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Chinese International Students' Intercultural Communication Competence and Intercultural Communication Apprehension in the USA

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Chinese International Students' Intercultural Communication Competence and Intercultural

Communication Apprehension in the USA

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A dissertation

presented to

the Faculty of the Department of Educational Leadership and Policy Analysis

East Tennessee State University

In partial fulfillment

of the requirements for the degree

Doctor of Education in Educational Leadership

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by

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Keywords: Chinese International Students, Intercultural Communication Competence,

Intercultural Communication Apprehension

ABSTRACT

Chinese International Students' Intercultural Communication Competence and Intercultural

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by

Yi Lin

This study investigated the intercultural communication competence and intercultural

communication apprehension of Chinese international students. Participants in the study

consisted of Chinese international students over 18 years old studying at two 4-year public

universities in the southeastern United States. The study participants completed 2 online survey

questionnaires: the Intercultural Sensitivity Scale (ISS), which measured the degree of

intercultural communication competence, and the Personal Report of Intercultural

Communication Apprehension (PRICA), which measured the degree of intercultural

communication apprehension.

The findings of the study indicated a significant relationship between Chinese international

students' intercultural communication competence and their intercultural apprehension. Findings

also noted that gender, age, number of U.S. friends, and level of education were not factors

predicting the participants' degree of intercultural communication competence and intercultural

communication apprehension. However, frequency of speaking English outside of the classroom

was an important factor indicating differences in the degree of the study participants'

intercultural communication competence and intercultural communication apprehension. In

addition, the study revealed that the length of time in the United States affected participants'

intercultural communication competence but not their intercultural communication apprehension.

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DEDICATION

This work is for my father and mother who have encouraged and supported me in all my endeavors.

ACKNOWLEDGEMENTS

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CHAPTER 1

INTRODUCTION

Intercultural communication competence is the ability to encode and decode meanings that correspond to the meanings held in another communicator's repository (Beamer, 1992). In order to learn, to know, and to function in today's society, communication is vital. However, individuals may consciously or unconsciously avoid situations where communication is required. McCroskey (1972) first coined this avoidance as *communication apprehension* (CA), defined as an individual's level of fear or anxiety associated with either real or anticipated communication with another person or persons. Communication apprehension (CA) relates to communicative incompetence that stems from anxiety or fear. A review of intercultural training literature showed little attention given to the relationship between intercultural communication competence and intercultural communication apprehension among international students.

International students studying in the United States (U.S.) is not a new topic in the academic world. International students have played a significant role in building enrollment on U.S. campuses while creating a diverse culture on those campuses. At the time of this study Chinese international students formed the largest group of international students on U.S. campuses.

The number of international students at colleges and universities in the United States increased by 3% to 690,923 during the 2009/10 academic year, according to the *Open Doors* report, which is published annually by the Institute of International Education (IIE) with support from the U.S. Department of State's Bureau of Educational and Cultural Affairs. This represents a record high number of international students in the United States. This year's growth was primarily driven by a 30% increase in Chinese student enrollment in the United States to a

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total of nearly 128,000 students, or more than 18% of the total international

student population, making China the leading sending country. (Institute of

International Education, 2010, para. 1)

Due to the support of the Chinese government to make secondary education universal and

the encouragement to have more Chinese educated, there are growing numbers of Chinese

students seeking college degrees in China as well as in developed countries around the world. In

addition, the strength of the booming Chinese economy has increased the numbers of middle

class families that have the financial ability to send their children to study in U.S. Thus, China

has become the single largest source of international students in the U.S. (Institute of

International Education, 2010)

Because of this wave of migration, there are potential opportunities and concerns for both

US universities and for Chinese international students (Fischer, 2009). Studying abroad can

provide opportunities for Chinese students to see the world from a different perspective, to paint

their life differently by living in a foreign land, and to enrich their knowledge through interaction

with people around the world. On the other hand, Chinese students frequently prefer to

communicate with each other in their mother tongue and bind themselves within their small,

collegial Chinese community. Therefore, the critical question arises of how to help Chinese

international students explore other societies and acquire socialization. Due to their completely

different culture in China, students may encounter difficulties in terms of customs, language, and

educational styles (Liu, 2001). The current study addresses these concerns and potential

problems.

Studies on intercultural communication competence revealed that acquiring knowledge

and understanding of cultural distinctions was significant in successful cross-cultural

communication (Beamer, 1992; Penbek, Yurdakul, & Cerit, 2009). Previous researchers

examined the factors of communication apprehension (Booth-Butterfield & Cottone, 1991;

Colby, Hopf, & Ayres, 1993; Freeman, Sawyer, & Behnke, 1997; Hsu, 2004; Martin, Valencic,

& Heisel, 2002; McCroskey & Sheahan, 1976; McCroskey, Booth-Butterfield, & Payne, 1989;

Neuliep & Ryan, 1998; Proctor, Douglas, Garera-Izquierdo, & Wartman, 1994; Zhang, Butler, &

Pryor, 1996), discovering that international students had high levels of communication

apprehension due to their cultural background (Neuliep & Ryan, 1998). However, limited studies

analyzed the relationship between intercultural communication competence and intercultural

communication apprehension for international students, especially based on the level of

intercultural sensitivity or the understanding of cultural differences for effective intercultural

communication competence. The design of the current study may expand understanding

concerning the intercultural communication competence of Chinese international students based

on examining their intercultural sensitivity and intercultural communication apprehension. In

addition, the study explored the effects on intercultural communication competence and

intercultural communication apprehension of demographic and personal variables such as gender,

age, length of time in the U.S., number of U.S. friends, level of education, and frequency of

speaking English.

Statement of the Problem

The current study addresses the problem of the intercultural communication competence

(ICC) and intercultural communication apprehension (ICA) of Chinese international students,

and the significance of the relationship between ICC and ICA. This quantitative study

determined whether a significant relationship existed between intercultural communication

competence and intercultural communication apprehension in Chinese international students

studying in the U.S. A secondary purpose was to discover the ways in which demographic and personal variables, such as age, gender, the length of time in the U.S., number of U.S. friends, level of education, and the frequency of speaking English determined the differences in student ICC and ICA. Although most research on communication apprehension found that Chinese international students were less willing to communicate, few studies exist on the relationship between intercultural communication competence and intercultural communication apprehension in the group of Chinese international students in U.S. This was especially true of intercultural communication competence based on examining intercultural sensitivity.

Research Questions

Using quantitative research methodology, the study examined the intercultural communication competence and intercultural communication apprehension of students from mainland China studying in two U.S. 4-year public universities.

The study addressed the following research questions:

RQ1: Is there a significant relationship between the intercultural communication competence and intercultural communication apprehension among Chinese international students'?

RQ2: Is there a significant difference in levels of intercultural communication competence between Chinese international male and female students?

RQ3: Is there a significant difference in levels of intercultural communication competence among Chinese international students based on the number of months they have studied in the U.S.?

RQ4: Is there a significant difference in levels of intercultural communication competence based on the age of Chinese international students?

RQ5: Is there a significant difference in levels of intercultural communication competence among Chinese international students based on their number of U.S. friends?

RQ6: Is there a significant difference in levels of intercultural communication competence among Chinese international students based on the frequency with which they speak English?

RQ7: Is there a significant difference in levels of intercultural communication competence among Chinese international students based on their level of education?

RQ8: Is there a significant difference in levels of intercultural communication apprehension between Chinese international male and female students?

RQ9: Is there a significant difference in levels of intercultural communication apprehension among Chinese international students based on the number of months they have studied in the U.S.?

RQ10: Is there a significant difference in levels of intercultural communication apprehension based on the age of Chinese international students?

RQ11: Is there a significant difference in levels of intercultural communication apprehension among Chinese international students based on their number of U.S. friends?

RQ12: Is there a significant difference in levels of intercultural communication apprehension among Chinese international students based on the frequency with which they speak English?

RQ13: Is there a significant difference in levels of intercultural communication apprehension among Chinese international students based on their level of education?

Significance of the Study

ICC and ICA may affect the performance of international students. According to Dillon and Swann (1997),

> Most retention problems with international students occur because of difficulty
> adjusting to U.S. culture, and more specifically, the culture of the U.S. College
> and University system. Retention problems are often the result of international
> students' dissatisfaction with their communication interactions with teachers and
> other students in the classroom and in interpersonal interactions outside class. (p.
> 4)

Researchers found that people with high level of Communication Apprehension (CA) engaged in shorter conversations, avoided lengthy eye contact, and moved around less than average speakers, which could reduce the effectiveness of their communication. Due to what some may consider poor performance, the students' grades often suffer, which can negatively influence their GPA and self-esteem. Consequently, future presentations become more frightening, gradually increasing anxiety and inevitably affecting speaking (Nelson & Webster, 1991).

With the current globalization and migration of students, greater numbers of Chinese students will likely study in the U.S. Having a different cultural origin and communication problems will be noticeable, thus research is essential to aid adjustment issues for these students. The current study may provide administrators and educators with an awareness of the ICC and ICA of Chinese international students. With further exploration of the relationship between ICC and ICA and the differences among related variables, educators and administrators may gain a deeper understanding on communication competence and apprehension differences. Based on the

findings in this study, educators and students may develop strategies that support adjustments for international students to aid communication competence and ameliorate apprehension.

Limitations of the Study

The primary limitation of this study was its narrow scope. The study examined Chinese international students in only two U.S. universities in Georgia and Tennessee. Therefore, the findings may not be generalizable to other campuses in different parts of the U.S. An informal request for permission to conduct the study went to the directors of international offices at the universities. Second, the instruments were in English rather than participants' mother tongue, which might have caused misunderstanding among the participants. Third, the participants were limited to Chinese students coming from mainland China, excluding Chinese students from Taiwan, Hong Kong, and Macau; thus, the results would not apply to students coming from those areas.

Definitions of Terms

To create understanding, working definitions of study terms may require clarification. The list below offers definitions of terms employed in the current study.

Communication apprehension (CA). "A broadly based anxiety related to oral communication. More specifically, CA is an individual's level of fear or anxiety associated with either real or anticipated communication with another person or persons" (McCroskey & Beatty, 1986, Para 1).

Culture. "The collective programming of the human mind that distinguishes the members of one human group from those of another. Culture in this sense is a system of collectively held values" (Hofstede, 2011d, Para 1).

Culture awareness. Being open to the idea of changing cultural attitudes.

Culture shock. A condition of disorientation affecting someone who is suddenly exposed to an unfamiliar culture or way of life or set of attitudes (Culture shock, 2011).

Intercultural Communication Apprehension (ICA). "The fear or anxiety associated with either real or anticipated interaction with people of different groups, especially cultural and ethnic and/or racial groups" (McCroskey & Neuliep, 1997, p.145).

Intercultural Communication Competence (ICC). "The ability to effectively and appropriately execute communication behaviors that negotiate each other's cultural identity or identities in a culturally diverse environment" (Chen & Starosta, 1998, p. 231).

Intercultural Sensitivity (IS). It implies individuals' "active desire to motivate themselves to understand, appreciate, and accept differences among cultures" (Chen & Starosta, 1998, p. 231).

Overview of the Study

This work includes five chapters. Chapter 1 introduces the study, includes a statement of the problem, and illustrates the significance of the research. Chapter 2 includes a literature review of previous studies in five areas, synthesis of cultural dimension, intercultural communication competence, communication apprehension, international students, and Chinese international students. Chapter 3 offers the methodology including discussion of measurements, participants, data collection, and data analysis. Chapter 4 presents the results of the study. Chapter 5 offers a conclusion and discussion of the results regarding the research questions, the limitations of the study, and the implications for future research.

CHAPTER 2

LITERATURE REVIEW

Introduction

During the 2009-2010 academic year there were approximately 128,000 international students from China studying in U.S. colleges and universities, making China the largest contributor of international students to the U.S. higher education system. In 2010 Chinese student enrollment in the United States increased by 30% and represented more than 18% of the total international student population in the country (Institute of International Education, 2010, 2010). Thus, large numbers of students coming from China can create potential concerns and problems related to studying and living due to the different cultural heritage than the host culture.

In general international students struggle with pressure regarding culturally related issues in addition to the normal academic and life stresses experienced by all college students. Most international students have problems, both socially and educationally, such as lowered social interaction, homesickness, academic concerns, depression, and difficulties in cultural adjustment (Mallinckrodt & Leong, 1992; Rahman & Rollock, 2004; Swagler & Ellis, 2003; Yang & Clum, 1995; Ying, 2005; Zhang & Brunton, 2007). Toyokawa and Toyokawa (2002) pointed out that "international students experience difficulty including culture shock, language difficulties, adjustment to customs and values, differences in education systems, isolation and loneliness, homesickness and a loss of established social networks" (p. 2). In addition, according to Charles and Stewart (1991) international students may also meet with "discrimination, financial problems and depression" (p. 1). However, within that extensive list, language is often the salient problem affecting their studying and living.

This chapter provides an overview of the previous literature related to intercultural communication. The first section explores intercultural communication competence, including

intercultural competence, communication competence, and intercultural sensitivity. The second

section discusses intercultural communication and introduces communication apprehension. The

discussion on cultural awareness compares the cultural dimensions of West and East. The

chapter includes a description of international students in the United States relative to their

current situation and future trends. The final section provides information on Chinese

international students in the United States, including certain cultural factors that influence their

studying and living.

<center>**Intercultural Communication Competence**</center>

Various researchers have examined intercultural communication competence (ICC) in

several contexts, such as: a) the organizational communication context (Chen & Starosta,1996;

Méndez García & Pérez Caňado, 2005); b) the health care and counseling context (Diaz-Lazaro

& Cohen, 2001; Fuertes, Bartolomeo, & Nichols, 2001; Manese, Wu, & Nepomuceno, 2001;

Sevig & Etzkorn, 2001; Toporek, 2001); c) consultation (Jackson & Hayes, 1993); d) nursing

(Koskinen & Tossavainen, 2004); e) nurse education (Culley, 1996); f) dental hygiene care

delivery (Fitch, 2004); g) tourism (Leclerc & Martin, 2004); and h) education (Greenholtz, 2000;

Le Roux, 2002; Sercu, 2004; Wilson, 1993).

Researchers defined the concept of ICC with different foci and in diverse ways. Some of

these conceptualizations included cross-cultural adjustments, cross-cultural adaptation,

intercultural understanding, overseas success, personal adjustment, cross-cultural effectiveness,

satisfaction with overseas experience, and interaction competence involving knowledge,

motivation, and skills (Gudykunst & Mody, 2001). Ruben (1976) identified seven dimensions of

ICC: a) the capacity to be flexible, b) the capacity to be nonjudgmental, c) tolerance for

ambiguity, d) the capacity to communicate respect, e) the capacity to personalize one's

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knowledge and perceptions, f) the capacity to display empathy, and g) the capacity for turn taking. In addition, Chen (1988) offered four elements of ICC as personal attributes, communication skills, psychological adaptation, and cultural awareness. The factors of culture, perceptions, roles and identities, communication styles, and personality also influenced ICC (Vuckovic, 2008). Hence, it is important to clarify the concept of ICC.

First, intercultural competence and communication competence, the two parts of ICC, are significant for study (Deardorff, 2004). Intercultural competence is the ability to "interact effectively and appropriately in a variety of intercultural situations by successfully utilizing one's intercultural resources (e.g., knowledge, skills, awareness and attitudes)" (Berardo, 2005, p.4). That is, intercultural competent people can skillfully use alternatives to solve problems raised by cultural differences and grow in the process. Communication competence is "the ability to effectively and appropriately execute communication behavior to elicit a desired response in a specific environment" (Chen, 1990, p. 12). Thus, people with high communication competence manage their interaction environment by revealing appropriate communication behavior. According to Chen's and Berardo's definitions of intercultural competence and communication competence, ICC is a combination of the two, and defined as "the ability to effectively and appropriately execute communication behaviors that negotiate each other's cultural identity or identities in a culturally diverse environment" (Chen & Starosta, 1998, p. 241). However, intercultural communication competence does not refer to merely knowing how to speak one or multiple foreign language(s). People with ICC must have the ability to negotiate and to respect cultural symbols and norms (Collier & Thomas, 1988; Kim, 1994), and know "how to fulfill their own communication goals by respecting and affirming the multilevel cultural identities of those with whom they interact" (Chen & Starosta, 1996, p. 359).

Consequently, "intercultural communication competence is an umbrella concept which is comprised of cognitive, affective, and behavioral ability of interactants in the process of intercultural communication" (Chen & Starosta, 2000, p. 4). The cognitive aspect is a conception of intercultural awareness that includes "the understanding of culture conventions that affect how we think and behave" (p. 4). Intercultural sensitivity represents affective ability, which implies individuals' "active desire to motivate themselves to understand, appreciate, and accept differences among cultures" (Chen & Starosta, 1998, p. 231). Moreover, intercultural adroitness symbolizes behavioral ability, which refers to "the ability to get the job done and attain communication goals in intercultural interactions" (Chen & Starosta, 1996, p. 367). With intercultural awareness, sensitivity, and adroitness, people can recognize, understand, and appreciate cultural differences, identify their cultural status, and acquire skill in the process. In this study ICC is measured by one of its core and affective aspect: intercultural sensitivity.

According to Chen and Starosta (2000), "Successful intercultural communication demands interactants' ability of intercultural awareness by learning cultural similarities and differences, while the process of achieving awareness of cultural similarities and differences is enhanced and buffered by the ability of intercultural sensitivity" (p. 6). Bennett (1984) also noted that intercultural sensitivity could transform interactants from the rejection step to the integration step in the developing process of intercultural communication, affectively, cognitively, and behaviorally. Thus, individuals with intercultural sensitivity could

reach the level of dual identity and enjoy cultural differences by gradually

overcoming the problems of denying or concealing the existence of cultural

differences and attempting to defend their own world views, and moving to

develop empathic ability to accept and adapt cultural differences, (Chen &

Starosta, 2000, p. 6)

In addition, intercultural sensitivity with intercultural effectiveness and cross-cultural adaptation could build significant capability for living and working together successfully with people from different cultures (Zhao, 2002).

Chen (1997) identified six components of intercultural sensitivity: self-esteem, self-monitoring, open-mindedness, empathetic, interaction involvement, and nonjudgmental. Barnlud and Namura (1985) stated that one must face the challenge of understanding someone from another cultural background or culture with a sufficient margin of empathy, while the concept of empathy defined intercultural sensitivity. The literature review pointed out that "the majority of the scholars who studied ICC and intercultural sensitivity have noted that the more intercultural sensitivity a person has, the more intercultural competent he/she can be" (Penbek et al., 2009, p. 5).

Previous studies of university students examined the effect of intercultural sensitivity on intercultural communication competence. After studying students from two different universities, Penbek et al. (2009) noted higher levels of intercultural sensitivity proved a key to successful communication across cultures. Altshuler, Sussman, and Kachur (2003) indicated gender and multicultural experiences could influence the level of intercultural sensitivity. Attending culturally related programs can enhance students' intercultural sensitivity and change their attitudes toward cultural difference (Klak & Martin, 2003). However, the current study did not address culture programs as an area of study.

<center>**Intercultural Communication Apprehension**</center>

Communication Apprehension

In order to study intercultural communication apprehension (ICA), there needs to be a thorough understanding of communication apprehension (CA) of which ICA is a subfield. The following paragraphs feature a brief introduction of CA, including the types, effects, and treatments.

CA is "an individual's level of fear or anxiety associated with either real or anticipated communication with another person or persons" (McCroskey & Beatty, 1986, p. 279), also known as oral communication anxiety. General anxiety is "the predisposition to experience anxiety in a broad range of situations, such as taking tests, being exposed to snakes" (p. 284); whereas, CA refers only to apprehension within communications-related situations. Thus, general anxiety is different from communication apprehension due to its wide-ranging scale.

McCroskey and Beatty (1986) determined four ways to conceptualize CA: trait-like, generalized context, person-group, and situational. Trait-like CA is "a relatively enduring, personality-type orientation toward oral communication across a wide variety of contexts" (McCroskey & Beatty, 1986, p. 281), while generalized-context CA incorporates "a relatively enduring, personality-type orientation toward communication in a given type of communication context" (p. 282). That is, the trait-like perspective of CA views communication apprehension in one communication context as connected to apprehension in another communication context; whereas, generalized-context perspective does not. Person-group CA features "a relatively enduring orientation toward communication with a given person or group of people, [which is] a response to situational constraints generated by the other person or group" (p. 282) but is not personality-based. In other words, this type of CA more likely happens because of situational

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constraints produced by another person or group rather than by the personality of the individual. Last, situational CA is "a transitory orientation toward communication with a given person or group of people" (p. 283). The person-group CA greatly relates to situational CA.

Researchers have examined the effects of CA, noting that high CA related negatively to desired outcomes in interpersonal relationships, in the work environment, and in the educational arena (Daly & Stafford, 1984; McCroskey, 1977; Richmond, 1984). According to McCroskey and Beatty (1986) CA had both internal and external effects. The only universal effect, however, is a feeling of discomfort that affects individuals with all types of CA (McCroskey, 1984; McCroskey & Beatty, 1986; McCroskey & Richmond, 1990). Thus, the lower the CA, the less the internal discomfort. Richmond and McCroskey (1998) stated that individuals with high CA had feelings of discomfort, fright, lack of coping, inadequacy, or lack of intelligence. In addition, the normal physiological effects related to internal anxieties might be rapid beating of the heart, queasy stomach, increased perspiration, shakiness, and dry mouth.

Externally observable behaviors are more or less frequent depending on the levels of CA. Thus, no exact behavior is universally applicable to variable levels of CA (McCroskey & Richmond, 1990). For example, certain individuals may demonstrate communication avoidance, communication withdrawal, or communication disruption. McCroskey and Richmond (1990) also stated that,

> In order to avoid having to experience high CA, people may become less willing
> to communicate and therefore select occupations that involve low communication
> responsibilities, may pick housing units that reduce incidental contact with other
> people, may choose seats in classrooms or in meeting that are less conspicuous,

and may avoid social settings. Avoidance, then, is a common behavioral response

to high CA. (p. 29)

However, rare people with CA may have "overcommunication" (Richmond & McCroskey, 1998, p. 52), wherein people talk a great deal in a given situation.

Other studies of high CA also report certain negative results (Adler, 1980; Daly & Leth, 1976; McCroskey & Anderson, 1976; McCroskey, Daly, & Sorensen, 1976; McCroskey & Leppard, 1975). For instance, students with high CA may have lower overall grade-point averages and lower scores on college entrance examinations. Others may consider them less competent and less attractive. They usually have lower self-esteem. They are less likely to get job interviews, and, if hired, they are less likely to seek career advancements.

High CA affects people's daily lives. In order to reduce CA, treatment has been a major concern in some studies focusing on high CA (McCroskey, 1972; McCroskey, Ralph, & Barick, 1970) as well as on low CA (McCroskey, 1984). The four most popular treatments include: a) behavior therapies of systematic desensitization (Friedrich & Goss, 1984; Friedrich, Goss, Cunconan, & Lane, 1997; McCroskey, 1972; McCroskey, Ralph, & Barick, 1970; Wolpe, 1958); b) cognitive restructuring or modification (Fremouw, 1984; Fremouw & Scott, 1979; Fremouw & Zitter, 1978; Glowgower, Fremouw, & McCroskey, 1978; Meichenbaum, 1977); c) rhetoritherapy training (Kelly, 1984, 1997; Phillips, 1986, 1991); and d) visualization (Ayres & Hopf, 1985, 1987, 1991; Ayres, Hopf, & Ayres, 1997).

Systematic desensitization is "a treatment package that systematically includes (a) training in deep muscle relaxation, (b) construction of hierarchies of anxiety-eliciting stimuli, and (c) the graduated paring, through imagery, of anxiety-eliciting stimuli with the relaxed state" (Friedrich, Goss, Cunconan, & Lane, 1997, p. 308). Cognitive modification involves personal

identification of the individual's negative self-talk statements (e.g., I will bore people, or I am not confident), and learning to substitute positive ones (Glaser, 1981). Skills training requires individuals to learn skills that will enable them to be confident and competent in communication contexts (Kelly, 1997). Visualization is usually appropriate and popular for use in college classrooms (Ayres & Hopf, 1987). The method develops mental pictures that can serve as a model for new behavior (Restak, 1984). For instance, individuals with CA can imagine themselves as confident in front of a group. Thus, when they are in the situation, they can retrieve that picture of self-confidence and achieve better communication (Nelson & Webster, 1991).

Regarding the impact of age and gender on CA, MacIntyre, Baker, Clement, and Donovan (2002) investigated Japanese high school students in a second language communication environment, a French immersion program. The study demonstrated that both age and gender influenced student willingness to communicate in a second or foreign language. Moreover, Hassal, Joyce, Ottewill, Aequero, and Donoso (2002) studied communication apprehension in the United Kingdom among Spanish business and accounting students and noted significant differences in the levels of CA with females having higher levels. However, no relationship existed between the age of the student and CA.

Intercultural Communication Apprehension

Intercultural communication apprehension (ICA) is "the fear or anxiety associated with either real or anticipated interaction with people of different groups, especially cultural and ethnic and/or racial groups" (McCroskey & Neuliep, 1997). ICA describes a situation filled with "novelty, unfamiliarity, dissimilarity, and uncertainty" (Neuliep & McCroskey, 1997). According to Gudykunst and Kim (1997), people from other cultures are strangers in a different

milieu; consequently they tend to have the highest level of strangeness and the lowest level of familiarity. Thus, it is easy for people to be anxious in a new cultural environment. Gudykunst and Kim (1997) added that interactions among people from different cultures caused anxiety, labeled intercultural communication apprehension.

In the United States, intercultural communication apprehension is unavoidable for Chinese international students. Having to function in a second language and in a different cultural environment of novelty, formality, conspicuousness, unfamiliarity, dissimilarity, and degree of attention from others (McCroskey & Beatty, 1998) could create and increase CA. Lucas (1994) held that,

> If international students are apprehensive about speaking their own language,
> their fear of communicating in English must be magnified tenfold. In addition,
> even those international students who are not apprehensive about speaking in their
> own language can become apprehensive about speaking in English. (p. 594)

Thus, ICA creates an obvious issue for Chinese international students and a salient problem for study.

<div align="center">

U.S. vs. Chinese Culture

</div>

Culture and Cultural Dimensions

"Culture is the collective programming of the human mind that distinguishes the members of one human group from those of another. Culture in this sense is a system of collectively held values" (Hofstede, 2011d, Para 1). Clinton (1996) stated that culture helped individuals adapt to their environments. It influenced interaction and socialization with other members of society, while cultural awareness offered means to adjust and to understand the differences.

Hofstede (2011) conducted cross-cultural research by dividing culture into four

dimensions, addressing basic problems with which all societies deal: Power Distance Index

(PDI), Individualism (IDV), Masculinity (MAS), and Uncertainty Avoidance Index (UAI). A

fifth dimension, Long-Term Orientation (LTO), dealt with virtue in 23 countries according to a

questionnaire designed by Chinese scholars. PDI involves social distance; "that is the extent to

which the less powerful members of organizations and institutions (like the family) accept and

expect that power is distributed unequally" (Hofstede, 2011a, Para 1). IDV is about the

relationship between the individual and the group, which includes both individualism and

collectivism. Thus,

> On the individualist side we find societies in which the ties between individuals
>
> are loose: everyone is expected to look after him/herself and his/her immediate
>
> family. On the collectivist side, we find societies in which people from birth
>
> onwards are integrated into strong, cohesive in-groups, often extended families
>
> (with uncles, aunts and grandparents) which continue protecting them in exchange
>
> for unquestioning loyalty. (Para 2)

MAS addresses the opposite or feminine side as well and examines the distribution of roles

between the genders. Revealed in Hofstede's (2011) research,

> (a) Women's values differ less among societies than men's values; (b) men's
>
> values from one country to another contain a dimension from very assertive and
>
> competitive and maximally different from women's values on the one side, to
>
> modest and caring and similar to women's values on the other. The assertive pole
>
> has been called 'masculine' and the modest, caring pole 'feminine'. The women
>
> in feminine countries have the same modest, caring values as the men; in the

masculine countries they are somewhat assertive and competitive, but not as much

as the men, so that these countries show a gap between men's values and

women's values. (Para 3)

The Uncertainty Avoidance Index (UAI) concerns the ability to express or control

emotions. It deals with

a society's tolerance for uncertainty and ambiguity; it ultimately refers to man's

search for Truth. It indicates to what extent a culture programs its members to feel

either uncomfortable or comfortable in unstructured situations. Unstructured

situations are novel, unknown, surprising, different from usual. Uncertainty

avoiding cultures try to minimize the possibility of such situations by strict laws

and rules, safety and security measures, and on the philosophical and religious

level by a belief in absolute Truth; 'there can only be one Truth and we have it'.

People in uncertainty avoiding countries are also more emotional, and motivated

by inner nervous energy. The opposite type, uncertainty accepting cultures, are

more tolerant of opinions different from what they are used to; they try to have as

few rules as possible, and on the philosophical and religious level they are

relativist and allow many currents to flow side by side. People within these

cultures are more phlegmatic and contemplative, and not expected by their

environment to express emotions. (Para 4)

LTO refers to values of "thrift and perseverance, [while short-term orientation represents

values of] tradition, fulfilling social obligations, and protecting one's 'face'" (Para 5). Both

values are in the works of Confucius, the most significant Chinese philosopher who lived around

500 BC.

Cultural Differences

The United States is a young country with a short history. It has origins in Western culture coupled with mixed cultures because of immigrants from all over the world. On the contrary, China is over 5,000 year old with an oriental culture and rich traditions. According to Hofstede (2011) the Chinese have lower individualism (IDV) compared to other Asian countries, which may lead to the high level of collectivism. The low IDV reveals a close relationship to a group, family, extended family, or extended relationship. The society emphasizes loyalty, which indicates strong group relationships with collective responsibility. In contrast, the Chinese have high PDI, indicating "a high level of inequality of power and wealth within the society" (Hofstede, 2011b, Para. 4). Furthermore, China ranks highest in levels of LTO, which indicates "a society's time perspective and an attitude of persevering; that is, overcoming obstacles with time, if not with will and strength" (Para 1).

On the other hand, the United States has the highest ranking for individualism, which shows "a society with a more individualistic attitude and relatively loose bonds with others. The populace is more self-reliant and looks out for themselves and their close family members" (Hofstede, 2011c, Para 2). In addition, the U.S. demonstrates high levels of masculinity, which illustrates high differentiation of gender roles. "The male dominates a significant portion of the society and power structure. This situation generates a female population that becomes more assertive and competitive, with women shifting toward the male role model and away from their female role" (Para 3). The U.S. has a low LTO ranking, indicating the society's attitudes regarding cultural traditions as well as social obligations. Low PDI represents more equality among relationships within government, organizations, and even families. "This orientation reinforces a cooperative interaction across power levels and creates a more stable cultural

environment" (Para 4). In addition, the U.S. has a comparatively low UAI ranking, which is "indicative of a society that has fewer rules and does not attempt to control all outcomes and results. It also has a greater level of tolerance of a variety of ideas, thoughts, and beliefs" (Para 5).

In other words, the Chinese place higher values on group cooperation and individual modesty, while Americans place higher value on self-reliance and self-promotion. The Chinese maintain lifelong friendships with deep obligations to provide mutual aid, while Americans engage in limited mutual obligations with acquaintances. In addition, the Chinese try to avoid direct confrontation and have concerns about *face*, whereas Americans have little concern with *face*.

International Students

International students in this research refer to students traveling to and studying in a foreign educational institution. On U.S. campuses, diversity has created a symbolic culture made up of an increasing number of international students from all over the world. In 2010, the top 25 countries that sent students to study in the United States were:

China is the leading place of origin for international students in the United States with 127,628 in 2009/10 (an increase of 30% from the previous year), followed by #2 India (104,897, up 2%), #3 South Korea (72,153, down 4%), #4 Canada (28,145, down 5%), #5 Taiwan (26,685 down 5%), #6 Japan (24,842 down 15%), #7 Saudi Arabia (15,810, up 25%), #8 Mexico (13,450, down 9%), #9 Vietnam (13,112 up 2%), #10 Turkey (12,397, up 2%), #11 Nepal (11,233, down 3%), #12 Germany (9,548, down 1%), #13 United Kingdom (8,861, up 2%), #14 Brazil (8,786, up less than 1%), #15 Thailand (8,531, down 2%), #16 Hong Kong (8,034, down 4%), #17 France (7,716, up 4%), #18 Indonesia (6,943, down 8%), #19

Colombia (6,920, down 1%), #20 Nigeria (6,568 up 5%), #21 Malaysia (6,190, up 4%), #22 Kenya (5,384, down 8%), #23 Pakistan (5,222, down 1%), #24 Venezuela (4,958, up 6%), and #25 Russia (4,827, down 2%). (Institute of International Education, 2010)Para 1)

With such an influx of international students, issues related to culture, language, educational styles, and lifestyle are inevitable and in need of study. First, students differ from sojourners or immigrants. Sojourners may visit a country temporarily and immigrants intend to stay permanently. However, the goal of international students is to do well academically in order to find acceptable employment in the host country or on returning to their home countries. This drive adds add another level of complexity to the social and cultural adjustment of students (Swagler & Ellis, 2003; Ward, Bochner, & Furnham, 2001).

Added to those concerns, students from different cultures learn in different ways; they may differ in cognitive styles, self-expression, and communication styles (Bennett, 1995). Thus, not all the international students will have exactly the same difficulty due to the varying levels of discrepancy between the teaching styles in their host country and their home culture. For example, students from non-Western countries encounter more difficulties than those coming from Western countries (Brislin, 1981; Church, 1982; DeArmond, 1983; Deutsch, 1970; Klinneberg & Hull, 1979; Spaulding & Flack, 1976). Students from non-Western countries tend to have greater difficulties in cultural adjustment (Deutsch, 1970).

Language creates another problem even though many students come from English speaking countries. For students who do not speak English as their native language, the anxiety associated with speaking English may decrease their chances for conversation. They may feel less confident and fear that their low English speaking competence will affect their impression in

front of others. Students from English speaking countries may still have communication problems due to communication styles or accents.

Culture shock is a condition of disorientation affecting persons suddenly exposed to an unfamiliar culture, way of life, or set of attitudes. Oberg (1960) outlined six aspects of culture shock: a) strain due to the effort required to make necessary psychological adaptations; b) a sense of loss and feelings of deprivation in regard to friends, status, profession, and possessions; c) rejection by or rejection of members of the new culture; d) confusion in roles, role expectations, values, feelings, and self-identity; e) surprise, anxiety, disgust, and indignation after becoming aware of culture differences; and f) feelings of incompetence due to lack of coping in the new environment. Starting a new life without families and friends, international students encounter unpredictable problems related to culture shock that may impede their adaptation.

Differences in educational systems and teaching and learning styles also create difficulties for international students. First, due to the language deficiency, students may have difficulty understanding lectures, class materials, and homework. They have to spend more time studying than do their U.S. classmates to achieve academic success. Second, most U.S. classrooms promote a student-centered environment, which encourages students to express their opinions or question their professors. However, some international students, especially Asian students, may prefer a teacher-centered environment. In that style, students take notes and memorize them (Bresnahan & Cai, 2000; Skow & Stephan, 2000). Students from Asia, the Middle East, and Africa typically sit quietly in lecture-type classes and take verbatim notes to memorize and pass exams. Their cultures teach them not to question teachers and elders, to follow rather than to impose (Triandis, 1989).

Financial problems can be another significant issue for international students. Due to the high cost of living and studying in the U.S., students must manage their life and education simultaneously under financial pressure, especially those students from less than wealthy families (Cadieux & Wehrly, 1986). Furthermore, loneliness or lack of family support may also generate problems.

History of Chinese International Students

The history of Chinese international students studying in the U.S. dates to more than one and half centuries ago. The first documented Chinese international student studying in the United States was Yung Wing, who came to the US in 1847 at the age of 18. He graduated from Yale University in 1854 and returned to China the same year. Yung Wing strongly affirmed that the Western science and technical knowledge would strengthen China and concluded that "the rising generation of China should enjoy the same educational advantage that I had enjoyed and that through western education China may be regenerated" (Wing, 1909, p. 41). Thus, with this mind, he persuaded the Qing court to send students to the U.S. to learn the new knowledge. Consequently, in 1872, thirty teenage students entered U.S. universities and China gradually opened its door to Western education (Chu, 2004).

During its last year of reign from 1909 to 1911, the Qing court sent 179 students to America. After the founding of the Republic of China, large numbers of students joined the study abroad movement. Between 1912 and 1925, U.S. universities gained 852 Chinese students, including 43 women. By 1936, before the Sino-Japan War, the numbers grew to 1,002. Following that period, however, Chinese immigration to U.S. universities decreased due in large part to the international unrest caused by World Wars I and II (Chu, 2004).

During the war years, 1937-1945, the number dropped to less than a hundred per

year. After 1949 the flow of students from Mainland China to America stopped

completely. After the breakout of the Korean War in June 1950, the United States

banned the Chinese students in the country to return to China on the grounds that

their scientific and technical skills would aid the Communist regime in Mainland

China. It also enticed the students to remain in America by liberally dispensing

the status of permanent residence. Some students, who persisted in their demand

to return to China, were imprisoned without trial or hearing. The ban was lifted in

1955, about two years after the end of the Korean War. (Chu, 2004, p. 15)

After the founding of People's Republic of China in 1949, the study abroad policy was

changed due to communist party leadership. As a result, the destinations of Chinese students

abroad were socialistic countries such as the Soviet Russia and those in Eastern Europe. Between

1950 and 1960, Chinese international students numbered 10,678. After the Chinese Cultural

Revolution in 1969, China stopped all international travel for education until the legal seat of

UNESCO of the People's Republic of China resumed in 1971. The number of Chinese students

abroad was 1,548 between 1972 and 1978 (Yao, 2004).

In 1978, when the Chinese economic reform opened trade markets, the study abroad

policies also changed. Deng Xiaoping, the Chair of Communist Party during the time, was "the

key person for the policy changes who believed that the most important and efficient way of

development for a country was enhancing national science and technology level" (Yao, 2004, p.

7). Under his leadership, the new policy for studying abroad became the turning point for

Chinese students. In 1993, a clear and confirmed basic policy stated that the Chinese government

supported students studying abroad, encouraged them to return, and guaranteed their freedom to

leave and return. Accordingly, the Chinese government founded organizations to regulate, supervise, and serve overseas students. "[Fifty-five] education offices aimed to manage Chinese overseas educational affairs have been established in Chinese embassies of 38 countries, and more than 2000 Chinese overseas scholars and students associations set up with the help of the education offices of Chinese embassies worldwide" (p. 7).

The Ministry of Education founded the Chinese Service Centre for Scholarly Exchange (CSCSE) and the China Scholarship Council (CSC) to manage the relevant domestic affairs of studying abroad. Between 1978 and 2003 the population of Chinese students studying abroad grew to about 700,000 with approximately 173,000 returning to China. At the time of this study, China was the largest source country for overseas students in the world with destinations including the United Kingdom, America, Australia, Germany, Canada, France, Japan, and Russia (Yao, 2004).

In the 1980s the most popular destinations for Chinese students were the United States., West Germany, Japan, the United Kingdom, France, and Canada. In 1981 the United States alone hosted 45.7% of Chinese overseas students. By the1990s countries such as Australia, New Zealand, Singapore, and South Korea became Chinese students' new destinations; however, the percentage of students coming to the U.S. was still high. However, visa restrictions following the Sept. 11 attacks caused difficulties; thus, many Chinese students had to travel elsewhere even though they preferred U.S. schools (Yao, 2004). When U.S. universities began actively recruiting Chinese students and the government eased visa restrictions, Chinese students returned to study in U.S. universities, eventually making China the leading sending country.

Chinese Learners

Coming from a completely different culture, Chinese international students tend to encounter more cultural dissonance. In Chinese schools, Confucianism plays a vital role, and instructors encourage students to memorize the classics (Redding, 1990). "The strength of the philosophy is closely linked with education and learning and the traditional educational methods (such as rote learning and the application of examples) have remained largely unchanged" (Chan, 1999, p. 298). Beginning in kindergarten, parents and teachers impose regulations on children about appropriate behavior at home, in school, and in public; in elementary school students learn not to speak or answer questions unless they raise their hands and get permission from the teacher. Due to their authority in the teacher-centered mode of each class, teachers train students to be mechanized recipients of knowledge from the authority figure (Wang, 2011). As opposed to this pedagogy, the United States educator emphasizes individualism and personal recognition, and relies on explicit verbal messages to deliver most of the conversational information (Knutson, Komolsevin, Chatiketu, & Smith, 2002). As the two cultures collide, it creates problems in the ways in which Chinese international students confront, recognize, and deal with those differences.

From a sociological perspective, people may display fear in new surroundings. According to Stephan and Stephan (1985) people fear four types of negative consequences when interacting with strangers: a) the negative consequences for self-concept; b) the negative behavioral consequences; c) the negative evaluations by strangers; and d) the negative evaluations by in-group members. Anxiety increases when a newcomer to a different culture interacts with the local people and receives stigmatized feedback.

Chinese Learners, Intercultural Communication Competence, and Intercultural Communication Apprehension

A variety of studies examined the communication issues of Chinese international students. Their interpersonal communication styles influenced the ICC in Chinese students according to Holmes (2006). In order to maintain positive *face* or image, the Chinese culture teaches Chinese international students to be relatively silent (Morsbach, 1976; Oliver, 1971). The U.S. inquiry-based classroom style challenges Chinese students' approaches to communication (Holmes, 2006). Based on their degree of intercultural awareness and sensitivity, some "appeared to be engaging in critical self-reflection, and evaluating appropriate and effective communication strategies to engage in boundary crossing" (p. 29). Contrasting Chinese international students and New Zealand students, Holmes also indicated that "ICC, defined as goal achievement and mutual understanding, was not always happening" (p. 29).

In terms of intercultural communication apprehension, Lu and Hsu (2008) found out second language task were more anxiety-provoking, which could lead to higher self-reported CA. That is, Chinese students must complete their academic performance within a second-language context, which may cause CA. Furthermore, Chinese high-context culture, defined as valuing group harmony over individual assertiveness, produced higher CA (Hu & Grove, 1991; Morishima, 1981). Zhang, Butler, and Pryor (1996) compared communication apprehension levels between Chinese and U.S. college students. Their findings supported the notion that high-context cultures produced higher levels of CA. However, a friendly communication environment with accepting attitude from native peoples should help reduce communication apprehension.

Summary

The purpose of this quantitative study was to study Chinese international students' ICC and ICA. This chapter reviewed the related literature regarding ICC and ICA, the Chinese and U.S. cultures, and Chinese international students. This review of the literature clearly revealed the relationship between ICC, ICA, and cultural origin.

CHAPTER 3

RESEARCH METHODOLOGY

Introduction

The purpose of this study was to examine the relationship between Chinese international students' intercultural communication competence (ICC) and intercultural communication apprehension (ICA) in the United States. Analysis involved examining various components related to students' ICC and ICA experiences. Components included the students' gender, age, the number of months studying in U.S, number of U.S. friends, level of education, and the frequency with which students spoke English. This study sought statistically significant comparisons and possible relationships between Chinese international students' ICC and ICA.

Research Questions and Null Hypotheses

The study addressed several research questions to determine the relationship between Chinese international students' ICC and ICA. In addition, further questions explored the differences in the levels of ICC and ICA on diverse variables such as age, gender, and number of months studying in the U.S.

RQ1: Is there a significant relationship between the intercultural communication competence and intercultural communication apprehension among Chinese international students?

H_o1: There is no significant relationship between the intercultural communication competence and intercultural communication apprehension among Chinese international students.

RQ2: Is there a significant difference in levels of intercultural communication competence between Chinese international male and female students?

H_o2: There is no significant difference in levels of intercultural communication competence between Chinese international male and female students.

RQ3: Is there a significant difference in levels of intercultural communication competence among Chinese international students based on the number of months they have studied in the U.S.?

H_o3: There is no significant difference in levels of intercultural communication competence among Chinese international students based on the number of months they have studied in the U.S.

RQ4: Is there a significant difference in levels of intercultural communication competence based on the age of Chinese international students?

H_o4: There is no significant difference in levels of intercultural communication competence based on the age of Chinese international students.

RQ5: Is there a significant difference in levels of intercultural communication competence among Chinese international students based on their number of U.S. friends?

H_o5: There is no significant difference in levels of intercultural communication competence among Chinese international students based on their number of U.S. friends.

RQ6: Is there a significant difference in levels of intercultural communication competence among Chinese international students based on the frequency with which they speak English?

H_o6: There is no significant difference in levels of intercultural communication competence among Chinese international students based on the frequency with which they speak English.

RQ7: Is there a significant difference in levels of intercultural communication competence among Chinese international students based on their level of education?

H_o7: There is no significant difference in levels of intercultural communication competence among Chinese international students based on their level of education.

RQ8: Is there a significant difference in levels of intercultural communication apprehension between Chinese international male and female students?

H_o8: There is no significant difference in levels of intercultural communication apprehension between Chinese international male and female students.

RQ9: Is there a significant difference in levels of intercultural communication apprehension among Chinese international students based on the number of months they have studied in the U.S.?

H_o9: There is no significant difference in levels of intercultural communication apprehension among Chinese international students based on the number of months they have studied in the U.S.

RQ10: Is there a significant difference in levels of intercultural communication apprehension based on the age of Chinese international students?

H_o10: There is no significant difference in levels intercultural communication apprehension based on the age of Chinese international students.

RQ11: Is there a significant difference in levels of intercultural communication apprehension among Chinese international students based on their number of U.S. friends?

H_o11: There is no significant difference in levels of intercultural communication apprehension among Chinese international students based on their number of U.S. friends.

RQ12: Is there a significant difference in levels of intercultural communication apprehension among Chinese international students based on the frequency with which they speak English?

H_o12: There is no significant difference in levels of intercultural communication apprehension among Chinese international students based on the frequency with which they speak English.

RQ13: Is there a significant difference in levels of intercultural communication apprehension among Chinese international students based on their level of education?

H_o13: There is no significant difference in levels of intercultural communication apprehension among Chinese international students based on their level of education.

All research questions, null hypotheses, and statistical tests for this study are in Table 1.

Table 1

Research Questions, Null Hypotheses, and Statistical Tests

Research Question	Null Hypothesis (H_o)	Statistical Tests
Is there a significant relationship between the intercultural communication competence and intercultural communication apprehension among Chinese international students	There is no significant relationship between the intercultural communication competence and intercultural communication apprehension among Chinese international students.	Pearson correlation coefficient
Is there a significant difference in levels of intercultural communication competence between Chinese international male and female students?	There is no significant difference in levels of intercultural communication competence between Chinese international male and female students.	Independent sample *t* test
Is there a significant difference in levels of intercultural communication competence among Chinese international students based on the number of months they have studied in the U.S.?	There is no significant difference in levels of intercultural communication competence among Chinese international students based on the number of months they have studied in the U.S.	One way ANOVA

Table 1 (continued)

Research Question	Null Hypothesis (H_o)	Statistical Tests
Is there a significant difference in levels of intercultural communication competence based on the age of Chinese international students?	There is no significant difference in levels of intercultural communication competence based on the age of Chinese international students.	One way ANOVA
Is there a significant difference in levels of intercultural communication competence among Chinese international students based on their number of U.S. friends?	There is no significant difference in levels of intercultural communication competence among Chinese international students based on their number of U.S. friends.	Pearson correlation coefficient
Is there a significant difference in levels of intercultural communication competence among Chinese international students based on the frequency with which they speak English?	There is no significant difference in levels of Chinese International students' intercultural communication competence in regard to the frequency with which they speak English.	Two way ANOVA
Is there a significant difference in levels of intercultural communication competence among Chinese international students based on their level of education?	There is no significant difference in levels of intercultural communication competence among Chinese international students based on their level of education.	One way ANOVA
Is there a significant difference in levels of intercultural communication apprehension between Chinese international male and female students?	There is no significant difference in levels of intercultural communication apprehension between Chinese international male and female students.	Independent sample t test
Is there a significant difference in levels of intercultural communication apprehension among Chinese international students based on the number of months they have studied in the U.S.?	There is no significant difference in levels of intercultural communication apprehension among Chinese international students based on the number of months they have studied in the U.S.	One way ANOVA
Is there a significant difference in levels of intercultural communication apprehension based on the age of Chinese international students?	There is no significant difference in levels intercultural communication apprehension based on the age of Chinese international students.	One way ANOVA

Table 1(continued)

Research Question	Null Hypothesis (H_o)	Statistical Tests
Is there a significant difference in levels of intercultural communication apprehension among Chinese international students based on their number of U.S. friends?	There is no significant difference in levels of intercultural communication apprehension among Chinese international students based on their number of U.S. friends.	Pearson correlation coefficient
Is there a significant difference in levels of Chinese International students' intercultural communication apprehension in regard to the frequency they speak English?	There is no significant difference in levels of Chinese International students' intercultural communication apprehension in regard to the frequency they speak English.	Two way ANOVA
Is there a significant difference in levels of Chinese International students' intercultural communication apprehension in regard to the level of education?	There is no significant difference in levels of intercultural communication apprehension among Chinese international students based on their level of education	One way ANOVA

Population

The population consisted of Chinese students enrolled in two 4-year universities in the Southeastern U.S. The researcher first searched the web pages of potential universities to determine the population of Chinese international students and selected the universities according to their number of Chinese students enrolled. Each university had to contain over 100 Chinese students, including undergraduate students, graduate students, and exchange students. Thus, it was likely the student population of those universities would represent the research population. One hundred three participants responded to the survey, including 40 male and 63 female students.

Instrumentation

The study employed a quantitative research method. A questionnaire included two measurements with which to gauge the participants' ICC level regarding their intercultural

sensitivity and ICA. The questionnaire contained two parts composed in English because knowing English was among the vital factors of effective intercultural communication. The first part had five questions regarding participants' demographic information (see Appendix A). The demographics facilitated grouping students to analyze the levels of ICC and ICA based on different variables. The second part covered two measurements: the Intercultural Sensitivity Scale (ISS) (Chen & Starosta, 2000) and the Personal Report of Intercultural Communication Apprehension (PRICA) (Nueliep & McCroskey, 1997) (see Appendix B). Chen and McCroskey, respectively, granted permission to use the two instruments (See Appendix E and F).

The ISS developed by Chen and Starosta (2000) contained 24 statements about the individual's intercultural sensitivity. A Likert-type instrument contained the 24 statements with 5 representing *Strongly Agree* and 1 representing *Strongly Disagree*. The 24 statements grouped into five main factors, as follows (see also):

- Seven questions, such as *I enjoy interacting with people from different cultures*, measured the *Interaction Engagement* of respondents.

- Six questions, such as *I respect the values of people from different* cultures, measured the *Respect for Cultural Differences* in respondents.

- Five questions, such as *I feel confident when interacting with people from different cultures* measured the *Interaction Confidence* of respondents.

- Three questions, such as *I get upset easily when interacting with people from different cultures* measured the *Interaction Enjoyment* of respondents.

- Three questions, such as *I try to obtain as much information as I can when interacting with people from different cultures* measured the *Interaction Attentiveness* of respondents.

Table 2 lists all the five factors of 24 statements on the Intercultural Sensitivity Scale.

Table 2

Five Factors of 24 Statements on the Intercultural Sensitivity Scale

Factors	Statement
Interaction Engagement	1. I enjoy interacting with people from different cultures.
	11. I tend to wait before forming an impression of culturally-distinct counterparts.
	13. I am open-minded to people from different cultures.
	21. I often give positive responses to my culturally different counterpart during our interaction.
	22. I avoid those situations where I will have to deal with culturally-distinct persons.
	23. I often show my culturally-distinct counterpart my understanding through verbal or nonverbal cues.
	24. I have a feeling of enjoyment towards differences between my culturally-distinct counterpart and me.
Respect for Cultural Differences	2. I think people from other cultures are narrow-minded.
	7. I don't like to be with people from different cultures.
	8. I respect the values of people from different cultures.
	16. I respect the ways people from different cultures behave.
	18. I would not accept the opinions of people from different cultures.
	20. I think my culture is better than other cultures.
Interaction Confidence	3. I am pretty sure of myself in interacting with people from different cultures.

Table 2 (continued)

Factors	Statement
	4. I find it very hard to talk in front of people from different cultures.
	5. I always know what to say when interacting with people from different cultures.
	6. I can be as sociable as I want to be when interacting with people from different cultures.
	10. I feel confident when interacting with people from different cultures.
Interaction Enjoyment	9. I get upset easily when interacting with people from different cultures.
	12. I often get discouraged when I am with people from different cultures.
	15. I often feel useless when interacting with people from different cultures.
Interaction Attentiveness	14. I am very observant when interacting with people from different cultures.
	17. I try to obtain as much information as I can when interacting with people from different cultures.
	19. I am sensitive to my culturally-distinct counterpart's subtle meanings during our interaction.

The ISS instrument "has demonstrated strong reliability and appropriate concurrent and predictive validity" (Chen & Starosta, 2000, p. 12). A high internal consistency with .88 and .86 reliability coefficients was evident in two separate studies (Chen & Starosta, 2000). In order to compute an overall score from the 24 statements in the instrument, items 2, 4, 7, 9, 12, 15, 18, 20,

and 22 should be reverse-coded before summing the 24 items "with higher scores on the ISS suggesting higher level of sensitivity in intercultural action" (p.12).

The Personal Report of Intercultural Communication Apprehension (PRICA) consists of 14 statements according to a conceptualization of ICA as the "fear of anxiety associated with either real or anticipated communication with people from different groups, especially cultural and/or ethnic groups" (Neuliep & McCroskey, 1997, p. 148). The measurement developed from the Personal Report of Communication Apprehension (PRCA-24) (McCroskey, 1982), which measures individual communication apprehension. The 24-item Likert-type PRCA instrument is the most widely used and valid measure of trait-like CA. It assesses individual's CA in four separate communication contexts: public, small group, meeting, and interpersonal. PRCA-24 consistently shows high reliability and validity. According to McCroskey, Beatty, Kearney, and Plax (1985) studies reported alpha reliability coefficients ranging from .93-.95. The test-retest coefficients were greater than .80, which indicated that the measurement is stable across time (Rubin, Graham, & Mignerey, 1990). The findings from PRCA-24 were also replicable. For example, various studies (Beatty, 1987, 1988; Beatty & Friedland, 1990; Beatty, Balfantz, & Kuwabara, 1989) supported scores in each of the four areas showing anxiety experienced in a public speaking context (McCroskey & Beatty, 1984).

The PRICA adapted a five-step Likert-type response format from PRCA-24. It includes 14 items, "half worded positively and half worded negatively, were written to reflect interaction with people from different cultures" (Neuliep & McCroskey, 1997, p. 148). It originally consisted of 16 items; however, Item #1 (*I dislike interacting with people from different cultures*) and Item #15 (*I enjoy interacting with people from different cultures*) loaded into separate factors. "A Scree test indicated that a one factor solution was the most parsimonious interpretation of the

factor structure" (p. 148). Thus, the PRICA adopted in this study has only 14 items. Because the PRICA directly modeled on PRCA-24, it should have similar reliability and validity. Reliability for the scale was .942, determined by Cronbach's alpha. "As expected the PRICA was significantly correlated with the PRCA-24, r (196) = .58, $p<.01$" (p. 148).

The possible highest PRICA score is 70 and the possible lowest scores is 14. The midpoint of the PRICA score is 42. Scores below 32 indicate low intercultural CA and scores above 52 indicate high intercultural CA. Scores ranging between 32 and 52 indicate a moderate level of intercultural CA (Apaibanditkul, 2006; Neuliep & McCroskey, 1997; Reynolds, Woods, & Baker, 2006).

Data Collection

The survey in the current study obtained data on participants' intercultural communication competence and intercultural communication apprehension. "The survey method is one of the most important data collection methods in the social sciences, and as such it is used extensively to collect information on numerous subjects of research" (Nachmias & Nachmias, 2008, p. 225). A survey can be through mail questionnaires, personal interviews, telephone surveys, or via the Internet. The self-completion questionnaire is the most prevalent method (Aldridge & Levine, 2001). An online survey was appropriate for this study. Following Institutional Research Board (IRB) approval, a letter of request for permission to distribute questionnaires to Chinese international students went to the two universities. A telephone call followed up 2 weeks later. The two universities agreed to distribute questionnaires or forward an electronic copy to Chinese international students in their database. The survey included an introduction to the research, informed consent, and instruments. The survey questionnaire went by e-mail to approximately 200 Chinese international students through the education providers.

Internet-based surveys have several advantages compared to other data collection methods. Certain areas of advantage include: a)the Internet is lower in cost without requiring a trained staff of interviewers; b) it reduces bias errors that might be caused by "the personal characteristics of interviewers and variability in their skills" (Nachmias & Nachmias, 2008, p. 207); c) it maintains greater anonymity for respondents in absence of an interviewer; d) it allows respondents to take longer to answer each question; and e) it permits wider geographic contact (Nachmias & Nachmias, 2008; Taylor, 2000; Yun & Trumbo, 2000). On the other hand, researchers should consider the disadvantages before employing online survey methodology. First, researchers cannot guarantee the accuracy of the information without having deep contact with participants (Wright, 2005). The same person may have several email addresses, inactive, or invalid email addresses, which can affect a random sample (Andrews, Nonnecke, & Preece, 2003; Couper, 2000; Wright, 2005). In addition, self-selection bias creates another limitation (Stanton, 1998; Thompson, Surface, Martin, & Sanders, 2003; Witmer, Colman, & Katzman, 1999; Wright, 2005). Some persons are likely to complete online surveys, while others may ignore them.

Another concern with any type of survey is to offer financial incentives to increase the response rate. Participants have a chance to win a prize with the winner randomly selected from the pool of respondents. However, this method may challenge the trustworthiness of the data or increase multiple responses from individual respondents in order to increase their chances of winning (Konstan, Rosser, Ross, Stanton, & Edwards, 2005; Wright, 2005).

The current quantitative research obtained an overview of Chinese international students' intercultural communication competence and intercultural communication apprehension. It examined the relationship between ICC and ICA based on students' intercultural sensitivity. As a

secondary query, the study discovered the ways in which ICC and ICA changed under different factors.

Pilot Study

The researcher conducted a pilot study of Chinese international students to test their understanding of the English words on the Intercultural Sensitivity Scale (ISS) and the Personal Report of Intercultural Communication Apprehension (PRICA). Five Chinese international students from five different disciplines and three different age groups commented on the test language. Participants gathered in a classroom of the College of Education at East Tennessee State University and read the approved questionnaire under the researcher's supervision and direction. Students had assurances that their information would be only for the purposes of this study, that their participation was completely voluntary, and that all data collected would remain confidential. Each participant signed an informed consent form. Participants had 10 minutes to read the questionnaire. All participants failed to identify the English words *counterpart*, *jumbled*, and *subtle*. Thus, the researcher added Chinese explanations to the questionnaire to help participants understand the questions and offer more correct answers.

Data Analysis

During analysis a series of one-way analyses of variance (ANOVA) tested the differences on the levels of ICC and ICA according to participants' ages, genders, and number of years studying in the U.S. Demographic questions divided the participants into subgroups. An independent samples *t* test determined the strength of the relationship between ICC and ICA. The analysis of research questions 1, 5, and 11 was through a Pearson correlation coefficient. A one way ANOVA analyzed research questions 3, 4, 7, 9, 10, and 13, while two way ANOVAs

analyzed research questions 6 and 12. Research questions 2 and 8 employed independent sample *t* tests. The level of significance for all null hypotheses was.05.

Summary

The analyses of the quantitative data determined the study results. The online survey questionnaire provided the quantitative data needed to perform the study of the relationship between Chinese international students' ICC and ICA. The study explored whether a statistically significant relationship existed between the ICC and ICA as well as the level of ICC/ICA based on different variables such as age, gender, numbers of months studying in U.S., number of U.S. friends, level of education, and the frequency of speaking English. The results could help Chinese international students cope with intercultural communication related questions and enhance further studies in the field.

CHAPTER 4

RESULTS AND ANALYSIS OF DATA

The purpose of this study was to investigate the relationship between intercultural communication competence (ICC) and intercultural communication apprehension (ICA) among Chinese international students. The study analyzed various components related to students' ICC and ICA experiences with the level of ICC and ICA. Components included the gender, age, the number of months studying in the U.S, number of U.S. friends, level of education, and the frequency with which the students spoke English. Participants included 103 Chinese international students studying at two 4-year universities in the U.S. The respondents included 40 male and 63 female students, 44 undergraduate students, 43 master's students, and 16 students pursuing a doctoral degree and beyond.

This chapter presents the analyzed data that answer the 13 research questions and 13 null hypotheses. Two data measures included seven demographic questions and 38 survey questions measured on a 5-point Likert-type scale. Data derived from the Chinese International Students' Intercultural Communication Competence and Intercultural Communication Apprehension in the USA Survey (Appendices A to D) administered through an online survey format. Each institution sent out the survey twice and 103 students responded.

Research Question #1

Research Question #1: Is there a significant relationship between the intercultural communication competence and intercultural communication apprehension among Chinese international students?

H_o1: There is no significant relationship between the intercultural communication competence and intercultural communication apprehension among Chinese international students.

A Pearson correlation coefficient tested the relationship between Chinese International students' intercultural communication competence and intercultural communication apprehension. The results of the analysis revealed a strong negative relationship between ICC ($M = 84.99$, $SD = 8.66$) and ICA ($M = 36.72$, $SD = 9.45$) and a statistically significant correlation [$r(103) = -.71$, $p < .01$]; therefore, the null hypothesis was rejected. In general, the results suggested that students with higher ICC tended to have lower ICA. Figure 1 shows the correlation of ICC and ICA.
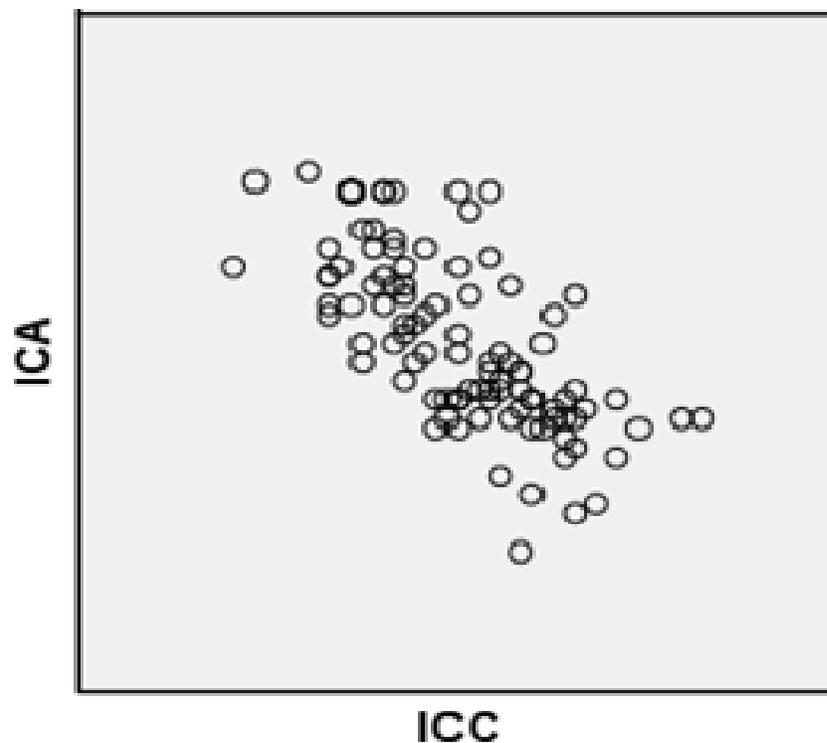
Figure 1. Correlation of ICC and ICA

Research Question #2

Research Question #2: Is there a significant difference in levels of intercultural communication competence between Chinese international male and female students?

H$_o$2: There is no significant difference in levels of intercultural communication competence between Chinese international male and female students.

An independent-samples *t* test evaluated whether the levels of Chinese international students' intercultural communication competence differed between male and female students. The level of ICC was the test variable and the grouping variable was male or female student. The test was not significant, $t(98) = 0.96$, $p = 0.34$; therefore, the null hypothesis was retained. The effect size for this analysis ($d = 0.19$) was smaller than Cohen's convention for a small effect ($d = 0.20$). These results indicated that male students ($M = 85.95$, $SD = 7.07$) and female students ($M = 84.38$, $SD = 9.54$) tended to have similar levels of intercultural communication competence. The 95% confidence interval for the difference in means was -1.69 to 4.83. Figure 2 shows the distributions for the two groups.
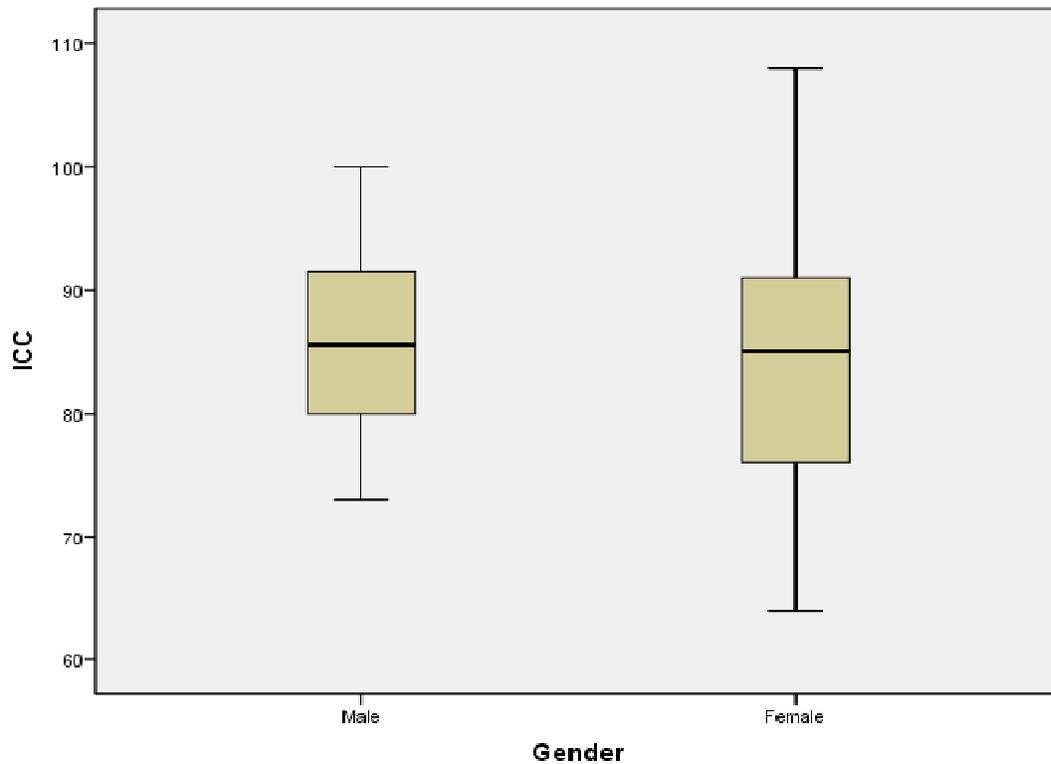
Figure 2. Distribution of levels of ICC for male and female students

Research Question #3

Research Question #3: Is there a significant difference in levels of intercultural communication competence among Chinese international students based on the number of months they have studied in the U.S.?

H_o3: There is no significant difference in levels of intercultural communication competence among Chinese international students based on the number of months they have studied in the U.S.

A one-way analysis of variance evaluated the relationship between changes in Chinese international students' intercultural communication competence and the number of months they studied in the U.S. The division of the factor variable, the number of months, was in five levels (0 to 12 months, 13 to 24 months, 25 to 36 months, 37 to 48 months, and 49 months or longer). The dependent variable was the level of ICC. The ANOVA was significant, $F(4, 98) = 2.87$, $p = .03$, therefore rejecting the null hypothesis. The strength of the relationship between the levels of ICC and the change in the number of month of studying in U.S., as assessed by η^2, was a medium effect (.11).

Because the overall F test was significant, post hoc multiple comparisons assessed pairwise difference among the means of the five groups. Because of the assumption of equal variances, the appropriate post hoc test was a Tukey procedure. There was a significant difference in the means between the group of students staying in the U.S. for 2 to 3 years (25 to 36 months) and the group of students staying in U.S. for more than 4 years (49 months and longer) ($p = .02$). However, none of other comparisons showed significance. The group of students staying at U.S. longer showed a greater increase in ICC compared to groups of students

staying in the U.S. for shorter periods. The 95% confidence intervals for the pairwise differences as well as the means and standard deviations for the five groups are in Table 3.

Table 3

95% Confidence Intervals of Pairwise Differences in Mean Changes in Number of Months in U.S.

Number of Months	N	M	SD	0 to 12	13 to 24	25 to 36	37 to 48
0 to 12 months	40	85.28	8.78				
13 to 24 months	24	83.67	8.88	-4.39 to 7.61			
25 to 36 months	12	81.08	5.24	-3.46 to 11.84	-5.63 to 10.8		
37 to 48 months	13	83.46	7.86	-5.60 to 9.23	-7.8 to 8.21	-11.68 to 6.92	
49 months or longer	14	91.21	8.71	-13.15 to 1.28	-15.36 to .27	-19.27 to -.99	-16.7 to 1.20

Research Question #4

Research Question #4: Is there a significant difference in levels of intercultural communication competence based on the age of Chinese international students?

H_o4: There is no significant difference in levels of intercultural communication competence based on the age of Chinese international students.

A one-way analysis of variance evaluated the relationship between levels of Chinese international students' intercultural communication competence and the students' ages. The factor variable, the age, created a division into three groups: 18 to 21 years old, 22 to 25 years

old, 26 years old or older. The dependent variable was levels of ICC of the different age groups.

The ANOVA was not significant, $F(2, 100) = .34$, $p = .71$, therefore retaining the null hypothesis.

The strength of the relationship between levels of Chinese International students' ICC and

students' age, as assessed by η^2, was small (.01). The results indicated no significant effect in

students' level of ICC by age. The means and standard deviations for the three age groups are in

Table 4.

Table 4

Means and Standard Deviations of Three Age Groups' ICC

Groups by Age	N	M	SD
18 to 21 years	26	83.92	10.31
22 to 25 years	56	85.11	8.16
26 years old or older	21	86.00	8.02

Research Question #5

Research Question #5: Is there a significant difference in levels of intercultural

communication competence among Chinese international students based on their number of U.S.

friends?

H_o5: There is no significant difference in levels of intercultural communication

competence among Chinese international students based on their number of U.S. friends.

A Pearson correlation coefficient tested the relationship between levels of intercultural

communication competence among Chinese international students based on their number of U.S.

friends. Before analysis, the researcher removed outliers, which changed the results. Four

students reported having over 100 friends, another four reported having over 150 friends, and

one student reported having over 200 friends, while others reported having fewer than 10 friends, e.g., 0 to 3 friends (46), 4 to 7 friends (30), and 8 to 10 friends (10). The analysis revealed no statistically significant correlation [$r(94) = .10$, $p = .35$] between ICC ($M = 85.11$, $SD = 8.54$) and the number of U.S. friends ($M = 2.97$, $SD = 2.19$), therefore retaining the null hypothesis. In general, the results suggested little effect in ICC based on numbers of U.S. friends. Figure 3 shows the correlation between ICC and the number of friends.
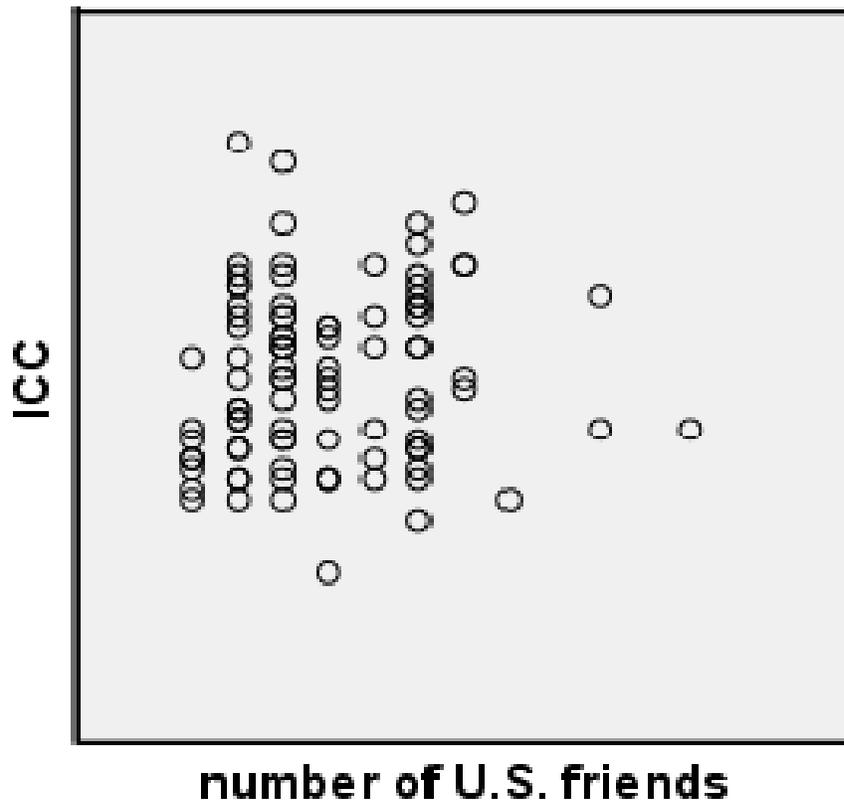
Figure 3. Correlation of ICC and number of friends

Research Question #6

Research Question #6: Is there a significant difference in levels of intercultural communication competence among Chinese international students based on the frequency with which they speak English?

H_o6: There is no significant difference in levels of intercultural communication competence among Chinese international students based on the frequency with which they speak English.

A 4 × 4 ANOVA evaluated the effects on levels of Chinese international students' intercultural communication competence based on the frequency with which they spoke English in and outside of class. The means and standard deviations for ICC as a function of the two factors are in Table 3. No student reported *Never* speaking English in or outside of class. The ANOVA indicated no significant interaction between speaking English in and outside class, $F(5, 91) = 1.10$, $p = .37$, partial $\eta^2 = .06$, main effects for speaking English in class $F(3, 91) = 0.52$, $p = .67$, partial $\eta^2 = .02$, and significant main effects for speaking English outside class $F(3, 91) = 7.28$, $p = .017$, partial $\eta^2 = .19$. The main effect of speaking English outside class indicated that students frequently speaking English out of class tended to have higher ICC than those who did not. The follow-up analyses studied the main effect for speaking English out of class, which consisted of all pairwise comparisons among the four frequencies. The Tukey HSD procedure controlled for Type I error across the pairwise comparisons. The results of this analysis indicated that the group reporting *Frequently* had significantly higher ICC scores. Table 5 shows the means and standard deviations for levels of ICC.

Table 5

Means and Standard Deviations for Levels of ICC

Frequency speaking English in class	Frequency speaking English outside class	*M*	*SD*	*N*
Infrequently	Infrequently	76.63	6.26	8
	Sometimes	83.00	7.58	5
	Frequently	94.50	2.12	2
Sometimes	Infrequently	81.82	5.78	11
	Sometimes	82.22	7.43	23
	Frequently	93.33	2.16	6
Frequently	Infrequently	88.50	12.02	2
	Sometimes	85.30	9.24	10
	Frequently	90.14	3.76	7
Always	Sometimes	82.00	7.01	14
	Frequently	92.58	8.46	12
	Always	88.67	17.50	3

Research Question #7

Research Question #7: Is there a significant difference in levels of intercultural communication competence among Chinese international students based on their level of education?

H_o7: There is no significant difference in levels of intercultural communication competence among Chinese international students based on their level of education.

A one-way analysis of variance evaluated the relationship between levels of Chinese international students' intercultural communication competence and students' level of education. The factor variable, the level of education, created three groups: undergraduate, master's level, and doctorate and beyond. The dependent variable was levels of ICC from different groups of level of education. The ANOVA was not significant, $F(2, 100) = 1.38$, $p = .26$, therefore retaining the null hypothesis. The strength of the relationship between levels of Chinese international students' ICC and students' level of education, as assessed by η^2, was small (.03). The results indicated not significant effect between students' level of ICC and their level of education. The means and standard deviations for the three groups by levels of education are in Table 6.

Table 6

Means and Standard Deviations of Three Groups by Levels of Education ICC

Levels of Education	N	M	SD
Undergraduate	44	83.68	9.07
Master's level	43	86.65	8.39
Doctorate and Beyond	16	84.12	7.96

Research Question #8

Research Question #8: Is there a significant difference in levels of intercultural communication apprehension between Chinese international male and female students?

H_o8: There is no significant difference in levels of intercultural communication apprehension between Chinese international male and female students.

An independent-samples *t* test evaluated whether the levels of Chinese international students' intercultural communication apprehension differed between male and female students. The level of ICA was the test variable and the grouping variable was male or female students. The test was not significant, $t(93) = -0.86$, $p = 0.39$, therefore retaining the null hypothesis. The effect size for this analysis ($d = 0.17$) was smaller than Cohen's convention for a small effect ($d = 0.20$). The results indicated that male students ($M = 35.75$, $SD = 8.51$) and female students ($M = 37.33$, $SD = 10.03$) tended to have similar levels of intercultural communication apprehension. The 95% confidence interval for the difference in means was -5.25 to 2.08. Figure 4 shows the distributions for the two groups.
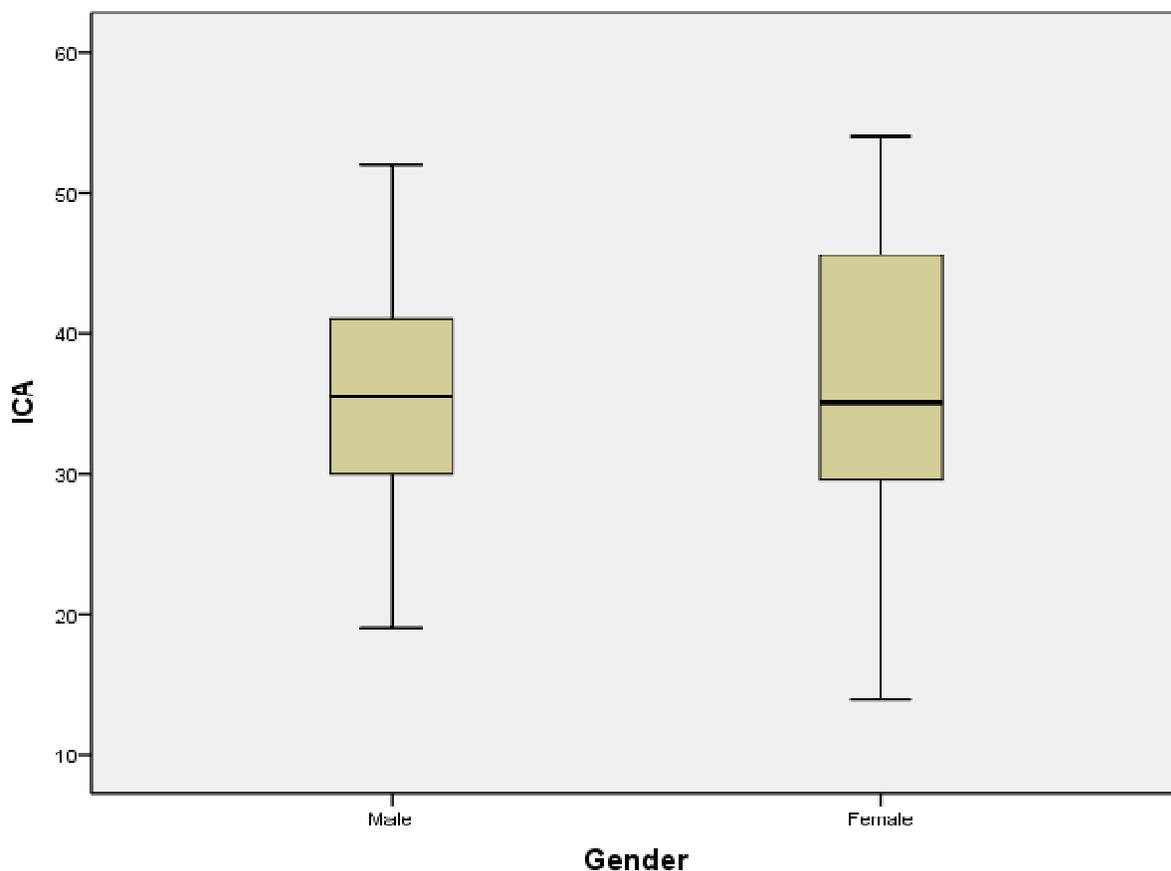
Figure 4. Distribution of levels of ICA for male and female students

Research Question #9

Research Question #9: Is there a significant difference in levels of intercultural communication apprehension among Chinese international students based on the number of months they have studied in the U.S.?

H_o9: There is no significant difference in levels of intercultural communication apprehension among Chinese international students based on the number of months they have studied in the U.S.

A one-way analysis of variance evaluated the relationship between levels of Chinese international students' intercultural communication apprehension and the number of months students had been in the U.S. The factor variable, the number of months, created five levels: 0 to 12 months, 13 to 24 months, 25 to 36 months, 37 to 48 months, and 49 months or longer. The dependent variable was levels of ICA from different groups of months. The ANOVA was not significant, $F(4, 98) = 1.20$, $p = .32$, therefore retaining the null hypothesis. The strength of the relationship between levels of Chinese international students' ICA and number of months staying in U.S., as assessed by η^2, was small (.05). The results indicated little significant effect on students' level of ICA by how long they had been in the U.S. The means and standard deviations for the 5 groups are in Table 7.

Table 7

Means and Standard Deviations of Groups of Months ICA

Months in U.S.	N	M	SD
0 to 12 months	40	36.50	9.47
13 to 24 months	24	37.37	9.85
25 to 36 months	12	37.75	8.67
37 to 48 months	13	39.92	10.17
49 months and longer	14	32.36	8.32

Research Question #10

Research Question #10: Is there a significant difference in levels of intercultural communication apprehension based on the age of Chinese international students?

H_o10: There is no significant difference in levels intercultural communication apprehension based on the age of Chinese international students.

A one-way analysis of variance evaluated the relationship between levels of Chinese international students' intercultural communication apprehension and students' age. The factor variable, the age factor, created three groups: 18 to 21 years old, 22 to 25 years old, 26 years old or older. The dependent variable was levels of ICA from different age groups. The ANOVA was not significant, $F(2, 100) = .47$, $p = .63$, therefore retaining the null hypothesis. The strength of the relationship between levels of Chinese international students' ICA and students' age, as assessed by η^2, was small (.02). The results indicated no significant effect on students' level of ICA by age. The means and standard deviations for the three age groups are in Table 8.

Table 8

Means and Standard Deviations of Three Age Groups ICA

Groups by Age	N	M	SD
18 to 21 years	26	38.15	11.48
22 to 25 years	56	36.48	8.97
26 years or older	21	35.57	8.09

Research Question #11

Research Question #11: Is there a significant difference in levels of intercultural communication apprehension among Chinese international students based on their number of U.S. friends?

H_o11: There is no significant difference in levels of intercultural communication apprehension among Chinese international students based on their number of U.S. friends.

A Pearson correlation coefficient tested the relationship between Chinese international students' intercultural communication apprehension and their number of U.S. friends. Before analysis, the researcher removed outliers, which changed the conclusions. Four students reported having over 100 friends, another four reported having over 150 friends, and one student reported having over 200 friends, while others reported having fewer than 10 friends, e.g., 0 to 3 friends (46), 4 to 7 friends (30), and 8 to 10 friends (10). The results of the analysis revealed no statistically significant correlation [$r(94) = -.16, p = .12$] between ICA ($M = 36.80, SD = 9.59$) and number of U.S. friends ($M = 2.97, SD = 2.19$), thus retaining the null hypothesis. In general, the results suggested no effect between students' ICA and the numbers of U.S. friends. Figure 5 shows the correlation of ICA and the number of friends.

Figure 5. Correlation of ICA and number of friends

Research Question #12

Research Question #12: Is there a significant difference in levels of intercultural communication apprehension among Chinese international students based on the frequency with which they speak English?

H_o12: There is no significant difference in levels of intercultural communication apprehension among Chinese international students based on the frequency with which they speak English.

A 4 × 4 ANOVA evaluated the way in which the frequency of speaking English in and outside of class changed the levels of Chinese international students' intercultural communication apprehension. The means and standard deviations for ICA as a function of the

two factors are in Table 9 and no students reported *Never* speaking English in class or outside of class. The ANOVA indicated no significant interaction between speaking English in and outside class, $F(5, 91) = 1.17$, $p = .33$, partial $\eta^2 = .06$, main effects for speaking English in class $F(3, 91) = 0.93$, $p = .43$, partial $\eta^2 = .03$, but significant main effects for speaking English outside class $F(3,91) = 4.57$, $p = .005$, partial $\eta^2 = .13$. The main effect of frequently speaking English outside class indicated that students frequently speaking English out of class tended to have low ICA than those who did not. The follow-up analyses studied the main effect of speaking English out of class, which consisted of all pairwise comparisons among the four frequencies. The Tukey HSD procedure controlled for Type I error across the pairwise comparisons. The results of this analysis indicated that the group reporting *Frequently* improved ICA significantly.

Table 9

Means and Standard Deviations for Levels of ICA

Frequency speaking English in class	Frequency speaking English outside class	*M*	*SD*	*N*
Infrequently	Infrequently	46.63	8.18	8
	Sometimes	37.40	5.46	5
	Frequently	32.00	5.66	2
Sometimes	Infrequently	38.27	7.77	11
	Sometimes	40.83	9.21	23
	Frequently	28.67	7.79	6
Frequently	Infrequently	35.00	8.49	2
	Sometimes	34.40	9.55	10
	Frequently	29.71	5.43	7
Always	Sometimes	38.50	7.29	14
	Frequently	29.33	8.61	12
	Always	34.62	9.42	3

Research Question #13

Research Question #13: Is there a significant difference in levels of intercultural communication apprehension among Chinese international students based on their level of education?

H_o13: There is no significant difference in levels of intercultural communication apprehension among Chinese international students based on their level of education.

A one-way analysis of variance evaluated the relationship between levels of Chinese international students' intercultural communication apprehension and students' level of education. The factor variable, the level of education, created three groups: undergraduate, master's level, and doctorate and beyond. The dependent variable was levels of ICA from different groups of level of education. The ANOVA was not significant, $F(2, 100) = 0.59$, $p = .56$, therefore retaining the null hypothesis. The strength of the relationship between levels of Chinese international students' ICA and students' level of education, as assessed by η^2, was small (.01). The results indicated no significant effect between students' level of ICA and their level of education. The means and standard deviations for the three groups of level of education are in Table 10.

Table 10

Means and Standard Deviations of Three Groups of Level of Education ICA

Levels of Education	N	M	SD
Undergraduate	44	37.68	10.48
Master's level	43	35.53	8.40
Doctorate and beyond	16	37.25	9.45

Summary

This chapter included the data obtained from of the Chinese international students'

Intercultural Communication Competence and Intercultural Communication Apprehension in the

USA survey. There were 13 research questions and 13 null hypotheses. All data were derived

from an online survey distributed to approximately 200 Chinese students, resulting in a 50%

return rate with 103 student responses.

CHAPTER 5

SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS FOR FUTURE

RESEARCH

Chapter 5 presents a summary of findings, conclusions, and recommendations for future research on Chinese international students' intercultural communication competence and intercultural communication apprehension. The summary of findings is in seven parts according to the research questions, the analyzed variables, and the two measurements (ISS and PRICA). The purpose of this study was to examine the relationship between Chinese international students' intercultural communication competence (ICC) and intercultural communication apprehension (ICA).

Summary of Findings

The data analyses reported derived from 13 research questions tested at a .05 level of significance. The variables studied included students' gender, age, the number of months studying in U.S, number of U.S. friends, level of education, and the frequency of speaking English. Data came from two universities in the southeastern U.S. with approximately 100 Chinese international students each.

Research Question #1

The purpose of the ISS and PRICA was to investigate Chinese international students' intercultural communication competence and intercultural communication apprehension in the U.S. The participants' scores on the ISS instrument ranged from 64 to 108, with a mean of 84.99; while scores on the PRICA instrument ranged from 14 to 54, with a mean of 36.72. Fourteen participants scored higher than 52, indicating high intercultural communication apprehension, 40 participants scored below 32, demonstrating low level of ICA, and 59 participants showed a

moderate level of ICA. In general, the results suggested that students with higher ICC tended to have lower ICA. The finding of the study concurred with Rudd and Lawson (2007) who noted that individual's communication apprehension influenced ICC. With uncertainty or communication apprehension, communication competency is not likely achievable.

Research Questions #2 and #8

There was no significant difference between male and female participants' ICC and ICA levels. For ICC, male students indicated a mean of 85.95 with a 7.07 standard deviation, while females had a mean of 84.38 with a 9.54 standard deviation. In terms of ICA, the mean of the females' scores was 37.33, while the males' was 35.75 with standard deviations of 10.03 and 8.51, respectively. Previous studies (Altshuler et al., 2003; Hassal et al, 2002) indicated that gender was a factor in ICC and ICA. However, the present research did not show the same result.

Research Questions #3 and #9

The time the participants had spent in the U.S. appeared to be a significant factor in students' ICC (see Table 1). Contrary to expectations; however, time spent in the U.S. did not correlate significantly with the study participants' level of ICA (see Table 5), which may be because apprehension and its consequences are culturally bound (Waxin, 2004). In addition, Berger (1982) said, "Lack of opportunity to communicate most certainly has the effect of raising uncertainty; however, the opportunity to interact may not produce reductions in uncertainty' (p. 8).

Research Questions #4 and #10

No significant difference existed between students' age and level of ICC and ICA, which suggested that age was not a factor in affecting students' ICC (see Table 2) and ICA (see Table

6). However, age was one of the factors that influenced students' ICA in a previous study of a different group of international students (Apaibanditkul, 2006).

Research Questions #5 and #11

No significant difference existed between the number of U.S. friends and the level of ICC and ICA, which also concurred with Berger's (1982) statement that the opportunity to interact might not reduce uncertainty because culture was vital for ICC and ICA. In addition, Holmes (2004) pointed out Chinese students should reconstruct and renegotiate their primary cultural learning and communication styles to accommodate other styles. That is, no matter how many U.S. friends they have, without adapting to the host culture and communication styles, Chinese students cannot enhance their intercultural communication competence.

Research Questions #6 and #12

No significant difference existed in levels of ICC and ICA regarding the overall interaction of frequency with which students spoke in and outside of class. However, the frequency of speaking English outside of class did have a significant relationship with students' ICC and ICA. These results suggested that frequently speaking English outside of classroom will help student competence in intercultural communication and decrease their intercultural communication apprehension.

Research Questions #7 and #13

No significant difference existed between in levels of ICC and ICA regarding students' level of education. Contrary to expectations, the level of education was not a key factor in influencing students' ICC and ICA.

Conclusions

One purpose of this study was to determine students' ICC and ICA, and the relationship between ICC and ICA. A second purpose of the study was to determine the relationship between ICC, ICA, and demographic and individual characteristics. The following conclusions relate to the findings of this study.

- There was significant difference between Chinese international students' ICC and ICA. In general, students with high ICC have lower ICA.

- There was no significant difference between genders on ICC or ICA.

- There was no significant difference between ages on ICC or ICA.

- There was no significant difference between levels of education on ICC or ICA.

- There was no significant difference between number of U.S. friends on ICC or ICA.

- There was a significant difference in ICC scores based on time spent in the U.S., but there was no significant difference in ICA scores based on time spent in the U.S.

- There was a significant difference between frequency of speaking English outside of class on ICC and ICA.

Recommendations for Practice

The following recommendations are made toward increasing ICC and decreasing ICA among Chinese students in universities and college campuses.

- Encourage students' communication outside of class by providing on or outside campus activities involving both Chinese students and American students. For example, having volunteer American students or American families pair with international student, which was recommended by Lewthwaite (1996).

- Design professional development for educators and administrators in colleges and universities to aid the adjustment of ICC skills of Chinese international students.

- Use learning communities to develop cultural competence for educators and administrators to assist Chinese students in succeeding academically and acquiring English language proficiency.

Recommendations for Future Research

As many of this study's results are meaningful, implications drawn may guide future studies on ways in which the experiences of ICC and ICA can help Chinese international students live, study, and work in U.S. Several recommendations for additional research include:

- A longitudinal qualitative research could examine the in-depth cultural, social, and educational factors that affect Chinese international students' ICC and ICA.

- A replicated study could recruit Chinese international students coming from mainland China, Hong Kong, Macau, and Taiwan to compare the cultural differences of the four areas.

- A replicated study could recruit international student from all Asian countries or all foreign countries and have a larger sample size from more universities.

- A study could determine the ways in which different Chinese cultural dimensions affect students' ICC and ICA.

- A study should examine how students' majors affect their ICC and ICA even though their level of education was not a significant factor in this study.

- A study could examine the ICC and ICA of Chinese international students born in the 1990s and largely influenced by Western culture.

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APPENDICES

APPENDIX A: Informed Consent Form

Chinese International Students' Intercultural Communication Competence and Intercultural Communication Apprehension in the USA Survey

Informed Consent Form

This Informed Consent will explain about being a participant in a research study conducted by Yi Lin, a doctoral candidate in the department of Educational Leadership and Policy Analysis at East Tennessee State University, for her completion of her Ed.D dissertation. It is important that you read this material carefully and decide if you wish to be a volunteer.

PURPOSE:

The purpose of this research study is as follows:

The purpose of this study is to research and examine the relationship between Chinese international students' intercultural communication competence (ICC) and intercultural communication apprehension (ICA). The study will analyze various components related to student ICC and ICA experiences. Components include the students' gender, age, the duration of studying in the U.S, and the frequency with which students speak English.

PROCEDURES

You will complete a survey, which will take approximately 15 to 20 minutes. The survey contains two parts: Demographic information and two instruments of ICC and ICA. The basic demographic information includes questions such as gender, age, how long you have stayed in the United States, and how often you speak English inside or outside the classroom. The two instruments include statements concerning intercultural communication, such as *I enjoy interacting with people from different cultures* and I *am tense and nervous while interacting with people from different cultures*. A minimum of 100 participants are required for the study.

VOLUNTARY PARTICIPATION

Participation in this research is voluntary. You must be 18 years of age or older to participate. Refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. You are free to discontinue participation at any time and if you decide to withdraw from the study, no information collected from you will appear in the study.

CONTACT FOR QUESTIONS

If you have questions at any time, you may call Yi Lin at 423-631-2768 or Dr. Jasmine Renner at 423-439-7629. You may call the Chair of the Institutional Review Board at 423-439-6054 for any questions you may have about your rights as a research subject. If you have any questions or concerns about the research and want to talk to someone independent of the research team or you can not reach the study staff, you may call an IRB Coordinator at 423-439-6055 or 423-439-6002. By beginning the survey, you confirm that you have read this document or had it read to you. You had an opportunity to ask questions and to discuss your participation with the investigator. You freely and voluntarily choose to be part of this research project.

APPENDIX B: Demographic Information

1. You are: (1) Male _____   (2) Female _____

2. How old are you? ____

3. How long have you been in the U.S.: _____ Year(s) _____ Month(s)

4. You are: (1) an undergraduate student _____

           (2) a graduate student: Master's _____

                                        Doctoral and beyond _____

5. How many U.S. friends do you have who speak native English? _____

    (Note: A friend is a person whom you know, like, and trust and talk with frequently.)

6. How often do you speak English in class?

    Never___   Infrequently___   Sometimes___Frequently____   Always___

7. How often do you speak English outside of class?

    Never___   Infrequently___   Sometimes___ Frequently____   Always___

APPENDIX C: Intercultural Sensitivity Scale

Directions: This instrument is composed of 24 statements concerning intercultural communication. There are no right or wrong answers. Please indicate the degree to which each statement applies to you by marking whether you: (5) Strongly Agree, (4) Agree, (3) Are Undecided, (2) Disagree, or (1) Strongly Disagree. Please work quickly and record your first impression. Thank you for your cooperation.

_____ 1. I enjoy interacting with people from different cultures.

_____ 2. I think people from other cultures are narrow-minded.

_____ 3. I am pretty sure of myself in interacting with people from different cultures.

_____ 4. I find it very hard to talk in front of people from different cultures.

_____ 5. I always know what to say when interacting with people from different cultures.

_____ 6. I can be as sociable as I want to be when interacting with people from different cultures.

_____ 7. I don't like to be with people from different cultures.

_____ 8. I respect the values of people from different cultures.

_____ 9. I get upset easily when interacting with people from different cultures.

_____ 10. I feel confident when interacting with people from different cultures.

_____ 11. I tend to wait before forming an impression of culturally-distinct counterparts.

_____ 12. I often get discouraged when I am with people from different cultures.

_____ 13. I am open-minded to people from different cultures.

_____ 14. I am very observant when interacting with people from different cultures.

_____ 15. I often feel useless when interacting with people from different cultures.

_____ 16. I respect the ways people from different cultures behave.

_____ 17. I try to obtain as much information as I can when interacting with people from different cultures.

_____ 18. I would not accept the opinions of people from different cultures.

_____ 19. I am sensitive to my culturally-distinct counterpart's subtle meanings during our interaction.

_____ 20. I think my culture is better than other cultures.

_____ 21. I often give positive responses to my culturally different counterpart during our interaction.

_____ 22. I avoid those situations where I will have to deal with culturally-distinct persons.

_____ 23. I often show my culturally-distinct counterpart my understanding through verbal or nonverbal cues.

_____ 24. I have a feeling of enjoyment towards differences between my culturally-distinct counterpart and me.

APPENDIX D: Personal Report of Intercultural Communication Apprehension

Directions: This instrument is composed of fourteen statements concerning your feelings about communicating with people from other cultures. There are no right or wrong answers. Please indicate the degree to which each statement applies to you by marking whether you: (5) Strongly Agree, (4) Agree, (3) Are Undecided, (2) Disagree, or (1) Strongly Disagree. Please work quickly and record your first impression. Thank you for your cooperation.

_____ 1. Generally, I am comfortable interacting with a group of people from different cultures.

_____ 2. I am tense and nervous while interacting with people from different cultures.

_____ 3. I like to get involved in group discussions with others who are from different cultures.

_____ 4. Engaging in a group discussion with people from different cultures makes me tense and nervous.

_____ 5. I am calm and relaxed while interacting with a group of people who are from different cultures.

_____ 6. While participating in a conversation with a person from a different culture, I feel very nervous.

_____ 7. I have no fear of speaking up in a conversation with a person from a different culture.

_____ 8. Ordinarily, I am very tense and nervous in conversations with a person from a different culture.

_____ 9. Ordinarily, I am very calm and relaxed in conversations with a person from a different culture.

_____ 10. While conversing with a person from a different culture, I feel very relaxed.

_____ 11. I am afraid to speak up in conversations with a person from a different culture.

_____ 12. I face the prospect of interacting with people from different cultures with confidence.

_____ 13. My thoughts become confused and jumbled when interacting with people from different cultures.

_____ 14. Communicating with people from different cultures makes me feel uncomfortable.

Thank you for completing this survey!

APPENDIX E: Permission to Use Intercultural Sensitivity Scale

310 Davis Hall
10 Lippitt Road
Kingston, RI 02881
gmchen@uri.edu

Dear Dr. Chen,

My name is Yi Lin, a doctoral student from East Tennessee State University wring my dissertation titled Chinese International Students' Intercultural Communication Competence and Intercultural Communication Apprehension in the USA under the direction of my dissertation committee chaired by Dr. Jasmine Renner.

I would like your permission to reproduce to use Intercultural Sensitivity Scale survey instrument in my research study. I would like to use and print your survey under the following conditions:

- I will use this survey only for my research study and will not sell or use it with any compensated or curriculum development activities.
- I will include the copyright statement on all copies of the instrument.
- I will send my research study and one copy of reports, articles, and the like that make use of these survey data promptly to your attention.

If these are acceptable terms and conditions, please indicate so by signing one copy of this letter and returning it to me either through postal mail, fax, or email:

Yi Lin
Room 2500, Building 51,
University of North Florida
1 UNF Drive, Jacksonville, FL 32224
Zyll8@goldmail.etsu.edu
423-631-2768

Sincerely,
Yi Lin
Doctoral Candidate

Yes, you have our permission to use the scale for the research purpose.
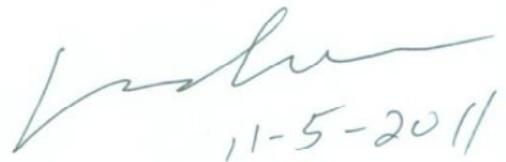
11-5-2011

APPENDIX F: Permission to Use Personal Report Intercultural Communication

Apprehension Measurement

On Sat, Nov 5, 2011 at 2:48 PM, James C. McCroskey <email@jamescmccroskey.com> wrote:

Hi Yi--

Yes Yi, you may use the PRICA measure for your research in your dissertation. There is no fee for this. All you need to do is to provide the normal references.

I am quite interested in your topic. When you get finished, I would like for you to let me know what you get in your results.

Best wishes for the success in your research!!

Jim

Dr. James C. McCroskey
Human Communication Scientist
Dept. of Communication Studies
University of Alabama @ Birmingham
email: email@JamesCMcCroskey.com
website: www.JamesCMcCroskey.com

VITA

YI LIN

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