad experience influence their interpersonal communication after they have come back to China?

A number of factors are commonly identified to have an impact on individuals' intercultural competence development. However, the impact that these factors have can be evaluated differently by Chinese visiting scholars across sex, age, country of study, and length of study. Since the focus of this study was on Chinese visiting scholar perceptions of the factors affecting their intercultural competence development during their sojourning abroad, it was appropriate to use *G*-theory (Cronbach et al., 1972) as a theoretical framework.

The instrument used for quantitative data collection was a 40-item 10-point scale rating form (see Appendix C), which required the participants to rate the impact of these factors on their intercultural competence development during their sojourning abroad on a 1-10 point scale (1 = the least positively impacts intercultural competence

development, and 10 = the most positively impacts intercultural competence development). Instructions were provided on the rating form. In addition, the rating form also collected the participants' background information about their sex (i.e., male and female), age (i.e., younger than 40 years old, 40-50 years old, and older than 50 years old), country of study (i.e., the United States and the United Kingdom), and length of study (i.e., 3-6 months, 7-12 months, and more than 12 months).

Further, semi-structured interviews were conducted between the researcher and the ten participants who were purposefully selected (i.e., 5 Chinese visiting scholars studied in the United States and 5 Chinese visiting scholars studied in the United Kingdom) from the 85 participants for the quantitative component of the study. The purpose of these interviews was to examine more in-depth information about Chinese culture and the host country culture influence Chinese visiting scholars' intercultural competence development while studying abroad as well as how the study abroad experience influence their interpersonal communication after they have come back to China.

Computer programs SPSS and GENOVA were used for quantitative data analyses, which included both SPSS statistical analyses and *G*-theory analyses. The SPSS statistical analyses included descriptive statistical analysis and inferential statistical analysis such as independent samples *t*-tests and one-way ANOVAs. Specifically, The SPSS analyses included: a) demographic characteristics of the participants; b) reliability of the rating form of the 40 factors impacting Chinese visiting scholars' intercultural competence development; c) descriptive statistical

analysis (i.e., mean and standard deviation) for all 40 factors; d) independent samples *t*-tests for the comparison of the significant mean impact score differences for the demographic variable gender (i.e., male and female) and country of study (i.e., the United States and the United Kingdom), respectively; and e) one-way ANOVA analyses for independent variables of age (i.e., younger than 40 years old, 40-50 years old, and older than 50 years old) and length of study (i.e., 3-6 months, 7-12 months, and more than 12 months) were conducted to examine the significant group differences. For significant ANOVAs, Bonferroni *post hoc* multiple comparisons were performed to examine exact group differences.

The GENOVA analyses included: a) a factor-by-rater nested within gender (*f x r: g*) mixed effects *G*-study; b) two factor-by-rater random effects *G*-studies for male and female raters, respectively; c) a factor-by-rater nested within country of study (*f x r: c*) mixed effects *G*-study; d) two factor-by-rater random effects *G*-studies for the United Kingdom and the United States, respectively; e) a factor-by-rater nested within age (*f x r: a*) mixed effects *G*-study; f) three factor-by-rater random effects *G*-studies for younger than 40 years old, 40-50 years old, and older than 50 years old raters, respectively; g) a factor-by-rater nested within length of study (*f x r: l*) mixed effects *G*-study; and h) three factor-by-rater random effects *G*-studies for participants having 3-6 months, 7-12 months, and more than 12 months study overseas, respectively.

In addition, a coding and classifying approach (Gay &Airasian, 2012) was used for interview data analysis. Participants' responses relevant to research questions #3,

#4, and #5 were grouped together and subsequently categorized and analyzed according to the recurring themes.

Highlights of the Major Findings

First, the participants of this study rated the following as the top 15 factors most positively impacting their intercultural competence development: a) *self-confidence;* b) *foreign language skills or proficiency;* c) *open-mindedness;* d) *knowledge about the host country/culture;* e) *experiences with cultural difference;* f) *interaction confidence;* g) *time spent with international peers;* h) *curiosity about discovering the host country/culture;* i) *being non-judgemental;* j) *self-efficacy;* k) *living with a host family;* l) *family and institution support;* m) *social skills;* n) *interaction with peers from different cultures; and* o) *respect for the host country/culture*.

Second, the participants of this study rated the following as the top 15 factors least impacting their intercultural competence development: a) *financial difficulties,* b) *feeling lonely,* c) *feeling stressful,* d) *academic anxiety,* e) *ethnocentrism,* f) *previous traveling experience,* g) *prejudice,* h) *family international experience,* i) *pre-departure preparation,* j) *having studied language overseas,* k) *having accompanying spouses and children,* l) *stereotypes,* m) *first language,* n) *having prolonged negative experiences with international people,* and o) *previous experience abroad.*

Third, the independent samples *t*-tests results for the independent variable of sex indicate that male participants rated the following factors significantly higher than the female participants ($p < .05$): *interaction with peers from different cultures, interaction confidence, foreign language skills or proficiency, pre-departure*

preparation, first language, respect for the host country/culture, open-mindedness, experiences with cultural difference, self-efficacy, time spent with their international peers, social skills, training and orientation for overseas sojourners, guided reflection, previous travelling experience, family international experience, having the goal of gaining cultural understanding, past international experiences, family and institution support, tolerance of ambiguity, and self-esteem.

Further, the independent samples t-tests results for the independent variable of country of study indicate that participants who studied in the United Kingdom rated the following factors significantly higher than participants who studied in the United States ($p < .05$): *interaction confidence, time spent with international peers, training and orientation for overseas sojourners, having an international perspective, family and institution support, and tolerance of ambiguity*. However, participants who studied in the United States rated the following factors significantly higher than participants who studied in the United Kingdom ($p < .05$): ethnocentrism, having accompanying spouses and children, academic anxiety, and having studied language overseas.

Fourth, for the independent variable of age, the one-way ANOVAs results show that participants aged above 50 rated the following 19 factors significantly higher than participants aged below 40 ($p <.05$): *Cultural differences, foreign language skills or proficiency, respect for the host country/culture, open-mindedness, being non-judgmental, experiences with cultural difference, self-confidence, self-efficacy, time spent with their international peers, training and orientation for overseas*

sojourners, guided reflection, previous travelling experience, previous experience abroad, family international experience, having the goal of gaining cultural understanding, past international experiences, having an international perspective, tolerance of ambiguity, and self-esteem.

Further, participants aged above 50 also assigned significantly higher scores than participants aged between 40 and 50 (p <.05): *respect for the host country/culture, experiences with cultural difference, time spent with their international peers, guided reflection, previous travelling experience, family international experience, past international experiences, having an international perspective, tolerance of ambiguity, and self-esteem*.

Fifth, for the independent variable of length of study, the one-way ANOVAs results show that participants who studied abroad for over 12 months rated the following factors significantly higher than participants who studied abroad for 7-12 months (p <.05): *prejudice, knowledge about the host country/culture, having an international perspective, and self-esteem*. Further, participants who studied abroad for over 12 months rated the following factors significantly higher than participants who studied abroad for 3-6 months (p <.05): *financial difficulties, previous travelling experience, having an international perspective, and feeling lonely.*

Sixth, the comparison of the G-studies results indicate that the variable *sex* did generate fairly different results in terms of the sources of rating variation of the impact of the factors on Chinese visiting scholars' intercultural competence development. The variance component of rater was twice larger for male participants

than for female participants, indicating that male raters were twice more inconsistent than the female raters in rating these factors. Further, there were more unexplained variances in the female raters' ratings than the male raters' ratings. However, the *G*-coefficient obtained for male raters was .94, and the *G*-coefficient for the female raters was .93, suggesting that the male and female raters' ratings of the 40 factors in terms of their impact on the development of intercultural competence were similar.

Seventh, the comparison of the above G-studies results indicate that the variable *country of study* did generate some different results in terms of the sources of rating variation of the impact of the factors on Chinese visiting scholars' intercultural competence development. The object of measurement, factor, was almost twice larger for UK participants than for US participants. The object of measurement is desired variance, indicating all these 40 factors do have different impact on intercultural competence development. Further, the UK participants were more consistent than the US participants in rating these factors. Finally, there was more unexplained variance in the US participants' ratings than the UK participants' ratings. As a result, the *G*-coefficient obtained for the UK participants was .96, whereas the *G*-coefficient for the US participants was .91, suggesting that UK participants' ratings of the 40 factors were more reliable than those of the US participants.

Eighth, the comparison of the above G-studies results indicate that the variable *age* did generate very different results in terms of the sources of rating variation of the impact of the factors on Chinese visiting scholars' intercultural competence development. The object of measurement, factor, was the largest for participants aged

40-50 among all three age groups. Again, the object of measurement is desired variance, indicating all these 40 factors do have different impact on intercultural competence development. Further, participants aged 40-50 were more consistent than participants younger than 40 and over 50 years old. Finally, there was more unexplained variance in the younger than 40 participants' ratings than the other two age groups. As a result, the *G*-coefficients obtained for participants aged under 40, between 40 and 50, and above 50 were .78, .83, and .82, respectively, suggesting that the reliabilities of ratings of the 40 factors in terms of their impact on the development of Chinese visiting scholars' intercultural competence across three age groups were slightly different.

Ninth, the comparison of the above G-studies results indicate that the variable *length of study* did generate considerably different results in terms of the sources of rating variation of the impact of the factors on Chinese visiting scholars' intercultural competence development. The object of measurement, factor, was almost three times larger for raters having 3-6 months of study time than raters having 7-12 and over 12 months of study time. Again, the object of measurement is desired variance, indicating all these 40 factors do have different impact on intercultural competence development. Further, raters having 3-6 months of study time were over five times more consistent than raters having 7-12 and over 12 months of study time in rating these factors. Finally, there was less unexplained variance in raters having 3-6 months of study time than raters having 7-12 and over 12 months of study time. As a result, the *G*-coefficients obtained for raters having 3-6 months, 7-12 months, and over 12

months of study time were .85, .58, and .65, respectively, suggesting that raters having 3-6 months of study time rated the 40 factors considerably more reliably than raters having 7-12 and over 12 months of study time.

Tenth, the following 15 factors associated with Chinese culture positively affect Chinese visiting scholars' intercultural communication while studying abroad: *a) Perseverance; b) being friendly and nice; c) being helpful; d) being polite; e) being self-confident, f) being hard working; g) being easy to get along with other people; h) sharing Chinese culture with American and British people; j) being humble and eager to learn; k) being tolerant; l) developing strategies to cope with challenges; m) visiting local people and making friends; n) being proud of being a Chinese; o) showing mutual respect; p) keeping a positive attitude.*

Eleventh, that the following nine factors associated with Chinese culture negatively affect Chinese visiting scholars' intercultural communication while studying abroad: *a) Being nervous and anxious; b) being afraid of losing face; c) having poor English listening and speaking skills; d) being not active; e) being not direct; f) refusing help from strangers; g) having no religious beliefs; and h) being together with Chinese people.*

Twelfth, the following six factors associated with American and British cultures positively affect Chinese visiting scholars' intercultural communication while studying abroad: *a) Being friendly and helpful; b) being good at communication; c) being tolerant; d) being patient; e) being self-confident; and f) showing respect for and appreciation of Chinese culture*.

Thirteenth, the following four factors associated with American and British cultures negatively affect Chinese visiting scholars' intercultural communication while studying abroad: *a) Using colloquial and slang language; b) stereotyping, c) being religious; and d) culture shock*.

Finally, the overall impact of Chinese visiting scholars' study abroad experience on their interpersonal communication after they have come back to China can be both positive and negative. Further, the specific changes they have noticed in their interpersonal communication after they have come back to China include: a) Becoming a good listener; b) becoming more effective in communication; and c) becoming more strategic in communication.

Limitations of the Study

This study was limited in the following three ways. First, the 40 factors used in the study were all supported in the literature, indicating that their impacts on the development of intercultural competence can be either highly positive or highly negative. Therefore, there was little variance in terms of their impacts on the development of intercultural competence. This limitation might have limited the interpretation of the results.

Second, only 85 Chinese visiting scholars who studied in the United States and the United Kingdom were involved in this study. These 85 participants might be different from other Chinese visiting scholars who studied in these two countries and in other foreign countries. Therefore, the results might not be generalized to other

Chinese visiting scholars who studied in the United States and the United Kingdom as well as other foreign countries.

Finally, only ten Chinese visiting scholars were invited for the interviews. Focus group interviews with more Chinese visiting scholars might have provided different perspectives in terms of the impact of the factors on the development of Chinese visiting scholars' intercultural competence. Again, this limitation might also have limited the interpretation and generalizability of the results.

Conclusion

In light of the limitations, the following six conclusions were made. First, there were significant differences in the ratings of certain factors in terms of their impact on the development of intercultural competence as evaluated by the Chinese visiting scholars across sex, country of study, age, and length of study.

Second, the variable *sex* did generate fairly different results in terms of the sources of rating variation of the impact of the factors on Chinese visiting scholars' intercultural competence development. Male raters were twice more inconsistent than the female raters in rating these factors. Further, there was more unexplained variance in the female raters' ratings than the male raters' ratings. Further, the male and female raters' ratings of the 40 factors in terms of their impact on the development of intercultural competence were similar.

Third, the variable *country of study* did generate some different results in terms of the sources of rating variation of the impact of the factors on Chinese visiting scholars' intercultural competence development. The object of measurement was

almost twice larger for UK participants than for US participants. Further, the UK participants were more consistent than the US participants in rating these factors. Finally, there was more unexplained variance in the US participants' ratings than the UK participants' ratings. As a result, UK participants' ratings of the 40 factors were more reliable than those of the US participants.

Fourth, the variable *age* did generate very different results in terms of the sources of rating variation of the impact of the factors on Chinese visiting scholars' intercultural competence development. The object of measurement was the largest for participants aged 40-50 among all three age groups. Further, participants aged 40-50 were more consistent than participants younger than 40 and over 50 years old. Finally, there was more unexplained variance in the younger than 40 participants' ratings than the other two age groups. As a result, the reliabilities of ratings of the 40 factors in terms of their impact on the development of Chinese visiting scholars' intercultural competence across three age groups were slightly different.

Fifth, the variable *length of study* did generate considerably different results in terms of the sources of rating variation of the impact of the factors on Chinese visiting scholars' intercultural competence development. The object of measurement was almost three times larger for raters having 3-6 months of study time than raters having 7-12 and over 12 months of study time. Further, raters having 3-6 months of study time were over five times more consistent than raters having 7-12 and over 12 months of study time in rating these factors. Finally, there was less unexplained variance in raters having 3-6 months of study time than raters having 7-12 and over 12 months of

study time. As a result, raters having 3-6 months of study time rated the 40 factors considerably more reliably than raters having 7-12 and over 12 months of study time.

Sixth, Chinese culture affect Chinese visiting scholars' intercultural competence development both positively and negatively while they are studying abroad. Similarly, the host country culture (i.e., American culture and British culture) affect their intercultural competence development both positively and negatively as well. Therefore, Chinese visiting scholars need to be aware that both home culture (i.e., Chinese culture) and host country culture affect Chinese visiting scholars' intercultural competence development both positively and negatively.

Finally, Chinese visiting scholars' study abroad experience continues to impact their interpersonal communication both positively and negatively after they have come back to China. Positively, they have become more strategic and effective in interpersonal communications. Negatively, they are expected to experience reverse culture shock. Therefore, they need to develop specific strategies to deal with the unexpected reverse culture shock.

Important Educational Implications

This study was designed to examine Chinese visiting scholars' perceptions of the factors affecting their intercultural competence development during their sojourning abroad. The results can provide important educational implications for both Chinese visiting scholars and American and British professors and administrators.

First, it is important for Chinese visiting scholars to be aware of the factors

affecting their intercultural competence development positively as well as the factors affecting their intercultural competence development negatively before they study abroad. It is suggested that they make full preparation for their study abroad; for example, they need to make sure that their English proficiency is adequate for their study abroad; they also need to make sure they have a good understanding about the host country's culture.

Second, it is important for American and British professors to understand Chinese visiting scholars' educational and cultural backgrounds before they accept them as their visiting scholars. It is suggested that American and British professors provide their Chinese visiting scholars with specific assistance and mentoring so that they become interculturally competent and academically successful.

Lastly, it is important for American and British university administrators to understand Chinese visiting scholars' needs and expectations as soon as they have become visiting scholars on campus. It is suggested that American and British university administrators provide Chinese visiting scholars with all kinds of supports so that they become interculturally proficient and socially comfortable.

Directions for Future Research

This study provides two directions for future research in the area of intercultural competence development of Chinese visiting scholars sojourning abroad. First, future studies should expand this area of research to include large-scale data. This study involved only 85 Chinese visiting scholars who studied in the United States and the United Kingdom. Expanding the study to include more participants who studied in

other English speaking countries such as Canada, Australia, and New Zealand would improve the reliability, validity, and generalizability of the results.

Second, using structural equation modeling (*SEM*) future studies should further define the 'intercultural competence' construct and explore its causal relationships with all these factors and other variables. *SEM* is a type of statistical analysis that combines factor analysis and path analysis in order to examine the causal relationships that exist between multiple and complex variables (Schumacker & Lomax, 2010). *SEM* studies the relationship among latent constructs and stipulates causal relationships among multiple variables. The goal of *SEM* analysis is to determine which theoretical model is best supported by data.

A Final Personal Reflection

As I mentioned in Chapter 1, my educational background and professional experience had enabled me to choose this topic for my thesis. Through the entire research process of this thesis, I have understood the factors that affected the development of Chinese visiting scholars' intercultural competence as well as how they overcame the challenges they faced and finally became interculturally competent. I have learned a lot from this process. I become more aware of how the host culture and the Chinese culture had influenced my own intercultural competence development when I studied abroad. I understand that this thesis is only the start of my research career, I will continue to research on this topic as soon as I complete my doctoral study and try to make contributions to the research community.

REFERENCES

ADLER, Peter S. 1975. The transitional experience: An alternative view of culture shock. *Journal of Humanistic Psychology.* 15: 13-23.

ALLEN, D. E., & ARAFAT, I. S. 1971. Procreative family attitudes of American and foreign students. International Journal of Comparative Sociology, 12, 134-139.

ALRED, Geof & BYRAM, Mike. 2002. Becoming an intercultural mediator: A longitudinal study of residence abroad. *Journal of Multilingual and Multicultural Development.* 23/5: 339-352.

ALFRED, Geof; BYRAM, Mike; & FLEMING, Mike. 2003. *Intercultural experience and education.* Clevedon: Multilingual Matters Ltd.

ANGELL, R. C. 1969. *Peace on the march: Transnational participation.* New York: Van Nostrand Reinhold.

APPLEGATE, J. L., & SYPHER, H. E. 1988. Constructivist theory and intercultural communication research. In Y. Kim & W. Gudykunst (Eds.). Theoretical perspectives in intercultrual communication (pp. 41-65). Beverly Hills, CA: Sage.

ARASARATNAM, L. A., & DOERFEL, M. L. 2005. Intercultural communication competence: Identifying key components from multicultural perspectives. *International Journal of Intercultural Relations, 29,* 137-163.

BAÑOS, Ruth Vilá. 2006. Intercultural sensitivity of teenagers: A study of educational necessities in Catalonia. Intercultural Communication Studies XV(2), 16-22.

BARNETT, Ronald. 2007. *A will to learn: Being a student in an age of uncertainty.* Berkshire: Open University Press.

BECKER, T. 1971. Cultural patterns and nationalistic commitment among foreign students in the United States. *Sociology and Social Research, 55,* 467-481.

BENJAMIN, Lough. 2010. *Predictors of intercultural competence among international volunteers.* Unpublished Ph.D. dissertation submitted to Washington University in St. Louis.

BENNET, J. Milton. 2001. Developing intercultural competence for global leadership. In R. D., and C. Fußinger (Eds.), *Interkulturelles management: Konzeption – Beratung – Training* (pp. 205-226). Wiesbaden: Gabler.

BENNET, J. Milton. 2004. Becoming interculturally competent. In Wurzel, J. (Ed.). (2004). *Toward multiculturalism: A reader in multicultural education* (2nd ed., pp. 62-77). Newton,

MA: Intercultural Resource Corporation.

BENNET, J. Milton. 1993. Toward ethnorelativism: A developmental model of intercultural sensitivity. In R. M. Paige (Ed.), *Education for the intercultural experience* (pp. 21-71). Yarmouth, ME: Intercultural.

BENNET, J. Milton. 1986. A developmental approach to training for intercultural sensitivity. *International Journal of Intercultural Relations, 10*(2), 179-196.

BENNET, J. Milton, & BENNET, M. J. 2004. Developing intercultural sensitiveity: An integrative approach to global and domestic diversity. In D. Landis, J. Bennett, & M. Bennett (Eds.), *Handbook of intercultural training* (3rd ed., pp. 147-165). Thousand Oaks, CA: Sage.

BENNET, J. Milton, BENNET, M. J., & ALLEN, W. (2003). Developing intercultural competence in the language classroom. In D. L. Lange & R. M. Paige (Eds.), *Culture as the core: Perspectives on culture in second language learning.* Greenwich, CT: Information Age Publishing.

BERRY, John. 1997. Immigration, acculturation, and adaptation. *Applied Psychology: An International Review.* 46/1: 5-68.

BERRY, John W. 1990. Psychology of acculturation. In BRISLIN, Richard (ed.) *Applied Cross-cultural Psychology* (pp. 232-253). California: Sage publications.

BERRY, John W. & KIM, Uichol. 1988. Acculturation and mental health. In P. Dasen, J. W.

BOND, Sheryl; QIAN, Jun; & HUANG, Jinyan. 2003. The *role of the faculty in the Internationalization of the undergraduate curriculum and classroom experience*. Ottawa: Canadian Bureau for International Education.

BOURDIEU, Pierre and Lo ̈c J.D. WACQUANT. 1992. *An Invitation to Reflexive Sociology*. Chicago: The University of Chicago Press.

BOURDIEU, Pierre & PASSERON, Jean-Claude. 1990. *Reproduction in education, society and culture*. London: Sage Publications.

BOURDIEU, Pierre. 1986. The forms of capital. In J. G. Richardson (ed.), *Handbook of theory and research for the sociology of education* (pp. 241-258). Westport, CT: Greenwood Press.

BOUTON, F. Lawrence. 1994. Conversational implicature in the second language: Learned slowly when not deliberately taught. *Journal of Pragmatics, 22*: 157-167.

BRADFORD, Lisa; ALLEN, Mike; BEISSER, Kevin. 1998. An evaluation and meta-analysis of intercultural communication competence research. *Reports* (ED417 453).

BRENNAN, Robert. 2000. Performance assessments from perspective of generalizability theory. *Applied Psychological Measurement, 24*(4), 339-353.

BURNS, J. 1998. Beyond classical reliability: Using generalizability theory to assess dependability. *Research in Nursing and Health, 21,* 83-90.

BYRAM, Michael. 1997. *Teaching and assessing intercultural communicative competence.* Clevedon: Multilingual Matters Ltd.

BYRAM, Michael. 2000. Assessing intercultural competence in language teaching. *Sprogforum 18*(6): 8–13.

BYRAM, Michael & FENG, Anwei (eds). 2006. *Living and studying abroad: Research and practice.* Clevedon: Multilingual Matters Ltd.

BYRAM, M., A. NICHOLS, A., & STEVENS, D. 2001. Developing intercultural competence in practice. Clevedon: Multilingual Matters.

CASH, R. William. 1993. *Assessment of study-abroad programs using surveys of student participants.* AIR 1993 Annual Forum Paper.

CHAMBERLAIN, S., GUERRA, P., & GARCIA, S. 1999. Intercultural communication in the classroom. *Southwest Educational Development Lab*, 1-61.

CHANG, Yuh-Fang. 2009. How to say no: an analysis of cross-cultural difference and pragmatic transfer. *Language Science.* 31: 477-493.

CHAPDELAINE, Raquel F. & ALEXITCH, Louise R. 2004. Social skills difficulty: Model of culture shock for international graduate students. *Journal of College Student Development*. 44/2:167-184.

CHEN, C. P. 1999. Common stressors among international college students: Research and counseling implications. *Journal of College Conseling, 2,* 49-65.

CHEN, Guo-Ming & STAROSTA, William. 2000. *The development and validation of the intercultural communication sensitivity scale. Human Communications, 3, 1-15*.

CHEN, Guo-Ming & STAROSTA, William. 1998. *Foundations of intercultural communication*. Boston MA: Allyn & Bacon.

CHEN, Guo-Ming & STAROSTA, William. 1996. Intercultural communication competence: A synthesis. In B. Burleson (Ed.). Communication Yearbook, 19 (pp. 353-383). Thousand oaks,

Sage.

China Education Year Book. 2001. Beijing: People's Education Press.

China Education Year Book. 2002. Beijing: People's Education Press.

China Education Year Book. 2003. Beijing: People's Education Press.

China Education Year Book. 2004. Beijing: People's Education Press.

China Education Year Book. 2005. Beijing: People's Education Press.

China Education Year Book. 2006. Beijing: People's Education Press.

China Education Year Book. 2007. Beijing: People's Education Press.

China Education Year Book. 2008. Beijing: People's Education Press.

China National Bureau of Statistics. 2007. *China Statistical Yearbook*. Beijing: China Statistics Press.

China Scholarship Council. 2010. *CSC annual report 2010*. Beijing: China Scholarship Council.

China Scholarship Council. 1999. *CSC annual report 1999*. Beijing: China Scholarship Council.

China Scholarship Council. 2008. *CSC annual report 2008*. Beijing: China Scholarship Council.

CHITAKORNKIJSIL, P. 2010. Intercultural communication challenges and multinational organization communication. *International Journal Of Organizational Innovation, 3*(2), 6-20.

CHURCH, Austin T.1982. Sojourner adjustment. *Psychological Bulletin.* 91/3:540-572.

COELHO, G. V. 1962. Personal growth and educational development through working and studying abroad. *Journal of Social Issues, 18(1),* 55-67.

COLEMAN, James. 1995. The current state of knowledge concerning student residence abroad. In G. Parker and A. Rouxeville (eds) The Year Abroad: Preparation, Monitoring, Evaluation, Current Research and Development. London: AFSL/CiLT.

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches.* Thousand Oaks, CA: Sage Publications Inc.

CRICK, J. E., & BRENNAN, ROBERT. (1983). *GENOVA: A general purpose analysis of variance system. Version* 2.1. Iowa City, IA: American College Testing Program.

CRONBACH, J. Lee; GLESER, C. Goldine; NANDA, Harinder & RAJARATNAM, Nageswari. 1972. *The dependability of behavioural measurements.* New York: Wiley.

CUI, G., & AWA, N. E. 1992. Measuring intercultural effectiveness: An integrative approach. Intercultural Journal of Interculturl Relations, 16, 311-328.

DAVID, K. H. 1971. Culture shock and the development of selfawareness. *Journal of Contemporary Psychotherapy,*4,44-48.

DELIA, J. G. 1987. Interpersonal cognition, message goals, and organization of communication: recent constructivist research. In. D. L. Kincaid (Ed.), Communication theory: Eastern and western perspectives (pp. 255-273). San Diego, CA: Academic Press.

DEARDORFF, Darla. K. 2008. Intercultural competence: A definition, model, and implications for education abroad. In V. Savicki (Ed.), Developing intercultural competence and transformation: Theory, research, and application in international education (pp. 32-52). Sterling, VA: Stylus.

DING, Xiaohao; YUE, Changjun & SUN, Yuze. 2009. The influence of China's entry into the WTO on its education system. *European Journal of Education*, 44/1: 9-19.

DINGES, N. G., & BALDWIN, K. D. 1996. Intercultural competence: A research perspective. In D. Landis & R. S. Bhagat (Eds.), *Handbook of intercultural training* (pp. 106-123). Thousand Oaks, CA: Sage.

DIRKX, John M., MEZIROW, Jack & CRANTON, Patricia. 2006. Musings and reflections on the meaning, context, and process of transformative learning: a dialogue between John M. Dirkx and Jack Mezirow. *Journal of Transformative Education.* 4: 123-139.

DöRNYEI, Zoltán; DUROW, Valerie and ZAHRAN, Khawla. 2004. Individual differences and their effects on formulaic sequence acquisition. In SCHMITT, Norbert (Ed.) *Formulaic Sequences* (pp.87-106). Amsterdam: John Benjamins Publishing Company.

ELORBANY, Ramy & HUANG, Jinyan. 2012. Examining the impact of rater educational background on ESL writing assessment: A generalizability theory approach. *Language and Communication Quarterly, 1*(1), 2-24.

ELORZA, I. 2008. Promoting intercultural competence in the FL/SL classroom: Translations as sources of data. *Language and Intercultural Communication, 8*(4), 261-277. Retrieved from EBSCOhost.

ENNEW, Christine T. & YANG, Fujia. 2009. Foreign universities in China: a case study. *European Journal of Education.* 44/1: 21-36.

ERICHSEN, Elizabeth Anne. 2011. Learning for change: Transforming international experience as identity work. *Journal of Transformative Education*. 9: 109-133.

FANG, J. 2010. A study on pragmatic failure in cross-cultural communication. Online Submission, Retrieved from EBSCO host.

FANTINI, Alvino. 2006. Exploring and assessing intercultural competence. Retrieved May 1, 2007, from http://www.sit.edu/publications/docs/feil_research_report.pdf.

FENG, J. H. 1991. *The adaptation of students from the People's Republic of China to an American academic culture.* Retrieved from ERIC database.

FLACK, M. J. 1976. Results and effects of study abroad. *Annals of the American Academy of Political and Social Science, 424,* 107-117.

FRITZ, Wolfgang. 2001. Die interkulturelle Kompetenz von Managern – ein Schlüsselfaktor für den Erfolg auf Auslandsmärkten. In D. von Oelsnitz, & A. Kammel (Eds.), *Kompetenzen moderner Unternehmensführung: Joachim Hentze zum 60. Geburtstag* (pp. 87-101). Bern.: Haupt.

FRITZ, Wolfgang, GRAF, Andrea, HENTZE, Joachim, MÖLLENBERG, Antje, & CHEN, Guo-Ming. 2005. An examination of Chen and Starosta's model of intercultural sensitivity in Germany and United States. *Intercultural Communication Studies, XIV*(1), 53-65.

FRITZ, Wolfgang, MÖLLENBERG, Antje, & CHEN, Guo-Ming. 2002. Measuring intercultural sensitivity in different cultural contexts. *Intercultural Communication Studies, 11*(2), 165-176.

FRITZ, Wolfgang, MÖLLENBERG, Antje, & CHEN, Guo-Ming. 2003. Die interkulturelle Sensibilität als Anforderung an Entsandte – Bedeutung und Elemente für ein Meßmodell. In K. P. Wiedmann (Ed.), *Fundierung des Marketing* (pp. 231-258). Wiesbaden: Gabler.

GARCIA, Paula. 2004. Pragmatic comprehension of high and low level language learners. *TESL-EJ, 8,* Retrieved on March 28, 2010.

GARGANO, Terra. 2009. (Re)conceptualizing international student mobility: The potential of transnational social field. *Journal of Studies in International Education.* 13: 331-346.

GILL, Scherto. 2007. Overseas students' intercultural adaptation as intercultural learning: A transformative framework. *Compare*. 37: 167-183.

GRAF, A. 2004. Screening and training intercultural competencies: Evaluating the impact of national culture on intercultural competencies. *International Journal of Human Resource*

Management, *15*(6), 1124-1148.

GU, Qing. 2005. "Enjoy loneliness" – understanding Chinese learners' voices. *Humanising Language Teaching*. Year 7, Issue 6 (www.hltmag.co.uk).

GU, Qing. 2009. Maturity and interculturality: Chinese students' experiences in UK higher education. *European Journal of Education.* 44: 37-52.

GUDYKUNST, W. B. 1993. Toward a theory of effective interpersonal and intergroup communication: An anxiety/uncertainty management (AUM) perspective. In R. L. Wiseman, and J. Koester (Eds.), *Intercultural communication theory* (pp. 33-71). Newbury Park, CA: Sage.

GUDYKUNST, W. B. 1998. Applying the anxiety/uncertainty management (AUM) theory to intercultural adjustment training. *International Journal of Intercultural Relations*, *22*(2), 227-250.

GUDYKUNST, W. B., & KIM, Y. Y. (1997). *Communicating with strangers: An approach to intercultural communication*. Bostons: McGraw Hill.

GUNNLAUGSON, Olen. 2006. Shedding light on the underlying forms of transformative learning theory: Introducing three distinct categories of consciousness. *Journal of Transformative Education.* 5: 134-151.

HALPERN, David. 2004. *Social capital.* Cambridge: Polity.

HAMMER, M. R., BENNETT, M. J., & WISEMAN, R. 2003. Measuring intercultural sensitivity: The intercultural development inventory. *International Journal of Intercultural Relations*, *27*,421-443.

HAMZA, Aswan. 2010. International experience: An opportunity for professional development in higher education. *Journal of Studies in International Education.* 14: 50-69.

HAN, Yinyan. 2004. *Psychocultural factors affecting intercultural communication effectiveness*. Paper presented at the Fourth International Conference on ELT in China, Beijing, China.

HANNIGAN, T. P. 1990. Traits, attitudes, and skills that are related to intercultural effectiveness and their implications for cross-cultural training: A review of the literature. *International Journal of Intercultural Relations, 13*, 89-111.

HEGAZY, M. E. 1969. Cross-cultural experience and social change: The case of foreign study (Doctoral dissertation, University of Minnesota, 1968). *Dissertation Abstracts International*, 1969, *29*, 3679A. (University Microfilms No. 69-6, 853)

HELD, David & MCGREW, Anthony (eds.). 2003. *The global transformations reader: an introduction to the globalization debate*. Cambridge: Polity.

HIXSON, Millard Timothy. 2003. Understanding how adult educators become interculturally competence practitioners. Unpublished dissertation submitted to The University of Georgia, Athens, Georgia.

HOY, W. K. 2010. Quantitative Research in Education: A Primer. SAGE Publications, Inc.

HOFFMAN, David. 2009. Changing academic mobility patterns and international migration: What will academic mobility mean in the 21st century? *Journal of Studies in International Education*. 13: 347-364.

HU, Martin. 2009. *Chinese-Foreign Cooperative Education*. Paper presented at the OBHE Global Forum 2009, Malaysia.

HU, Xin. (2007). Intercultural miscommunication: Causes and factors from ideological perspective. *Sino-US English Teaching, 4*(6), 54-57.

HUANG, Jinyan. 2006. English abilities for academic listening: How confident are Chinese students? *College Student Journal, 40*(1), 218-226.

HUANG, Jinyan. 2005. Challenges of academic listening in English: Reports by Chinese students. *College Student Journal, 39*(3), 553-569.

HUANG, Jinyan. 2004. Voices from Chinese students: Professors' use of English affects academic listening. *College Student Journal, 38*(2), 212-223.

HUANG, Jinyan & KLINGER, Don. 2006. Chinese graduate students at North American universities: Learning challenges and coping strategies. *The Canadian and International Education Journal*. 35/2: 48-61.

HUANG, Jinyan. 2008. How accurate are ESL students' holistic writing scores on large-scale assessments? – A generalizability theory approach. *Assessing Writing, 13(3)*, 201-218.

HUANG, Jinyan & **RINALDO, Vince.** 2009. Factors affecting Chinese graduate students' cross-cultural learning at North American universities. *International Journal of Applied Educational Studies,* 4/1: 1-13.

HUANG, Jinyan & BROWN, Kathine. 2009. Cultural factors affecting Chinese ESL students' academic learning. *Education, 129*/4: 643-653.

HUANG, Jinyan. 2009. What happens when two cultures meet in the classroom? *Journal of Instructional Psychology, 36*/4: 335-342.

HUANG, Jinyan. & FOOTE, Chandra. 2010. Grading between the lines: What really impacts professors' holistic evaluation of ESL graduate student writing. *Language Assessment Quarterly, 7*(3), 219-233.

HUANG, Jinyan. & FOOTE, Chandra. 2011. Using generalizability theory to examine scoring reliability and variability of judging panels in skating competitions. *Journal of Quantitative Analysis in Sports, 7*(3), 1-21.

HUANG, Jinyan. 2011. Generalizability theory as evidence of concerns about fairness in large-scale ESL writing assessments. *TESOL Journal, 2*(4), 423-443.

HUANG, Jinyan. 2012. Using generalizability theory to examine the accuracy and validity of large-scale ESL writing. *Assessing Writing, 17*(3), 123-139.

HUANG, Jinyan. 2011. Are ESOL students really experiencing high levels of academic anxiety at North American universities? – Reports by Chinese graduate students. *International Journal of Business and Social Science, 14*(2), 35-41.

HUANG, Jinyan & TAVANO, Harlin. 2013. Developing ESOL students' intercultural communicative competence: Importance, challenges, and implications. *Language and Communication Quarterly, 2*/3: 164-174.

HUANG, Jinyan. 2013. *East meets west: Chinese ESL students in North American higher education*. Hauppauge: Nova Science Publishers, Inc.

HUANG, Jinyan; DOTTERWEICH, Erin; & BOWERS, Ashley. 2012. Intercultural miscommunication: Impact on ESOL students and implications for ESOL teachers. *Journal of Instructional Psychology.* 39/1: 36-40.

HUANG, Jinyan. 1998. *Students' learning disabilities in a second language speaking classroom.* Paper represented at the Annual Meeting of the American Educational Research Association, San Diego, CA.

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

IDI Manual. 2002. Qualifying Seminar for the Intercultural Development Inventory Manual for Training Session. Portland, Oregon: Intercultural Communication Institute.

ILLERIS, Knud. 2004. Transformative learning in the perspective of a comprehensive learning theory. *Journal of Transformative Education.* 2/2:79-89.

The Intercultural Development Inventory® (IDI®). 2014. Products. Available at http://idiinventory.com/products/

Internet World Stats. 2014. The world population and the top ten countries with the highest population. Retrieved July 9, 2014, from http://www.internetworldstats.com/stats8.htm

JENSEN, A. A., JAEGER, K. and LORENTSEN, A. (eds.). 1995. *Intercultural Competence: A New Challenge for Language Teachers and Trainers in Europe*. *Vol II: The Adult Learner*. Aalborg: Aalborg University Press.

KANG, Sun-Mee. 2006. Measurement of acculturation, scale format, and language competence – Their implication for adjustment. *Journal of Cross-Culture Psychology*. 37/6:669-693.

KAPPLER, Barbara, J. 1998. Refining intercultural perspective-taking. Unpublished doctoral dissertation, University of Minnesota, Minneapolis.

KEALEY, D. J., & RUBEN, B. D. 1983. Cross-cultural personnel selection: Criteria, issues and methods. In D. Landis & R. W. Brislin (Eds.), *Handbook of intercultural training*, Vol. 1 (pp. 155-175). New York: Pergamon.

KEEGWE, Jared. (2010). Fostering cross cultural competence in preservice teachers through multicultural education experiences. Early Childhood Education Journal, 38(3), 197-204.

KEGAN, Robert. 2000. What form transforms? In J. Mezirow & Associates, *Learning as transformation: Critical perspectives on a theory in progress* (pp. 35-69). San Francisco: Jossey-Bass.

KEHM, Barbara. 2005. The contribution of international student mobility to human development and global understanding. *US-China Education Review*. 2: 18-24.

KIM, Y. Y. 1995. Cross-cultural adaptation: An integrative theory. In R. L. Wiseman, and J. Koester (Eds.), *Intercultural communication theory* (pp. 170-193). Newbury Park, CA: Sage.

KIM, Y. Y. & GUDYKUNST, W. 1992. Communicating with strangers: An approach to intercultural communication. New York: McGraw-Hill, Inc.

KITCHENHAM, Andrew. 2008. The evolution of John Mezirow's transformative learning theory. *Journal of Transformative Education*. 6: 104-123.

KLINEBERG, O., HULL, W. F. 1979. *At a foreign university: An international study of adaptation and coping*. New York: Praeger.

KRAMER, Roderick & CARNEVALE, Peter. 2001. Trust and intergroup negotiation. In Brown, Rupert and Gaertner, Samuel Blackwell (Eds. Pp. 431-450) *Handbook of Social*

Psychology: Intergroup Processes. Oxford: Blackwell Publisher Inc.

LAROCHE, Miche; KIM, Chankon; HUI, Michael & TOMIUK, Marc, A. 1998. Test of nonlinear relationships between linguistic acculturation and ethnic identification. *Journal of Cross-Cultural Psychology.* 29/3: 418-433.

LAUBSCHER, Michael R. 1994. *Encounters with difference: Student perceptions of the role of out-of-class experiences in education abroad.* Westport, Conn.: Greenwood Press.

LEWIS, Coulter & HUANG, Jinyan. 2012. Motivators in the elementary classroom: A quantitative investigation of gender differences. *International Journal of Education and Culture, 1*(1), 2-29.

LIN, Grace; SU, Simon; & HO, Max. 2009. *Pragmatics and communicative competences*. In International Conference on TESOL & Translation Proceedings (pp. 54-60).

LIPPMAN, W. 1957. Public opinion. New York: Macmillan.

LIU, D. L. 1994. *Deep sociocultural transfer and its effect on second language speakers' communication.* Paper presented at the annual meeting of the Teachers of English to Speakers of Other Languages,Baltimore, MD.

LOUGH, Benjamin James. 2010. Predictors of intercultural competence among international volunteers. Unpublished doctoral dissertation. *Washington University in St. Louis.*

MARTELL, Luke. 2010. *The sociology of globalization.* Cambridge: Polity.

MARX, Helen. & MOSS, D. M. 2011. Please mind the culture gap: Intercultural development during a teacher education study abroad program. *Journal of Teacher Education, 62*(1), 35-47.

MATVEEV, A. V. 2002. The advantages of employing quantitative and qualitative methods in intercultural research: practical implications from the study of the perceptions of intercultural communication competence by American and Russian managers, *I.N. Rozina, Rostov-do-Don: Institute of Management, Business and Law Publishing,* 1, (168), 59-67.

MEGGITT, P. H. 1994. A comparative study of perceptions of overseas consulting 'effectiveness' – Australian providers and Asian and Pacific clients. *Studies in Consulting Education, 16,* 172-190.

MEZIROW, Jack. 1990. *Fostering critical reflection in adulthood: A guide to transformative and emancipatory learning.* San Francisco: Jossey-Bass.

MEZIROW, Jack. 1991. *Transformative dimensions of adult learning.* San Francisco:

Jossey-Bass.

MEZIROW, Jack. 1997. Transformative learning: Theory to practice. *New Directions for Adult Continuing Education.* 74: 5-12.

MEZIROW, Jack. 2000. *Learning as transformation: critical perspectives on a theory in progress.* San Francisco: Jossey-Bass.

MILSTEIN, Tema. 2005. Transformation abroad: Sojourning and the perceived enhancement of self-efficacy. International Journal of Intercultural Relations, 29, 217-238.

MINISTRY OF EDUCATION OF CHINA. 2014. The overall situation of studying abroad. Available at http://www.moe.gov.cn/publicfiles/business/htmlfiles/moe/s3917/201007/91574.html

MINISTRY OF FOREIGN AFFAIRS OF CHINA. 2014. The development and reform of Chinese higher education (from Chinese Consulate General in Perth). Available at http://www.
fmprc .gov.cn/mfa_eng/wjb_663304/zwjg_665342/zwbd_665378/t1138734.shtml

MISHLER, A. L. 1965. Personal contact in international exchanges. In H. C. Kelman (Ed.), *International behavior.* New York: Holt, Rinehart & Winston.

MONTGOMERY, Catherine & McDOWELL, Liz. 2009. Social networks and the international students experience: An international community of practice? *Journal of Studies in International Education.* 13/4: 455-466.

MORGAN, W. John & WU, Bin. 2011. Higher education reform in China: Beyond the Expansion. New York: Routledge Press.

MORGAN, W. John & LI, Fengliang. 2011. *Private higher education in China: Problems and possibilities.* In W. J. Morgan & B. Wu (Eds.). Higher education reform in China: Beyond the Expansion. New York: Routledge Press.

MORGAN, W. John. 2002. Globalisation, education & the need for roots. *Education Quarterly.* May/June: 10.

MŰLLER, S., & GELBRICH, K. 2001. Interkulturelle Kompetenz als neuartige Anforderung an Entsandte: Status quo und Perspektiven der Forschung. *Zeitschrift für betriebswirtschaftliche Forschung, 53*(5), 246-272.

MURPHY-LEJEUNE, E. 2003. An experience of interculturality: student travelers abroad, in: G. Alred, M. Byram & M. Fleming (Eds) *Intercultural Experience and Education* (101-113). Clevedon: Multilingual Matters Ltd.

NAGLES, B., WILLIAMS, N. 2013. Methodology brief: introduction to focus groups. *Center for Assessment Planning and Accountablity,* 1-12.

NGUYEN, Huong. H.; MESSÉ, Lawrence. A. & STOLLAK, Gary. E. 1999. Toward a more complex understanding of acculturation and adjustment: Cultural involvements and psychological functioning in Vietnamese youth. *Journal of Cross-Cultural Psychology*. 30/1: 5-31.

OBERG, K. 1960. Cultural shock: Adjustment to new cultural environments. *Practical Anthropology*. 7:177-182.

OLSHTAIN, Elite & COHEN, Andrew. 1990. The learning of complex speech act behavior. *TEST Canada Journal, 7*/2: 45-65.

PACE, C. R. 1959. *The junior year in France: An evaluation of the University of Delaware-Sweet Briar College Program.* Syracuse, N.Y.: Syracuse University Press.

PARMENTER, Lynne. 2003. Intercultural communicative competence. Teaching English Now, vol. 2. Available at http:// tb.sanseido.co.jp/english/newcrown/pdf/ten002/ten_02_10.pdf.

PLOTNIK, R. & MOLLENAUER, S. 1986. Introduction to psychology. New York: Random House.

POUTIATINE, Michael. 2009. What is transformation? Nine principles towards an understanding of the transformational process for transformational leadership. *Journal of Transformative Education.* 7: 189-207.

REDFIELD, Robert; LINTON, Ralf & HERSKOVITZ, Melville. 1936. Memorandum for the study of acculturation. *American Anthropologist*. 38/1:149-152.

REDMOND, V. Mark. 2000. Cultural distance as a mediating factor between stress and intercultural communication competence. *International Journal of Intercultural Relations*, 24: 151-159.

REDMOND, V. Mark, & BUNYI, J. M. 1993. The relationship of intercultural communication competence with stress and the handling of stress as reported by international students. *International Journal of Intercultural Relations, 17*, 235-254.

RISAGER, K. 2007. *Language and culture pedagogy: From a national to a transnational paradigm.* Buffalo, NY: Multilingual Matters.

ROBERTS, Celia; BYRAM, Michael; BARRO, Ano; JORDAN, Shirley & STREET, Brian. 2001. *Language learners as ethnographers.* Clevedon: Multilingual Matters Ltd.

ROBINSON, Phyllis. 2004. Meditation: Its role in transformative learning and in the fostering of an integrative vision for higher education. Journal of Transformative Education, 2(2), 107-119.

ROH, Seak-Zoon. 2014. A study on the factors affecting the intercultural sensitivity of middle and high school students in Koreqa. *Advanced Science and Technology Letters*. 47: 266-269.

RUBEN, B. D. 1976. Assessing communication competency for intercultural adaptation. *Group and Organization Studies, 1*, 334-354.

RUBEN, B. D., & KEALEY, D. 1979. Behavioral assessment of communication competency and the prediction of cross-cultural adaptation. *International Journal of Intercultural Relations, 3*, 15-48.

SAMOVAR, L. A., PORTER, R. E., & STEFANI, L. A. 1998. Communication between cultures. Belmont, CA: Wadsworth Publishing Company.

SAMPSON, D. L., & SMITH, H. P. 1957. A scale to measure world-minded attitudes. *Journal of Social Psychology, 45*. 99-106.

SANDERSON, G. 2008. A foundation for the internationalization of the academic self. *Journal of Studies in International Education*. 12: 276-307.

SCHILLER, N. G. 2005. Transnational social field and imperialism. *Anthropological Theory*. 5: 439-461.

SCHILLER, N. G. 2006. *Haven't we heard this somewhere before? A substantive view of transnational migration studies by way of a reply to Waldinger and Fitzgerald*. Princeton: Princeton University Press.

SCHUMACKER, R. E. & LOMAX, R. G. (2010). A beginner's guide to structural equation modelling (3rd ed.). New York, NY: Routledge.

SCHUMANN, John. 1986. Research on the acculturation model for second language acquisition. *Journal of Multilingual and Multicultural Development*. 7/5: 379-392.

SCOTT, John & MARSHALL, Gordon (eds.). 1998. *A Dictionary of Sociology*. Oxford: Oxford University Press.

SERCU, Lies. 2006. The foreign language and intercultural competence teacher: The acquisition of a new professional identity. *Intercultural Education, 17*/1: 55-72.

SHAHEEN, Stephanie. 2004. *The effect of pre-departure preparation on student intercultural development during study abroad programs*. Unpublished Ph.D. dissertation submitted to the Ohio State University.

SHAN, Hongxia & GUO, Shibao. 2014. Massification of Chinese higher education: Opportunities and challenges in a globalizing context. In Nichael Kariwo, Tatiana Gounko & Musembi Nungu (Eds.). A comparative analysis of higher education system: Issues, challenges and Dilemmas (pp. 9-23). Sense Publishers, Boston.

SHAVELSON, J. Richard & WEBB, M. Noreen. 1991. *Generalizability theory: A primer*. Newbury Park, CA: Sage.

SHAVELSON, J. Richard, WEBB, M. Noreen & ROWLEY, L. 1989. Generalizability theory. *American Psychologist, 44*(6), 922-932.

SHERRY, M., THOMAS, P., & CHUI W., H. 2010. International students: A vulnerable student population. Higher Education. 60, 33-46.

SINICROPE, Castle; NORRIS, John; & WATANABE, Yukiko. 2007. Understanding and assessing intercultural competence: A summary of theory, research, and practice. *Second Language Studies, 26*(1). http://www.hawaii.edu/sls/uhwpesl/26(1)/Norris.pdf

SMITH, H. P. 1955. Do intercultural experiences affect attitudes? *Journal of Abnormal and Social Psychology,* 57, 469-477.

SPITZBERG, B. H. 2000. A Model of intercultural communication competence. In L. Samovar & R. Porter (Eds.), *Intercultural communication: A reader* (pp. 375-387). Belmont, CA: Wadsworth.

STEGLITZ, I. E. 1993. *Intercultural perspective-taking: The impact of study abroad.* Unpublished doctoral dissertation, The University of Minnesota, Minneapolis.

STEPHAN, W., & ROSENFIELD, D. 1982. Racial and ethic stereotyping. In A. Millar (Ed.). Intergroup behaviour. Chicago: University of Chicago Press.

SUN, W., & CHEN, G. M. 1997. *Dimensions of difficulties Mainland Chinese students encounter in the United States.* Paper presented at eh 6th International Conference in Cross-Cultural Communication, Tempe, AZ.

SUN, Fengshou., & BARRIENTOS, Armando. (2009). The equity challenge in China's higher education finance policy. *Higher education Policy, 22*, 191–207.

TANCK, Sharyl. 2002. Speech act sets of refusal and complaint: A comparison of native and non-native English speakers' production. *TESOL Working Papers*, 4/2: 1-22.

TARIQUE, Ibraiz & CALIGIURI, Paula. 2009. The role of cross-cultural absorptive capacity in the effectiveness of in-country cross-cultural training. *International Journal of Training and Development.* 13/3: 148-164.

TAYLOR, Edward W. 2000. Analyzing research on transformative learning theory. In J. Mezirow & Associates (Eds.), *Learning as transformation* (pp. 285-328). San Francisco, CA: Jossey- Bass.

TAYLOR, Edward W. 2005. Making meaning of the varied and contested perspectives of transformative learning theory. In *Proceedings of the Sixth International Conference of Transformative Learning* (pp. 459-464). East lansing: Michigan State University.

TEICHLER, Ulrich & JANSON, Kerstin. 2007. The professional value of temporary study in another European country: employment and work of former ERASMUS students. *Journal of Studies in International Education.* 11/3: 486-495.

TING-TOOMEY, S. 1999. *Communicating across cultures.* New York: Guilford.

TING-TOOMEY, S. 1993. Communicative resourcefulness: An identity negotiation perspective. In R. L. Wiseman, and J. Koester (Eds.), *Intercultural communication theory* (pp. 72-111). Newbury Park, CA: Sage.

TRIANDIS, H. C. 1975. Culture training, cognitive complexity, and interpersonal attitudes. In R. Brislin, S. Bochner, & W. J. Lonner (Eds.), *Cross-cultural perspectives on learning.* New York: Wiley.

TROW, Martin. (1974). Problems in the transition from Elite to Mass Higher education. In *Policies for higher education - general report to the conference on the future structure of Post-secondary education* (pp. 51–101). Paris: OECD.

United Nations of Educational, Scientific and Cultural Organization. 2004. *Higher education in a globalized society: UNESCO education position paper.* Internet: http://www.unesco.org/education/higher_education/quality_innovation. (ED-2004/ WS/33)

United Nations of Educational, Scientific and Cultural Organization. 2004. *Higher education in a globalized society: UNESCO education position paper.* Retrieved on 5 June 2009. http://www.unesco.org/education/higher_education/quality_innovation

UPTON, T. A. 1989. Chinese students, American universities, and cultural confrontation. *MinneTESOL Journal, 7,* 9-28.

USEEM, J., & USEEM, R. 1955. *The Western educated man in India.* New York: Holt, Rinehart & Winston.

VOGT, K. 2006. Can you measure attitudinal factors in intercultural communication? Tracing the development of attitude in e-mail projects. *ReCALL, 18*(2), 153-173.

WARD, Colleen; BOCHNER, Stephen & FURNHAM, Adrian. 2001. *The Psychology of Culture Shock* (2nd edition). East Sussex: Routledge.

WARD, Colleen & KENNEDY, Antony. 1993. Where's the culture in cross-cultural transition? Comparative studies of sojourner adjustment. *Journal of Cross-cultural Psychology.* 24: 221-249.

WARD, Colleen & KENNEDY, Antony. 1994. Acculturation strategies, psychological adjustment and sociocultural competence during cross-cultural transitions. *International Journal of Intercultural Relations.* 18: 329-343.

WARD, Colleen & RANA-DEUBA, Arzu. 1999. Acculturation and adaptation revisited. *Journal of Cross-Culture Psychology*. 30/4:422-442.

WARD, Colleen & SEARLE, Wendy. 1991. The impact of value discrepancies and cultural identity on psychological and sociocultural adjustment of sojourners. *International Journal of Intercultural Relations.* 15: 209-225.

WATSON, J., & LIPPITT, R. 1955. *Learning across cultures: A study of Germans visiting America.* Ann Arbor: University of Michigan Press.

WILLIAUME, L. David. 2009. *Factors and processes of perspective transformation contributing to intercultural competence: host culture and newcomer perspectives.* Unpublished Ph.D. dissertation submitted to Trinity International University.

WU, Ellery K. Y. & MAK, Winnie W. S. 2012. Acculturation process and distress: Mediating roles of sociocultural adaptation and acculturative stress. *The Counseling Psychologist.* 40/1: 66-92.

YATES, E.L. 2002. The challenge of teaching for change. *New Directions for Adult and Continuing Education.* 109: 91-95.

YUAN, D. Z. 1982. *Chinese scientists' difficulties in comprehending English science lectures*. Master's thesis, University of California at Los Angles, Los Angles.

ZHONG, M. 1996. *Chinese students and scholars in the U.S.: An intercultural adaptation process.* Paper presented at the 82nd Annual Meeting of the Speech Communication Association, San Diego, CA.

ZHOU, Yuefang & TODMAN, John. 2009. Patterns of adaptation of Chinese postgraduate

students in the United Kingdom. *Journal of Studies in International Education.* 13/4:467-486.

Appendix A

Letter of Information
For
Intercultural Competence Development:
The Perceptions of Chinese Visiting Scholars Sojourning Abroad

Dear participant:

The project "Intercultural Competence Development: The Perceptions of Chinese Visiting Scholars Sojourning Abroad" led by Ling Zhang, a doctoral candidate at the School of Education, the University of Nottingham, is inviting you, as a Chinese visiting scholar who studied abroad in the United States and/or in the United Kingdom, to participate in this study.

The purpose of this study is to examine Chinese visiting scholars' perceptions of the factors affecting their intercultural competence development during their sojourning in the United States and/or in the United Kingdom. You are invited to complete a 40-item rating form to rate the impact of 40 factors on your intercultural competence development during your sojourning abroad. It will take you approximately 10 – 15 minutes to complete the rating form. Further, you may be randomly selected to participate in a 30-minute semi-structured interview with the researcher.

Your participation is entirely voluntary. You are not obliged to answer any questions you find objectionable or uncomfortable. You are free to withdraw from the study without reasons at any point, and you may request removal of your data. No name is required for the rating form. All data will be secured and confidentiality is absolutely guaranteed. Access to the data is restricted only to the researcher and her supervisor. There are no known or foreseeable risks to participating in this study.

This study may result in publications of various types (e.g., conference presentations, journal articles, professional publications, newsletters, or books). Only group data are reported. In this way, your personal information will not be attached to any form of the data that you provide. A copy of a report from this study will be made available to you upon request.

If you have questions, please feel free to contact Ling Zhang, Principal Investigator of this study at +8613607451135, or her supervisor Prof. John Morgan at +44 (0)115 9513717, or her ethics coordinator Prof. Roger Murphy at School of Education, the University of Nottingham.

Appendix B

Consent Form for
Intercultural Competence Development:
The Perceptions of Chinese Visiting Scholars Sojourning Abroad

I agree to participate in the study "Intercultural Competence Development: The Perceptions of Chinese Visiting Scholars Sojourning Abroad".

I have read, understood, and retained a copy of the Letter of Information concerning "Intercultural Competence Development: The Perceptions of Chinese Visiting Scholars Sojourning Abroad" and the purpose of the study is explained to my satisfaction. All my questions regarding the project have been sufficiently answered. I am aware of the purposes and data collection procedures in this study.

I have been notified that my participation in this study is entirely voluntary and that I may withdraw at any point during the study without any consequences to myself and my study at the university. I understand that I can choose not to answer any questions that I find objectionable or uncomfortable. I have been told that no name is required on the rating form so as to ensure confidentiality of all information. I have also been provided with the appropriate contact information in case of questions, concerns, or complaints about participation in this study.

Participant's Name:
_____

Signature:
_____

Date: _____

Please write your e-mail or postal address at the bottom of this sheet if you wish to receive a copy of the results of the study.

_____

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Appendix C

Rating Form of Factors Impacting Chinese Visiting Scholars' Intercultural Competence Development

Instructions for Participants

1. Please first choose your answers to the demographic information questions.

2. Please rate the impact of each factor on your intercultural competence development while studying abroad. The higher the number you choose in the box means the MORE this factor positively impacts your intercultural competence development. The lower the number you choose in the box means the LESS this factor impacts your intercultural competence development.

Demographic Information Questions

Your Gender	Male [ ]	Female [ ]
Country of Study	United Kingdom [ ]	United States [ ]
Age	< 30 [ ]	30-40 [ ]
	40-50 [ ]	> 50 [ ]
Length of Study	< 3 months [ ]	3-6 months [ ]
	7-12 months [ ]	> 12 months [ ]

Factor(s)	Impact on your intercultural competence development									
	1	2	3	4	5	6	7	8	9	10
interaction with peers from different cultures										
cultural differences										
culture shock										
interaction confidence										
foreign language skills or proficiency										
pre-departure preparation										
first language										
stereotypes										
prejudice										
ethnocentrism										
respect for the host country/culture										
open-mindedness										
being non-judgemental										
curiosity about discovering the host country/culture										
knowledge about the host country/culture										
experiences with cultural difference										
self-confidence										
having prolonged negative experiences with international people										
self-efficacy										
time spent with their international peers										
social skills										
training and orientation for overseas sojourners										
guided reflection										
financial difficulties										
previous travelling experience										
growing up in a multicultural home										
having accompanying spouses and children										
academic anxiety										
previous experience abroad										
family international experience										
having the goal of gaining cultural understanding										
past international experiences										
having studied language overseas										
living with a host family										
having an international perspective										
family and institution support										
tolerance of ambiguity										
feeling lonely										
self-esteem										
feeling stressful										

Appendix D

Interview Questions

1. Demographic Information Questions

Your Gender	Male [ ]	Female [ ]	
Country of Study	United Kingdom [ ]	United States [ ]	
Age	< 40 [ ]	40-50 [ ]	> 50 [ ]
Length of Study	3-6 months [ ]	7-12 months [ ]	>12 months [ ]

2. When did you start to study in the United States/United Kingdom as a visiting scholar?

3. When did you finish your study in the United States/United Kingdom as a visiting scholar?

4. What was your major task during your study abroad in the United States/United Kingdom?

5. How did Chinese culture positively affect your intercultural competence development during your study abroad in the United States/United Kingdom?

6. How did Chinese culture negatively affect your intercultural competence development during your study abroad in the United States/United Kingdom?

7. How did the American culture/British culture positively affect your intercultural competence development during your study abroad in the United States/United Kingdom?

8. How did the American culture/British culture negatively affect your intercultural competence development during your study abroad in the United States/United Kingdom?

9. What is the overall impact of your study abroad experience on your interpersonal communication after you have come back to China?

10. What specific changes have you noticed in your interpersonal communication after you have come back to China?

Appendix E

G-theory Analysis Control Cards

A factor-by-rater nested within gender mixed effects *G*-study

```
GSTUDY          ZHANG - MIXED MODEL - F X R : G DESIGN
COMMENT
COMMENT          G IS FIXED, R IS RANDOM
COMMENT          # RECORDS = 40 X 2
COMMENT          # VALUES PER RECORD = 41
COMMENT
OPTIONS         RECORDS ALL CORRELATION
EFFECT          * F      40 0
EFFECT          + G      02 0
EFFECT          + R:G 41 0
FORMAT           (41F2.0)
PROCESS
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FINISH

A factor-by-rater random effect *G*-study for male raters

```
GSTUDY          ZHANG - RANDOM MODEL - F X R DESIGN
COMMENT
COMMENT           # RECORDS = 40
COMMENT           # VALUES PER RECORD = 41
COMMENT
OPTIONS         RECORDS ALL CORRELATION
EFFECT          * F 40 0
EFFECT          + R 41 0
FORMAT          (41F2.0)
PROCESS
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DSTUDY ZHA NG F X R DESIGN
DEFFECT $ F
DEFFECT R 39 40 41
ENDDSTUDY
FINISH

A factor-by-rater random effect *G*-study for female raters

```
GSTUDY          ZHANG - RANDOM MODEL - F X R DESIGN
COMMENT
COMMENT          # RECORDS = 40
COMMENT          # VALUES PER RECORD = 41
COMMENT
OPTIONS         RECORDS ALL CORRELATION
EFFECT          * F 40 0
EFFECT          + R 41 0
FORMAT           (41F2.0)
PROCESS
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DSTUDY ZHA NG F X R DESIGN
DEFFECT $ F

A factor-by-rater nested within country of study mixed effects *G*-study

```
GSTUDY          ZHANG - MIXED MODEL - F X R : C DESIGN
COMMENT
COMMENT          C IS FIXED, R IS RANDOM
COMMENT          # RECORDS = 40 X 2
COMMENT          # VALUES PER RECORD = 36
COMMENT
OPTIONS         RECORDS ALL CORRELATION
EFFECT          * F      40 0
EFFECT          + C      02 0
EFFECT          + R:C 36 0
FORMAT          (36F2.0)
PROCESS
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070605060505070706060506050606050404040501030203030205060710080506070305
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070706080607080607080708040404050506040508070506060504040510090407081005
090607060506080708070907060708070807080708070807060708081010080810040307
080808070808070708080707030706070605060707080607060603070508090307081007
060506070606070807060708090706060708080708080808060706071009060810050107
080706070806060708070706030403050607060707080709070702080609080205061008
080404030405060706070607080708070607080706050405040504060709080907080308
100909080910070910080709040504050605040405060606050408071008040808100 6
080807080709060506070506070508090809070807080505060504051010080910090708
070807080706080607080707030306040607060706070807070803050810080306070708
```

030706070506070607080607070807070608090807080706070607071010030910040407
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030505050404070506060606060607070807060607060605060504030502080306020403 04
060504050705060504070705060604070504060504060605050406070908080604050104
050405060405070506060706070608070806070708090708060708071008050910030606
090807080808050809080808040506080504070506050606070601060907080105070706
090607080609050606070807080907060708090607080707070809081010090910070207
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050506060606050505050505060706060705060506050406050505060808050909010207
070607060706060505060706040504040504040305050505060205090609020507050 5
040302030201050304020302030203030202020403020302030202010110040501010703
050504030403050403030405010102020201030201020102030401070908090104040306
020405040304030403050606050607050505050505050403040306051009020910010305
050605060605070506070605020304040304030202040302040302050907080205050706
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050504050405080504040304070506070605060504060506060507060904090706010105
030403040304050607060706070608070809030405060104030201030106030501010107
050605050605060605060506080809070706080901020304060808050909090807010405
030304050403040203030203030306030403040304030201020101020108030801010905
080705070605070708080605040404040504040502020202030103060908080307060505
030506050505040504040404040505050505050304050606050605060710030907010307
070707060707050707060807040605050908060704030404050404050808080404010104
040405050505040506050504050405060505040403040404050404050710040907010105
050605050405070506070405050605060504030405040404050402060708070205050103
060606060606050504040404030407080708060707070505060506071008060910030706
060605060605060605050506030404040808080704040404040403070708080306080505
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050605060606050506050505040404050807080701030307040504050608080406020103
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060708090706080607080906050602030405060506050504060506050110060901090903
100909100908080910090909020506070706060708060708070702070808070206010105
050607080607080608070607080504060405040404050506060706071009050910091007
040404050404060405050405040405050605050605060506060704080708080406071004
050708070607060605050506060607080707070706090607080907081009050510100308
060606060506070607060706030404040506060507070606060503070506090307050809
070504050605050506050607080707060708070806070606070607081009070910030406
030504050504080505050505040405050505050404040505050602060506090205070905

090404030403040203030302030203020305040505040101010102010308080803010203
070404030304060504050405030303030203030201010101010103070408070307060308
050506050604050504050504050405050405040506080706070807081009050810010705
040506050605060505050504050405040405050403040504040504080410090407100503
070304030304030403020304050304050404030304040504050304030108070801010304
070304040304050505060506030405030102010102020203020103060608080305080405
FINISH

A factor-by-rater random effect *G*-study for the United Kingdom

```
GSTUDY          ZHANG - RANDOM MODEL - F X R DESIGN
COMMENT
COMMENT           # RECORDS = 40
COMMENT           # VALUES PER RECORD = 36
COMMENT
OPTIONS         RECORDS ALL CORRELATION
EFFECT          * F 40 0
EFFECT          + R 36 0
FORMAT          (36F2.0)
PROCESS
050405040403070807080708070705060506050605091008090708090810050908080603
050304050404060606070706070707070807060707050607060806070905090709070607
030303030403050506050505040508070706070808060506070605050110030601010405
090708090908060607080807070806070607080607070908080708081009090910010908
070607080807070807080606070709070809080908090808070707081009071010010406
040403040305060607080405040603050405060504050506050506050407040904010308
080405040505060504050605040507050404050405060405040504050407080904020710
050605070805040605030405060506050405050505040406050504050209050902030607
050504040504040405040504050407040504050405040505040504050107050901090104
050504060504050102030404050506040504040403040302030304020108050901070208
070506040506070506050405060506070406050605040906070505060909060909080309
090607060506080708070907060708070807080708070807060708081010080810040307
060506070606070807060708090706060708080708080808060706071009060810050107
080404030405060706070607080708070607080706050405040504060709080907080308
080807080709060506070506070508090809070807080505060504051010080910090708
030706070506070607080607070807070608090807080706070607071010030910040407
060708090908040405060708060708070607060809050607080906071010060910050809
030505050404070506060606060707080706060706060506050403050208030602040304
050405060405070506060706070607080708060707080907080607080710080509100306 06
090607080609050606070807080907060708090607080707070809081010090910070207
070506050405050605070505050608080909090908090405030605051008070910010409
050304050405050405040505050609060809080908090708090809080709050908020708
050506060606050505050505060706060705060506050406050505060808050909010207
040302030201050304020302030203030202020403020302030202010110040501010703
020405040304030403050606050607050505050505050403040306051009020910010305
080605070805040604040404060506050505050505050605050505050410080909010704
030403040304050607060706070608070809030405060104030201030106030501010107
030304050403040203030203030306030403040304030201020101020108030801010905
030506050505040504040404040505050505050304050606050605060710030907010307
040405050505040506050504050405060505040403040404050404050710040907010105
060606060606050504040404030407080708060707070505060506071008060910030706
050504050505040506060606070503050605050505060604050606071008050910010507
070504040404040506050605040503050405040504050404040505040110040901010204
```

0607080907060806070809060506020304050605060505040605060501100609010909030506070806070806080706070805040604050404040505060607060710090509100910070507080706070606050505060606070807070707060906070809070810090505101003080705040506050505060506070807070607080708060706060706070810090709100304060904040304030403040203030302030203020305040505040101010102010308080803010203050506050604050504050405040504050405040506080706070807081009050810010705070304030304030403020304050304050404030304040504050304030108070801010304
DSTUDY ZHA NG F X R DESIGN
DEFFECT $ F
DEFFECT R 34 35 36
ENDDSTUDY
FINISH

A factor-by-rater random effect *G*-study for the United States

```
GSTUDY          ZHANG - RANDOM MODEL - F X R DESIGN
COMMENT
COMMENT           # RECORDS = 40
COMMENT           # VALUES PER RECORD = 36
COMMENT
OPTIONS         RECORDS ALL CORRELATION
EFFECT          * F 40 0
EFFECT          + R 36 0
FORMAT          (36F2.0)
PROCESS
050605040706070506050506010405060506060610090909090801050805090108050204
050607060706080607060706040405030304050609060405050604080807090407070608
080708070808050707080808070306050504040310070404050407040907080705080106
080708080707060807080708010306050506050508050506060501050706080106060406
091009080909070908100708020508090708070710080909080802040708080209060805
030203020304050302030403040506050505060506050405070601070808080105080107
050304030203050403040405060505050403040503050405060506080909080607070406
050405050405050403050405090505060505060505060506060509050908090907020105
070605050405060605070607050604040403050405040404040510040709091006030303
070605060505070706060506050606050404040501030203030205060710080506070305
070706080607080607080708040404050506040508070506060504040510090407081005
080808070808070708080707030706070605060707080607060603070508090307081007
080706070806060708070706030403050607060707080709070702080609080205061008
100909080910070910080709040504050606050404050606060504080710080408081006
070807080706080607080707030306040607060706070807070803050810080306070708
080807080807080808090706070706080405070705060607050603070708090305070608
101009090809071009081007090809080809090807050607070801060809080105080706
060504050705060504070705060604070504060504060605050406070908080604050104
090807080808050809080808040506080504070506050606070601060907080105070706
060605050506070605070605040506040705080607070809080701060807090106040704
060504060504060504060504060504050506070809080908070801070809080106070907
060706050607070506060506050406050504060505040506050403070806080305050105
070607060706060505060706040504040405040403050505050602050906090205070505
050504030403050403030405010102020201030201020102030401070908090104040306
050605060605070506070605020304040304030202040302040302050907080205050706
050504050405080504040304070506070605060504060506060507060904090706010105
050605050605060605060506080809070706080901020304060808050909090807010405
080705070605070708080605040404040504040502020202030103060908080307060505
070707060707050707060807040605050908060704030404050404050808080404010104
050605050405070506070405050605060504030405040404050402060708070205050103
060605060605060605050506030404040808080704040404040403070708080306080505
050605060606050506050505040404050807080701030307040504050608080406020103
```

0505040505050705060504060605050506070305060605050506060707080906070501061009091009080809100909090205060707060607080607080707020708080702060101050404040504040604050504050404050506050506050606050606070408070808040607100406060606050607060706070603040404050606050707060606050307050609030700508090305040505040805050505050404050505050504040405050506020605060902050709050704040303040605040504050303030302030302010101010101030704080703070603080405060506050605050504050405040405050403040504040504080410090407100503070304040304050505060506030405030102010102020203020103060608080305080405DSTUDY ZHA NG F X R DESIGN
DEFFECT $ F
DEFFECT R 34 35 36
ENDDSTUDY
FINISH

A factor-by-rater nested within age mixed effects *G*-study

```
GSTUDY          ZHANG - MIXED MODEL - F X R : A DESIGN
COMMENT
COMMENT          A IS FIXED, R IS RANDOM
COMMENT          # RECORDS = 40 X 3
COMMENT          # VALUES PER RECORD = 09
COMMENT
OPTIONS         RECORDS ALL CORRELATION
EFFECT          * F      40 0
EFFECT          + A      03 0
EFFECT          + R:A 09 0
FORMAT          (09F2.0)
PROCESS
050504060609100904
050306080706050510
060708080810090803
050504030406050603
040405050707070810
060806080709090706
080303050407050503
030304040508080401
080504050110060105
080903070605090806
080805070806070510
070605081009091008
090705070808080805
070707080709080406
090708071009101006
030405050505050505
030506060605040710
040506060407090408
050805040305040505
050504050504050808
030505040407090410
050505050506040506
050506050505050503
050505040209090207
070506050304050502
040405050404050401
050605040107090104
070506050403030203
040404040504030603
050702040108090108
```

070704050607090608
060604050506050408
070805050909090909
080907050508080808
070606080707080710
080706081010081007
080604040708080708
060606070707080802
060607061009081007
100805050605040606
040505050707060809
100705040709090708
070803030707050505
070906080508070504
060808041010091008
080307040506070707
060607060808070710
070806071010091007
100608080905060707
080809080708090608
090708061010091009
060306040406050507
050406040707060703
050604030208060204
090505070405070705
050507050607080605
080506081008091006
060905060507070805
070908050906070608
060707091010091007
060705050608040505
060507090609080707
040608051008091009
060504050404070805
040506040609080707
070704090709090808
070505050505040606
060604050705060509
060606050808090907
050401010102030102
020103030204030704
030504020110050103
050203030404040502
050403030605050508

0507030610090910 05
0508050505060605 02
0505060505050610
0508050504100909 04
0503080806020103 03
0304080506040505 03
0506080101060501 07
0803040404020202 04
0403040203030406 02
0507010101080801 05
0703060508030606 04
0605060405030405 06
0705040507100907 07
0504060604040405 04
0505030404040306 07
0507040407100907 05
0606040408040507 05
0606080404070707 10
0506040610080910 06
0505040407030607 05
0405080605050505 10
0605050610080910 07
0507050507060404 03
0404030605050407 10
0507060501100901 04
1006050706060505 01
0806060906050607 10
0808070601100901 03
0405040605060507 06
0707050705040408 09
0406070610090910 07
0605040506070608 08
0807060506070607 07
0607050710090510 08
0307040405040608 05
0405050607080606 07
0408060710090910 06
0709030303010101 05
0403030102050507 05
0406010203080803 03
0405040405040708 05
0604050404050608 03
0506050710090810 05
0707040502020503 06

040401030303040602
040501040108080104
FINISH

A factor-by-rater random effect *G*-study for younger than 30 years old

```
GSTUDY          ZHANG - RANDOM MODEL - F X R DESIGN
COMMENT
COMMENT           # RECORDS = 40
COMMENT           # VALUES PER RECORD = 09
COMMENT
OPTIONS         RECORDS ALL CORRELATION
EFFECT          * F 40 0
EFFECT          + R 09 0
FORMAT          (09F2.0)
PROCESS
050504060609100904
050504030406050603
080303050407050503
080903070605090806
090705070808080805
030405050505050505
050805040305040505
050505050506040506
070506050304050502
070506050403030203
070704050607090608
080907050508080808
080604040708080708
100805050605040606
070803030707050505
080307040506070707
100608080905060707
060306040406050507
090505070405070705
060905060507070805
060705050608040505
060504050404070805
070505050505040606
050401010102030102
050203030404040502
050805050506060502
050308080602010303
080304040402020204
070306050803060604
050406060404040504
060604040804050705
050504040703060705
```

050705050706040403
100605070606050501
040504060506050706
060504050607060808
030704040504060805
070903030301010105
040504040504070805
070704050202050306
DSTUDY ZHA NG F X R DESIGN
DEFFECT $ F
DEFFECT R 07 08 09
ENDDSTUDY
FINISH

A factor-by-rater random effect *G*-study for 30-40 years old

```
GSTUDY          ZHANG - RANDOM MODEL - F X R DESIGN
COMMENT
COMMENT          # RECORDS = 40
COMMENT          # VALUES PER RECORD = 09
COMMENT
OPTIONS         RECORDS ALL CORRELATION
EFFECT          * F 40 0
EFFECT          + R 09 0
FORMAT          (09F2.0)
PROCESS
050306080706050510
040405050707070810
030304040508080401
080805070806070510
070707080709080406
030506060605040710
050504050504050808
050506050505050503
040405050404050401
040404040504030603
060604050506050408
070606080707080710
060606070707080802
040505050707060809
070906080508070504
060607060808070710
080809080708090608
050406040707060703
050507050607080605
070908050906070608
060507090609080707
040506040609080707
060604050705060509
020103030204030704
050403030605050508
050506050505050610
030408050604050503
040304020303040602
060506040503040506
050503040404030607
060608040407070710
040508060505050510
```

040403060505040710
080606090605060710
070705070504040809
080706050607060707
040505060708060607
040303010205050705
060405040405060803
040401030303040602
DSTUDY ZHA NG F X R DESIGN
DEFFECT $ F
DEFFECT R 07 08 09
ENDDSTUDY
FINISH

A factor-by-rater random effect *G*-study for 40-50 years old

```
GSTUDY          ZHANG - RANDOM MODEL - F X R DESIGN
COMMENT
COMMENT          # RECORDS = 40
COMMENT          # VALUES PER RECORD = 09
COMMENT
OPTIONS         RECORDS ALL CORRELATION
EFFECT          * F 40 0
EFFECT          + R 09 0
FORMAT          (09F2.0)
PROCESS
060708080810090803
060806080709090706
080504050110060105
070605081009091008
090708071009101006
040506060407090408
030505040407090410
050505040209090207
050605040107090104
050702040108090108
070805050909090909
080706081010081007
060607061009081007
100705040709090708
060808041010091008
070806071010091007
090708061010091009
050604030208060204
080506081008091006
060707091010091007
040608051008091009
070704090709090808
060606050808090907
030504020110050103
050703061009091005
050805050410090904
050608010106050107
050701010108080105
070504050710090707
050704040710090705
050604061008091006
060505061008091007
```

050706050110090104
080807060110090103
040607061009091007
060705071009051008
040806071009091006
040601020308080303
050605071009081005
040501040108080104
DSTUDY ZHA NG F X R DESIGN
DEFFECT $ F
DEFFECT R 07 08 09
ENDDSTUDY
FINISH

A factor-by-rater nested within length of study mixed effects *G*-study

```
GSTUDY          ZHANG - MIXED MODEL - F X R : L DESIGN
COMMENT
COMMENT          L IS FIXED, R IS RANDOM
COMMENT          # RECORDS = 40 X 3
COMMENT          # VALUES PER RECORD = 07
COMMENT
OPTIONS         RECORDS ALL CORRELATION
EFFECT          * F      40 0
EFFECT          + L      03 0
EFFECT          + R:L 07 0
FORMAT          (07F2.0)
PROCESS
06050608080703
05060605070801
07081008060704
03030505060606
05070605070804
06070907070808
05020506060605
08070806050507
05011001040706
05090506080708
08070806080801
06100910090606
09100908080706
09080808070702
07100910040705
05050606060508
03020306060601
06040704030607
05030504050510
05030505050406
06040704070506
06040505060507
05030505050409
04020902060505
04040405050504
07050704040410
04010701010603
05050504020308
07060606050405
05010801020605
```

05050506060509
07070804050504
07090909030705
07090707070707
08080706070803
08101010030707
05080807080707
08080603070602
07100910010608
05090705050508
10100904070404
06070907030806
04080806050508
07070706050403
06101010070808
08090605060607
08080606080703
07101010040708
08100804070909
10090709070601
04101010080706
07040505060404
06040504070306
07020802030604
08050606080706
09090806060801
07100810060606
04060706070807
06050506090901
05101010020704
05060607050609
06040404060501
05100810040807
05060505080808
06060606060903
05070908070705
04050405060507
07050604070502
05080809020505
02010201020203
05030502020201
05011001070506
04060303030305
05060504060602

03100910030506
07080705050504
05040406050507
04041009070605
07080901040207
05050609060108
05010601010705
04060503010105
08080504030103
04010801090805
05080905060607
07070705050504
04071007030704
06030404040405
05060505040402
04071007010703
04070905050506
06050604040603
05100810070605
05080806040607
05060504050604
04100810050603
05090505040504
05060605050506
04011001020706
07080805040503
10100906060602
08011001090805
05070605060707
04050505050604
08100910100604
04060506070908
06070604060703
06100910030609
05040404060606
03050505070702
05100910040705
03030201010103
07040503020203
04030803020808
04030405060805
04050405040704
05100910070603
03010102040304

07050605030403
03010801030705
FINISH

A factor-by-rater random effect *G*-study for participants having 3-6 months study overseas

```
GSTUDY          ZHANG - RANDOM MODEL - F X R DESIGN
COMMENT
COMMENT          # RECORDS = 40
COMMENT          # VALUES PER RECORD = 07
COMMENT
OPTIONS         RECORDS ALL CORRELATION
EFFECT          * F 40 0
EFFECT          + R 07 0
FORMAT          (07F2.0)
PROCESS
06050608080703
03030505060606
05020506060605
05090506080708
09100908080706
05050606060508
05030504050510
06040505060507
04040405050504
05050504020308
05050506060509
07090707070707
05080807080707
05090705050508
04080806050508
08090605060607
08100804070909
07040505060404
08050606080706
04060706070807
05060607050609
05060505080808
04050405060507
02010201020203
04060303030305
07080705050504
07080901040207
04060503010105
05080905060607
06030404040405
04070905050506
```

05080806040607
05090505040504
07080805040503
05070605060707
04060506070908
05040404060606
03030201010103
04030405060805
03010102040304
DSTUDY ZHA NG F X R DESIGN
DEFFECT $ F
DEFFECT R 05 06 07
ENDDSTUDY
FINISH

A factor-by-rater random effect *G*-study for participants having 7-12 months study overseas

```
GSTUDY          ZHANG - RANDOM MODEL - F X R DESIGN
COMMENT
COMMENT          # RECORDS = 40
COMMENT          # VALUES PER RECORD = 07
COMMENT
OPTIONS         RECORDS ALL CORRELATION
EFFECT          * F 40 0
EFFECT          + R 07 0
FORMAT          (07F2.0)
PROCESS
05060605070801
05070605070804
08070806050507
08070806080801
09080808070702
03020306060601
05030505050406
05030505050409
07050704040410
07060606050405
07070804050504
08080706070803
08080603070602
10100904070404
07070706050403
08080606080703
10090709070601
06040504070306
09090806060801
06050506090901
06040404060501
06060606060903
07050604070502
05030502020201
05060504060602
05040406050507
05050609060108
08080504030103
07070705050504
05060505040402
06050604040603
```

05060504050604
05060605050506
10100906060602
04050505050604
06070604060703
03050505070702
07040503020203
04050405040704
07050605030403
DSTUDY ZHA NG F X R DESIGN
DEFFECT $ F
DEFFECT R 05 06 07
ENDDSTUDY
FINISH

A factor-by-rater random effect *G*-study for participants having over 12 months study overseas

```
GSTUDY          ZHANG - RANDOM MODEL - F X R DESIGN
COMMENT
COMMENT          # RECORDS = 40
COMMENT          # VALUES PER RECORD = 07
COMMENT
OPTIONS         RECORDS ALL CORRELATION
EFFECT          * F 40 0
EFFECT          + R 07 0
FORMAT          (07F2.0)
PROCESS
07081008060704
06070907070808
05011001040706
06100910090606
07100910040705
06040704030607
06040704070506
04020902060505
04010701010603
05010801020605
07090909030705
08101010030707
07100910010608
06070907030806
06101010070808
07101010040708
04101010080706
07020802030604
07100810060606
05101010020704
05100810040807
05070908070705
05080809020505
05011001070506
03100910030506
04041009070605
05010601010705
04010801090805
04071007030704
04071007010703
05100810070605
```

04100810050603
04011001020706
08011001090805
08100910100604
06100910030609
05100910040705
04030803020808
05100910070603
03010801030705
DSTUDY ZHA NG F X R DESIGN
DEFFECT $ F
DEFFECT R 05 06 07
ENDDSTUDY
FINISH