The Influence of Social Interactions with American Students on Intercultural Sensitivity of International Students in Higher Education Institutions

Shahbaz Munawar

Follow this and additional works at: http://digitalcommons.wku.edu/diss

Part of the Educational Leadership Commons, and the International and Comparative Education Commons

Recommended Citation
http://digitalcommons.wku.edu/diss/84

This Dissertation is brought to you for free and open access by TopSCHOLAR. It has been accepted for inclusion in Dissertations by an authorized administrator of TopSCHOLAR. For more information, please contact topscholar@wku.edu.
THE INFLUENCE OF SOCIAL INTERACTIONS WITH AMERICAN STUDENTS ON INTERCULTURAL SENSITIVITY OF INTERNATIONAL STUDENTS IN HIGHER EDUCATION INSTITUTIONS

A Dissertation
Presented to
The Faculty of the Educational Leadership Doctoral Program
Western Kentucky University
Bowling Green, Kentucky

In Partial Fulfillment
Of the Requirements for the Degree
Doctor of Education

By
Shahbaz Munawar
May 2015
THE INFLUENCE OF SOCIAL INTERACTIONS WITH AMERICAN STUDENTS ON INTERCULTURAL SENSITIVITY OF INTERNATIONAL STUDENTS IN HIGHER EDUCATION INSTITUTIONS

Date Recommended 02-26-15

Randall Capps, Director of Dissertation

Richard Miller

John Baker

Dean, Graduate School 6/11/15 Date
This dissertation is dedicated to my parents.

My dad, a strong advocate of education, who always worked very hard so that all his children can get the best education in the world.

To my mom, who took care of us day and night out to meet our needs, and ensured we were always well fed, so that we can study well and grow stronger.

I love you, Ammi Jaan and Abbu Jaan from the bottom of my heart. Thank you for everything. May God give you long, prosperous, and healthy lives and always bless you.

Aameen!
ACKNOWLEDGEMENTS

Achieving a doctorate in educational leadership has been a great personal and professional experience. It certainly is not a journey that can be completed alone and requires a tremendous amount of moral, social, and professional support and encouragement from other individuals. These individuals must be recognized and acknowledged.

First and foremost, I want to thank my loving family. First to my dad, Mr. Munawar Hussain. A simple thank you does not describe my true emotions for your support and encouragement for my higher education. I feel very proud in telling you that you are the reason behind all my educational and professional achievements. I love you very much. Second, I want to send my greatest appreciation and thanks to my mother. Your unconditional love and prayers have brought me this far. I love you from the bottom of my heart. Thanks to my brothers and sisters for your continued love and support. A very special thanks to a beautiful family member, Ms. Yahsin Hsiao. I love you very much and thank you for everything throughout this journey.

A huge praise goes to my dissertation committee. I would like to thank my committee chair, Dr. Randy Capps. During the entire process, from brain-storming sessions to dissertation completion, your open availability and instant feedback made this project a success. Additionally, I was fortunate enough to have Dr. Richard Miller, Vice Provost and Diversity Officer, to serve on my committee. Your invaluable feedback on my research and taking time out of your very busy schedule are highly valued and much appreciated. Furthermore, I greatly acknowledge and thank Dr. John Baker for serving on my committee. Your intellectualism and experience as a graduate of this program served me a great deal with the successful completion of my own doctorate.
My greatest gratitude and sincere thanks is to Dr. Tony Norman, Director of the Educational Leadership Doctoral Program, for your support and encouragement throughout the program. You are an invaluable resource to all students in the program and a great role model. You always demonstrated a very welcoming, understanding, and accepting attitude, which is a very heartwarming gesture. I am very thankful to you for everything.

Another individual who continuously supported me during the process is Ms. Gaye Pearl. I couldn’t have asked for a better office/program partner while working on my doctorate. You are a great asset to the Educational Leadership Doctoral Program, and I highly appreciate your kindness and cordial assistance throughout this journey.

The Educational Leadership Doctoral Program ensured that all students have access to the best faculty and resources. One such resource is Mr. Bob Cobb, a gem methodologist. Your open door policy and instant feedback on my data analysis served a great favor to my cause and was a very encouraging and moving gesture on your behalf. Thank you so much, Bob.

I am highly indebted to a distinguished professor, my mentor, and a great friend, Dr. Christopher Wagner, who anxiously waited to give his feedback on my dissertation once it was completed. One of the reasons I reached this landmark is your inspiring and encouraging attitude. I will always cherish our time spent together throughout this journey and look forward to many more intellectual discussions and laughs at breakfasts at Panera Bread. Thank you for sharing your time, knowledge, and wisdom.

This program provided a great opportunity to network with a diverse group of individuals of all backgrounds with various knowledge and skills. The diversity
represented in the program is highly appreciated in which skills and knowledge are
shared and learned. A special thanks to my Cohort IV family. I feel content in satisfying
our commitment we made when we started this program together. The motto “We got
this” is what really helped me through this program. A very special thanks to a great
friend and a writing partner, Dr. Steve Briggs. Your constant encouragement and
progress check worked well in my favor. I will always treasure our friendship. To Ms.
Trudy-Ann Crossbourne of Cohort XI for assisting me with my research. Thank you, and
I look forward to our friendship for years to come.

I would like to give a special thanks to my friends and colleagues who directly
assisted me in my revolutionary achievement. To my close friend Abdul Samad, for
assisting me with my research. Thank you, Abdul, and I look forward to our friendship
well beyond this campus. To my travel buddy and a great friend Joel Nickel, who
accompanied me to other institutions and helped me with the data collection. To Sumra
Kanwal and Amani Liaqat for your assistance with my research. To Barbara Pinson for
being a critical friend on my dissertation. To Cathie Bryant for proofreading my
dissertation. Your suggestions and recommendations were highly valued. To Ahmed
Alteneiji for providing remote assistance at another institution. I also would like to thank
the staff of the International Program Offices at all three institutions for your help with
the data collection and correspondence with international students, in particular, Ms.
Sarah Van Alebeek at Western Kentucky, Ms. Martha Smith at Murray State, and Ms.
Vonda Martin at Eastern Kentucky University.
CONTENTS

LIST OF FIGURES ................................................................................................................. x
LIST OF TABLES .................................................................................................................... xi
ABSTRACT .......................................................................................................................... xiii

CHAPTER I: INTRODUCTION ................................................................................................. 1
  Problem Statement ............................................................................................................. 3
  Purpose of the Study .......................................................................................................... 4
  Research Questions and Hypotheses ................................................................................... 5
    Social Interaction .............................................................................................................. 7
    Type of Roommate .......................................................................................................... 8
  Significance of the Study ................................................................................................... 9
  Theoretical Basis for the Study .......................................................................................... 10
  Exceptions/Limitations ..................................................................................................... 11
  Definition of Terms .......................................................................................................... 12

CHAPTER II: LITERATURE REVIEW ......................................................................................... 14
  Intercultural Sensitivity .................................................................................................... 17
    Developmental Model of Intercultural Sensitivity ......................................................... 18
    Developmental Model of Intercultural Maturity ........................................................... 22
  Cross-Cultural Trends ..................................................................................................... 24
  International Students in the U.S. ..................................................................................... 25
    Factors that Influence International Students’ Decision Making and Destination Choice .......................................................................................................................... 30
    Upon Degree Completion ............................................................................................... 31
    Type of Housing and Roommate ................................................................................... 33
Social Interaction…………………………………………………..39
Overall Satisfaction…………………………………………………42
Theoretical Framework………………………………………………43

CHAPTER III: METHOD…………………………………………….45
Research Questions…………………………………………………..45
Research Design……………………………………………………47
Participants…………………………………………………………49
Measures and Procedures…………………………………………49
Demographic Scale……………………………………………….50
Intercultural Sensitivity Scale…………………………………….51
Validity of Intercultural Sensitivity Scale…………………………51
Other Studies Validating Intercultural Sensitivity Scale…………53
Pilot Study……………………………………………………………55
Reliability of the Intercultural Sensitivity Scale………………….55
IRB Approvals…………………………………………………….56
Conclusion…………………………………………………………58

CHAPTER IV: RESULTS……………………………………………59
Findings Related to Research Question 1……………………….61
Findings Related to Research Question 2 ……………………….64
Findings Related to Research Questions 3a, 3b, and 3c………….67
  Findings Related to Research Question 3a…………………….68
  Findings Related to Research Question 3b………………….....69
  Findings Related to Research Question 3c…………………...70
Summary of Results………………………………………………….72
LIST OF FIGURES

1: Developmental Stages of Intercultural Sensitivity……………………………19
LIST OF TABLES

1: A Three Dimensional Development Trajectory of Intercultural Maturity........................................................................23


3: Correlations of Intercultural Sensitivity Scale with Other Measures........52

4: Factor Loadings of the Intercultural Sensitivity Scale.........................54

5: Interpretation of Kappa for Intercultural Sensitivity Scale...................56

6: Kappa and Agreement Values for Intercultural Sensitivity Scale Items..................................................................................57

7: Population and Sample by Institution.............................................60

8: Age, Degree Level, and Marital Status by Institution..........................61

9: Frequency Distribution by Living Choice..........................................61

10: Analysis of Variance Summary for Overall Intercultural Sensitivity Scale by Living Choice.........................................................62

11: Means and Standard Deviations of Overall Intercultural Sensitivity by Living Choice..........................................................62

12: Means and Standard Deviations of Intercultural Sensitivity Subscales by Living Choice............................................................63

13: Means, Standard Deviations, and Correlation Coefficients of Overall Intercultural Sensitivity by Length of Stay with American Roommate .................................................................64

14: Social Interaction Group Classification based on Total Interaction Score..................................................................................65

15: Means, Standard Deviations, and t-test Results of Overall Intercultural Sensitivity by Total Social Interaction..........................66

16: Means and Standard Deviations of Intercultural Sensitivity Subscales by Total Social Interaction...............................................67

17: American Roommate Means, Standard Deviations, and t-test Results for Overall Intercultural Sensitivity by Total Social Interaction...........68
18: American Roommate Means and Standard Deviations for Intercultural Sensitivity Subscales by Total Social Interaction……….. 69

19: International Roommate Means, Standard Deviations, and $t$-test Results for Overall Intercultural Sensitivity by Total Social Interaction………………………………………….. 70

20: International Roommate Means and Standard Deviations for Intercultural Sensitivity Subscales by Total Social Interaction…………… 70

21: Living Alone Means, Standard Deviations, and $t$-test Results for Overall Intercultural Sensitivity by Total Social Interaction……………….. 71

22: Living Alone Means and Standard Deviations for Intercultural Sensitivity Subscales by Total Social Interaction………………………….. 71
THE INFLUENCE OF SOCIAL INTERACTION WITH AMERICAN STUDENTS ON INTERCULTURAL SENSITIVITY OF INTERNATIONAL STUDENTS IN HIGHER EDUCATION INSTITUTIONS

Shahbaz Munawar May 2015 110 Pages

Directed by: Randy Capps, Richard Miller, and John Baker

Educational Leadership Doctoral Program Western Kentucky University

International student enrollment in the United States has seen a steady growth in the last decade. A problem exists that although higher education institutions are able to meet the academic needs of international students, they are not properly equipped to address the cultural challenges these international student populations face. This study focused on the importance of universities introducing initiatives that consider international students’ lives and cultural learning when at U.S. campuses. The purpose of the study was to measure the intercultural sensitivity of international students based on social factors such as social interaction with Americans and their living choice.

Data were collected from three higher education institutions located in a state in the Midwest United States. The Intercultural Sensitivity Scale (ISS) developed by Chen and Starosta (2000) was utilized to collect data. ANOVA, Correlational analyses, and t-tests were utilized to analyze the data and to measure the differences and relationships in the intercultural sensitivity of international students based on level of social interactions and living choice.

The results indicated no significant differences in the intercultural sensitivity of international students based on living choice. Data also indicated no relationship between living with American student(s) and intercultural sensitivity of international students. Furthermore, no differences were found based on level of social interaction with American students and intercultural sensitivity of international students.
CHAPTER I: INTRODUCTION

Globalization, which has profoundly transformed higher education throughout the world (Altbach, Reisberg, & Rumbley, 2010; International Council for Open and Distant Education, 2009), is unavoidable and will continue to grow (Soleymani, 2010). Soleymani suggested that a need exists for all countries of the world to become “integrated into the global economy” (p. 104). Altbach et al. believed that mass international access to education is a recent occurrence globally and has experienced a rapid uplift in popularity within the past decade. The technological evolution, ease and advancement of air travel, and internet growth have played a significant role in promoting communication and approachability (Irving, 2010). Montgomery (2010) agreed, believing that, although the concept of travel abroad for higher education is not new, it has shown fast paced growth in recent years. The internationalization of universities and education, in general, has been occurring for centuries (Altbach & Knight 2007; Montgomery, 2010) as knowledge has been an important part of human development (Guruz, 2011). The revolution began with the emergence of the knowledge economy (Altbach et al., 2010; Altbach & Knight, 2007; Guruz, 2011). Altbach et al. argued that the 21st century gave rise to the knowledge economy, which includes “the growing centrality of the service sector, new fields like biotechnology, the importance of information and communication technology, and many others enhance the salience of higher education” (p. 2).

What has changed over centuries; however, are the characteristics and the quality of knowledge, the relative importance of science as its source, the methods by which it is created, stored, accessed, transmitted, acquired, and retrieved, its
relative importance as a production factor, and the level of education and training
required in the workforce. (Guruz, 2011, p. 3)

These trends, and others as they pertain to global higher education, are paramount
and must be understood due to their impact on globalization (Altbach et al., 2010).
“International student mobility constitutes the main form of cross-border higher
education” (Organization for Economic Cooperation and Development, 2009). Higher
education institutions now serve a more diverse student population, which has challenged
the current system and has demanded an overhaul to meet the varying needs of
diversified student populations (Altbach et al., 2010). Due to an increased focus on the
recruitment of international students, higher education institutions will be required to
meet the “unique learning needs” (Altbach et al., 2010, p. 95) required by these
international students. According to Altbach and Knight (2007), “information
technology; the knowledge economy; increased mobility for students, faculty, programs,
and providers; and an integrated world economy propel internationalization” (p. 302).
Although Altbach and Knight believed that the future of international higher education is
robust, they identified several factors that “may affect the pace of internationalization” (p.
303). These factors include:

- political uncertainties and national security concerns that may result in strict
  visa requirements;
- government and university policies related to visa costs and higher tuition
  rates;
- extended domestic educational capabilities due to self reliance and easy
  access;
• access to internationalized curriculum;
• international acceptance of degrees obtained online; and
• sustaining the quality of education internationally.

Leaders of educational institutions that display a stronger resolve for an international agenda must show the following eight characteristics, as specified by Cohen (2007), which he believed to be essential for global leadership: (1) “Being open to new experiences; (2) being curious about the world, (3) being enthusiastic and energetic, (4) being willing to listen and learn, (5) being able to adapt rapidly to change, (6) being willing to ask the right questions, (7) being innovative and creative, (8) being self-assured, and (9) being result-oriented” (p. 19).

Adjustment to a new culture can be very challenging for international students if not properly guided by a significant support system (Campbell, 2011). Campbell believed that “a support system could be the difference between a smooth transition and one fraught with difficulties” (p. 206). “Experiential learning” (Campbell, 2011, p. 205) also plays a significant role when students attempt to become familiar with a different environment. The experiential learning gained from more frequent interactions with American students will facilitate better cultural adjustments for international students. The present study represents an attempt to measure international students’ intercultural sensitivity based on their level of social interaction with American students.

**Problem Statement**

Institutions of higher education must provide international students with sufficient educational resources required to develop their intellectual aspects; however, at many universities, the focus on other aspects of their lives is minimal (Sawir, Marginson,
Deumert, Nyland, & Ramia, 2008). Sawir et al. stressed that a great deal of data and literature exist that focus on “academic experience and achievement” of international students, but a “lesser body of research attends to the circumstances of their lives, circumstances that are affected by a number of different agents - governments, educational institutions, civil organizations, family, networks of friends, and the students themselves” (p. 2). Globalization demands that institutions of all types recognize the importance of increased intercultural competence of individuals (Hammer, 2011). Lundstrum, White, and Schuster (1996) stated, “The education of the global citizen, one who will be comfortable visiting, working, and living in diverse countries, is the responsibility of academia” (p. 15). University leaders need to focus on the implementation of programs that also concentrate on promoting international students’ cultural growth while in the United States and becomes more critical as societies increasingly engage on a global basis. Fuller (2007) posited this question: “Does international education enhance the ability of students to relate sensitively to cultural difference?” (p. 322). He answered by citing Gillespie (2002), who believed that these questions generally remain unanswered, as colleges and universities do not measure outcomes that relate to students’ cultural learning.

**Purpose of the Study**

The primary purpose of the study was to measure international students’ intercultural sensitivity based on their level of social interaction with American students through living conditions. The study explored the variable of “living choice” and its influence on intercultural sensitivity of international students. Accommodations or the living arrangement is the first and a significant factor undertaken by the international
students when beginning their education at American universities. The living choice for this study is defined as the accommodations with respect to living with an American student(s), living with another international student(s), or living alone during the course of study and the extent to which a particular living choice impacts their intercultural sensitivity.

The study served several objectives: To gain insight into the differences of cultural competence among international students; to encourage educators to develop programs to improve social interaction among international and American students; and to employ the most effective learning practices for international students, that not only focus on academic aspects, but also on cultural learning. A studying of the demographic factors and the means by which these factors affect international students’ academic performance and cultural adaptation is intended to assist university programs in becoming more understanding of both academic and cultural learning and to develop improved policies of accommodation. Results of the study may assist in the development of social and “experiential” (Campbell, 2011, p. 205) programs for international students with the intention to help them avoid culture shock and to assist with assimilation, which ultimately may result in increased retention of international students, support for their academic success, and the promotion of career advancement. This also may benefit American students who are more inclined to pursue global education and become global citizens.

Research Questions and Hypotheses
The study will investigate the intercultural sensitivity of international students based on interaction, specifically living choice, with American students in higher educational institutions. Research questions identified for the study include:

**Research Question 1:** Is there a significant difference in intercultural sensitivity of international students based on their living choice?

**Hypothesis 1:** No significant difference will be found in intercultural sensitivity of international students based on their living choice.

**Research Question 2:** Is there a significant difference in intercultural sensitivity of international students based on their level of social interaction with American students?

**Hypothesis 2:** No significant difference will be found in intercultural sensitivity of international students based on their level of social interaction with American students.

**Research Question 3a:** Is there a significant difference in intercultural sensitivity of international students who live with American students and exhibit high or low social interaction?

**Research Hypothesis 3a:** No significant difference will be found in intercultural sensitivity of international students who live with American students and exhibit high or low social interaction.

**Research Question 3b:** Is there a significant difference in intercultural sensitivity of international students who live with other international students and exhibit high or low social interaction?
Research Hypothesis 3b: No significant difference will be found in intercultural sensitivity of international students who live with other international students and exhibit high or low level of social interaction.

Research Question 3c: Is there a significant difference in intercultural sensitivity of international students who live alone and exhibit high or low social interaction?

Research Hypothesis 3c: No significant difference will be found in intercultural sensitivity of international students who live alone and exhibit high or low social interaction.

Social Interaction

American society has become very diverse, and international students are responsible for increasing this diversity (Zhao, Kuh, & Carini, 2005). Zhao et al. believed that, in order to work effectively with diverse groups of individuals of varying backgrounds, it is imperative that institutions introduce programs that teach and encourage the value of diversity. One method by which to become culturally competent is by “mixing it up” (Trice, 2004, p. 671) and encouraging programs that allow frequent interactions to equally provide benefits for both international and local students. A majority of international students have reported that they experience culture shock at the beginning of their intercultural induction. Students may have felt isolated, anxious, and lonely in an unfamiliar environment (Zhao et al., 2005) and the minimal amount of interactions with American students can lead to many psychological problems such as “anxiety” and “depression” (Trice, 2004, p. 671). Zhao et al. believed that “friendships” (p. 210) and social ties in the host nation are crucial for cultural adjustment in an unaccustomed setting. International students primarily establish strong friendships with
co-nationals or international students from other foreign countries rather than students of the host country (Sam 2001; Zhao et al., 2005). The same argument applies when choosing a roommate. International students’ first choice of a roommate often is a co-national, followed by a foreign student from another country, and a student from the host country as their last choice. This reduces the opportunity for increased interactions with American students and, thus, slows their learning of American culture and assimilation.

Zimmerman (1995) studied the impact of frequency of international students’ interactions with American students on their perceptions of cultural adaptation and believed that “the most important factor in international students’ adjustment to American culture is the frequency of interaction with American students” (p. 329). Other variables such as length of stay in a country, were found to be irrelevant to “students’ perceptions of adjustment to or satisfaction with communication in their new environment” (p. 329). International students who are more inclined to reach out to American students for help are in a better position to learn and adapt to the American culture. Thus, Zimmerman emphasized the importance of providing opportunities for international students to interact more frequently with American students on campus.

**Type of Roommate**

The selecting of living arrangements, including choice of housing and roommate, is the most important decision made by international students when arriving at a U.S. campus. This is the most crucial decision for international students from a cultural viewpoint due to the likelihood that cultural learning will accelerate for those who choose to room with American students. Those who chose to room with a co-national or student from another foreign country may experience difficulty in adjusting to the host country’s
culture. For this reason, an assessment of roommate preferences of international students can provide insights into its impact on their intercultural sensitivity in the United States.

**Significance of the Study**

This study is significant since it examined the differences in international students’ intercultural sensitivity based on social factors. The paucity of such research regarding these social factors, particularly the impact of accommodations and living choice, is in need of greater study, analysis, and clarification (Abe, Talbot, & Geelhoed, 1998; Minson, 2000; Obeng-Odoom, 2012). The results of this study may provide institutions of higher education and educational policymakers with information to shape international student policy toward an enhancement of cultural learning and assimilation of international students into American culture.

While the results of this study may provide international and American students’ with insight into an awareness of the manners in which certain social adjustments assist in cultural assimilation, the study may also provide direction and advice to college and university administrators interested in strengthening international programs. Contextually, the aim of globalization promotes the notion of cultural multiplicity for economic, research, and greater international awareness. Societies are created with individuals from varying backgrounds and diverse social values. This study focused on the importance of the relationship between the social interaction and cultural learning and explored the differences in intercultural sensitivity between those international students who are more socially connected to American students, as compared to those who are less socially connected. Last, the results of the study will be useful for faculty who teach
international students and may identify necessary training needs. Heikinheimo and Shute (1986) stated:

Because many adaptation problems for foreign students remain relatively unknown to academic and support staff of universities and colleges, workshops should be arranged for university personnel who are in daily contact with foreign students, including instructors to help them understand the adaptation problems of foreign students and to develop encouraging and supportive response patterns. (p. 405)

**Theoretical Basis for the Study**

Globalization demands that societies become culturally competent to lead, manage, and work with diverse groups of individuals (Fritz, Mollenberg, & Chen, 2001). Higher education programs of increased cultural interaction will, not only benefit international students, but also American students from learning diverse cultures through social interactions and through residing with international students (Williams & Johnson, 2011).

Several variables influence intercultural sensitivity of international students. Engle and Engle (2004) listed seven key variables, as cited in Fuller (2007), that they believe contribute greatly to increased intercultural sensitivity and cultural competence based on international education: (1) Program duration, (2) entry target language competence, (3) use of the target language, (4) academic focus, (5) type of housing while studying, (6) cultural learning education and opportunities, and (7) cultural learning resourcefulness through experiences.
Morrison and Conaway (2006) estimated that, by the year 2020, white males will be in the minority in the U.S. work force as the majority of Fortune 500 companies attract skilled and “ethnically diverse employees” (p. 544). Although ethnic diversity adds value, it is not without challenges. International students, international employees, and host nationals may not know how to respond to a specific culture, which could result in a culture clash. To overcome this challenge, leaders, employees, and communities need to learn to work with those of different cultures and to develop efforts to promote higher levels of cultural understanding.

**Exceptions/Limitations**

The participants of this study were international students from three higher education public institutions in a state located in the Midwest United States. The results of the study are not necessarily applicable to all international student populations and institutions due to varying geographic areas, different international student representation, and varying university initiatives. The study focused on social interaction through living conditions and its influence on intercultural sensitivity of international students. Other variables, although important, were not considered, specifically, the evidence that English language (Dorozhkin & Mazitova, 2008; Hayes & Lin, 1994; Heikinheimo & Shute, 1986; Paltridge, Mayson, & Schapper, 2010; Rosenthal, Russell, & Thomson, 2007; Wright & Schartner, 2013) and personality type of international students (Hansson, Jones, & Carpenter, 1984) are major factors which influence international students’ adaptation to American society and culture. This study examined the impact of social factors, as indicated, on the intercultural sensitivity of international students, which may be critical to the ultimate success of the students and their respective
institutions. The survey utilized in this study is considered to be accurate in identifying and measuring international students’ intercultural sensitivity; however, many other variables can influence responses and include state of mind, feelings, and emotions of the participants. Additionally, all participants were international students and were assumed to possess basic reading and comprehensive skills in English.

**Definition of Terms**

*International student:* “Anyone studying at an institution of higher education in the United States on a temporary visa that allows for academic coursework, which includes F (student) and J (exchange visitor) visa” (Institute of International Education, 2014b, FAQ. 4).

*Intercultural:* “Refers to the encounter between people of different nations-states or diaspora cultures” (Green & Olson, 2008, p. 3).

*Multicultural:* “Describes the interaction between people of diverse cultures, most frequently refers to the diversity within a nation or a community. In the United States, the term generally describes ethnic and racial diversity within its borders” (Green & Olson, 2008, p. 3)

*Intercultural sensitivity:* “The ability to discriminate and experience relevant cultural differences” (Hammer, Bennett, & Wiseman, 2003, p. 422).

*Intercultural competence:* “The ability to think and act in interculturally appropriate ways” (Hammer et al., 2003, p. 422).

*Roommate:* “A person who shares a room, apartment, or house with someone else” (Roommate, 2015, In Merriam-Webster Dictionary).
**Social interaction:** Cahill (2005) stated, “Social interaction is the process through which two or more social actors reciprocally influence one another's actions. Although it may involve corporate actors of varying size, from pairs of individuals acting in concert to complex organizations, it commonly refers to processes of mutual influence among individuals” (p. 745).

**Culture:** “The collective programming of the mind that distinguishes the members of one group or category of people from another” (Hofstede, 2001, p. 9).

**Cultural assimilation:** According to the Sage glossary of social and behavioral sciences, cultural assimilation in the context of communication is defined as “a range of pathways taken by an outsider to integrate and resemble others in the predominant culture” (Sullivan, 2009, p. 125).

**Cultural adaptation:** Smyntyna (2006) defines cultural adaptation as the specific capacity of human beings and human societies to overcome changes of their natural and social environment by modifications to their culture” (p. 18).

**Cultural adjustment:** According to Black (1990), cultural adjustment is defined as “the degree of psychological comfort and familiarity an individual has for the new environment” (as cited in Templer, Tay, & Chandrasekar, 2006, p. 157).

**Maturity:** “refers to the developmental capacity that undergirds the ways learners come to make meaning, that is, the way they approach, understand, and act on their concerns” (King & Baxter Magolda, 2005, p. 574).

**Living choice:** International students’ choice of living while studying in the United States. Residence choice, living choice, and roommate type will be used alternately and carry the same meanings for this study.
CHAPTER II: LITERATURE REVIEW

Globalization is inevitable, as is working with diverse groups of individuals. Irving (2010) pointed out that, “while cross-cultural interactions have been taking place for thousands of years, it is only within recent decades and the past century that the societies of the world have become more accessible” (p. 2). The “emergence of a knowledge economy” (p. 2), which includes growth in the service sector, the invention of biotechnology, and the emergence of information and communication technology, has increased the global mobility of highly trained professionals in which the education sector plays a vital role (Altbach et al., 2010). Altbach et al. stated, “Academic mobility is a hallmark of global age” (p. 3). Guruz stressed the importance of uniting knowledge and individuals stating that “technical innovations and use of creative knowledge” (p. 7) will positively influence the economic growth and development. For the global higher education agenda, he argued that countries need to participate and share knowledge in order to avoid becoming isolated. According to Guruz, the basic principles of globalization require that individuals communicate with one another for the proper “functioning of international capital markets” (p. 19). This encourages students to attend schools in other countries and to create social and professional relationships.

Although related, globalization and internationalization are different phenomena (Altbach et al., 2010; Altbach & Knight, 2007; Green & Olson, 2008). Green and Olson (2008) believed that globalization and internationalization carry “multiple meanings” and can be used “synonymously” (p. 2). They provided a neutral definition of globalization as “the flow of ideas, capital, people, and goods around the world in the context of diminishing importance of national borders” (p. 2). In the institutional context,
“globalization refers to the reach of a campus, through distance learning, partnerships with institutions from other countries, or the implementation of academic programs or even campuses, outside the United States” (p. 3). Altbach et al. (2010) defined globalization as “the reality shaped by an increasingly integrated world economy, new information and communications technology (ICT), the emergence of an international knowledge network, the role of the English language, and other forces beyond the control of academic institutions” (p. 7). They defined internationalization as “the variety of policies and programs that universities and governments implement to respond to globalization” (p. 7). Montgomery (2010) believed that “internationalization is part of the contextual background to the spread of international students in higher education across the globe” (p. 3). Fok (2007) proposed that “internationalization is an interactive response to globalization” (p. 184).

In relation to higher education, globalization can be defined, on one hand, in terms of the economic, technological, political, and societal forces opening access to twenty-first century higher education, which has for much of the past century been owned by the upper and, to a lesser degree, the middle classes of the developed world. On the other, it can mean increasing the exposure of traditional learners to international experiences. One definition focuses on increasing the massification of learning throughout the world, the other on increasing understanding and connection. The two are not mutually exclusive, but whatever the perspective, it is now accepted that globalization has increased the rate of internationalization in higher education. (ICDE, 2009, p. 5)
This study is significant as it addresses the intercultural competence and integration as they pertain to international students. The international student population has shown a steady growth over the years. This research signified the importance of addressing the cultural adjustment factors that may directly impact the academic learning of international students. The research also signified the importance of the training of faculty and staff in dealing with international students, which may result in their better understanding of cultural differences, which ultimately may result in increased international student retention.

The purpose of this study was to better understand how to increase the intercultural sensitivity and competence of international students. The results may prove instrumental for university faculty responsible for assisting international students to undertake initiatives that focus on building the intercultural sensitivity of international students.

This chapter presents the review of existing literature pertaining to intercultural sensitivity, international students, as well as social interaction factors of international students. The review begins with two developmental models of intercultural sensitivity that provide a conceptual framework and developmental stages of intercultural sensitivity. These models transmit the understanding that intercultural sensitivity or cultural competence is a gradual process and is acquired “over time either individually or relationally, or both” (Spitzberg & Changnon, 2009, p. 21).

**Intercultural Sensitivity**

al. introduced the concept of “interpersonal sensitivity” (p. 4), which Chen believed to be similar to intercultural sensitivity. As cited in Chen, Bronfenbrener et al. defined interpersonal sensitivity as “the ability to distinguish how others differ in their behavior, perceptions or feelings” (p. 4). Chen believed that “intercultural sensitivity is similar to interpersonal sensitivity” (p. 4). Chen defined intercultural sensitivity as “an individual's ability to develop a positive emotion towards understanding and appreciating cultural differences that promotes an appropriate and effective behavior in intercultural communication.” (p. 5). According to Chen, intercultural sensitivity is comprised of five components, culturally competent individuals (1) have high self-esteem, which encourages positive relationships and respect for differences; (2) possess high self-monitoring by displaying emotional intelligence based on perceived situation; (3) are open-minded with willingness to recognize, accept, and appreciate differences; (4) empathize, which includes “identification, understanding, and consideration to others”; (5) show high interaction involvement by displaying attentiveness and understanding; and (6) are non-judgmental and, instead, show “feeling of enjoyment towards cultural differences” (p. 8).

A widely known and the most prominent of all theories of intercultural sensitivity is Bennett’s (1986, 1993) Developmental Model of Intercultural Sensitivity (DMIS). Hammer et al. (2003) defined intercultural sensitivity as “the ability to discriminate and experience relevant cultural differences” (p. 422). Scholars believed that Bennett’s concept of intercultural sensitivity closely relates to intercultural communication competence (Chen, 1997), which Hammer et al. defined as “the ability to think and act in interculturally appropriate ways” (p. 422). Hammer et al. believed that “greater
intercultural sensitivity is closely associated with greater potential for exercising intercultural competence” (p. 422).

**Developmental Model of Intercultural Sensitivity**

The Developmental Model of Intercultural Sensitivity (DMIS) was developed by Bennett (1986, 1993), which suggested that intercultural sensitivity is a gradual process and is dependent upon a certain set of behaviors. Comprised of the phenomenon of cognitive psychology and constructivism, the model is a portrayal of the manner in which individuals interpret cultural differences (Hammer et al., 2003). Hammer et al. (2003) stated, “The underlying assumption of the model is that as one’s experience of cultural difference becomes more complex and sophisticated, as one’s potential competence in intercultural relations increases” (p. 423). Based on the constructivist view, Hammer et al. believed that being present alone does not shape the cultural competence, but rather, the ability to conceive and discriminate will enhance the complexity of cultural experience and thus increased learning. The model takes into consideration the cultural differences identified and reflected by individuals, or vice versa, and is applicable in both academic and professional settings (Bennett, 1986). DMIS is comprised of six stages, as shown in Figure 1. The first three are categorized as Ethnocentric stages, and the second is the Ethnorelative stages. Progression to each stage represents an increased learning and acquisition of intercultural competence.
Figure 1. Development stages of intercultural sensitivity. Taken from *Developing intercultural competence for global leadership* (Bennett, 2001, p. 219).

**Ethnocentric stages.** In the denial stage, one denies the presence of cultural differences and believes that one’s own culture is true and genuine. “People with a denial worldview generally are disinterested in cultural difference when it is brought to their attention” (Hammer et al., 2003, p. 424). Denial of cultural difference is believed to be the default condition of “monocultural primary socialization” (Hammer et al., 2003, p. 424), and one can remain in this condition forever if no contact is made with those who are culturally different (Bennett, 2001). At the defense stage, individuals can identify cultural differences, but other cultures exist in a stereotypical form, as they still appear to be false. One’s own culture is the true reality, and the existence of other cultures is considered a threat (Bennett, 2001). “The world is organized into ‘us’ and ‘them’ where one’s own culture is superior and other cultures are inferior” (Hammer et al., 2003, p. 424). In the minimization stage, Bennett (2001) argued that one’s focus shifts to similarities among human beings and differences are “subsumed into already-existing,
familiar categories” (p. 221). Individuals become more encouraging and tolerant of other cultures and participate and include others into cultural activities.

**Ethnorelative stages.** In the acceptance stage, individuals begin to accept primary behavioral and cultural differences (Bennett, 2001). “People with acceptance worldview are able to experience others different from themselves, but equally human” (Hammer et al., 2003, p. 425). At the corporate level, the value of diversity is recognized and stimulated. However, due to a lack of training on intercultural skills, appropriate actions may be ambiguous (Bennett, 2001). In the adaptation stage, individuals become bicultural or multicultural and shift their cultural frame of reference (Bennett, 2001). In this worldview, “cultural difference is the state in which the experience of another culture yields perception and behavior appropriate to that culture” (Hammer et al., 2003, p. 425). Individuals are able to adjust their cultural views and perspectives based on the situation. Integration is a stage in which individuals move in and out of cultures and are able to enjoy the cultural differences. The ethnocentric views begin to disappear. In this worldview, “people are dealing with issues related to their own ‘cultural marginality’; they construe their identities at the margins of two or more cultures” (Hammer et al., 2003, p. 425).

Based on Bennett’s (1986, 1993) Developmental Model of Intercultural Sensitivity, Hammer and Bennett (1998, as cited in Paige, Jacobs-Cassuto, Yershova, & Dejaeghere, 2003) developed a 60-item Intercultural Development Inventory (IDI) to measure the intercultural sensitivity (p. 474), which was reduced to a final 50-item instrument (Hammer et al., 2003). Straffon (2003) utilized the original 60-item Intercultural Development Inventory and studied the intercultural sensitivity of high
school students attending an international school at a large Southeast Asian city. Students were from 40 different countries and ranged in age from 13 to 19. The researcher hypothesized that students attending an international school would have a higher level of intercultural sensitivity. In order to measure this, a mixed method was utilized. Quantifiable data was gathered using the original 60-item Intercultural Development Inventory (IDI) and was validated with the qualitative data from structured interviews.

Straffon (2003) focused the study on two aspects to explore the range of intercultural sensitivity level. The total range of intercultural sensitivity was first calculated, as measured by the IDI, and explored relative to its relationship with the length of stay of international students. Second, Straffon conducted interviews with international students to validate the results and to determine the participants’ views of the cultural differences. A total of 336 international students participated in the study, and 13 were selected to participate in structured interviews. IDI scores were conceptualized based on Bennett’s (1986, 1993) Developmental Model of Intercultural Sensitivity (DMIS). Straffon found that the majority of the respondents scored in the ethnorelative stage of the DMIS. Straffon also found a significant relationship between the length of stay in a foreign country and intercultural sensitivity. The results indicated that students showed higher levels of ethnorelativism based on their length of stay. The interview responses also showed consistency with the development scores on the Intercultural Sensitivity of DMIS.

Straffon (2003) suggested a need for further study on a similar equivalent sample for comparison purposes, as he believed that this was the first study of this nature on a high school international population.
Another model that considers intercultural competence as a progressive process is King and Magolda’s (2005) Developmental Model of Intercultural Maturity.

Developmental Model of Intercultural Maturity

Similar to Bennett’s (1986, 1993) Developmental Model of Intercultural Sensitivity, King and Baxter Magolda’s (2005) Developmental Model of Intercultural Maturity emphasizes three dimensions of cultural development, which include cognitive, intrapersonal, and interpersonal. According to King and Baxter Magolda, Intercultural maturity is defined as “multi-dimensional and consisting of a range of attributes, including understanding (the cognitive dimension), sensitivity to others (the interpersonal dimension), and a sense of oneself that enables one to listen to and learn from others (the intrapersonal dimension)” (p. 574). Table 1 shows a three dimensional development trajectory of Intercultural Maturity, as adapted from A Developmental Model of Intercultural Maturity by King and Baxter Magolda (p. 576).

The framework illustrates the progression of cultural competence as initial, intermediate, and mature level development. It demonstrates that students become culturally competent by taking into account “cultural differences” (p. 579) and then by respecting and appreciating those differences. Table 1 shows King and Baxter Magolda’s (2005), developmental model of intercultural maturity.
### Table 1

**A Three Dimensional Development Trajectory of Intercultural Maturity**

<table>
<thead>
<tr>
<th>Development Theories</th>
<th>Initial Level of Development</th>
<th>Intermediate Level of Development</th>
<th>Mature Level of Development</th>
</tr>
</thead>
</table>
| **Cognitive**        | ● Categorizes knowledge as right or wrong  
                       ● Naive about other cultures and values  
                       ● Resists challenges to own beliefs  
                       ● Views differing cultural perspectives as wrong | ● Evolving awareness and acceptance of uncertainty and multiple perspectives  
                       ● Ability to shift from accepting knowledge claims to personal processes for adaptation | ● Ability to consciously shift perspectives and behaviors into an alternative cultural worldview and to use multiple cultural frames |
| **Intrapersonal**    | ● Lack of awareness of own values and intersection of social identity  
                       ● Lack of understanding of other cultures  
                       ● Differences viewed as threats to identity | ● Evolving sense of identity as distinct from external others’ perceptions  
                       ● Tension between external and internal definitions prompts self-exploration of values, racial identity, and beliefs  
                       ● Recognizes legitimacy of other cultures | ● Capacity to create an internal self that openly engages challenges to one’s views and beliefs and that considers social identities (race, class, gender, etc.) in a global and national context  
                       ● Integrates aspects of self into one’s identity |
| **Interpersonal**    | ● Dependent relations with similar others is a primary source of identity and social affirmation  
                       ● Perspectives of different others are viewed as wrong  
                       ● Lack of awareness on how social systems affect social norms and intergroup differences  
                       ● Views social problems egocentrically  
                       ● No recognition of society as an organized entity | ● Willingness to interact with diverse others and refrain from judgment  
                       ● Relies on independent relations in which multiple perspectives exist  
                       ● Self is often overshadowed by need for others’ approval  
                       ● Begins to explore how social systems affect intergroup norms and relations | ● Capacity to engage in meaningful, interdependent relationships with diverse others  
                       ● Understanding of ways individual and community practices affect social systems  
                       ● Willing to work for the rights of others |

Adapted from *A Developmental Model of Intercultural Maturity* (King & Baxter Magolda, 2005, p. 576).
Cross-Cultural Trends

Hofstede (2001) believed that intercultural encounters “are as old as the humanity itself” and have occurred since “two different tribes of human met” (p. 423). Bentley (1993) argued that although cross-cultural encounters have taken place since the pre-modern times, but the “development in technology of transportation quickened the tempo of cross-cultural contact and exchange” (p. 20):

Chen (1997) gives the most importance to “migration” and “multiculturalism” (p. 3) and believes these trends as the most significant contributors to globalizations. According to U.S. Census (2010) data, a significant growth occurred in the population of ethnic minorities in the United States between 2000 and 2010. The highest increase (43.3%) was seen in the Asian population, followed by Hispanics (43%). U.S. Census (2012) Bureau projections estimated that “Asians will more than double from 15.9 million in 2012 to 34.4 million in 2060” (A More Diverse Nation section, para. 4). The concept of minority will soon disappear (Garcia, 2000), as the U.S. will become a majority – minority nation in 2043, as “no group will make up a majority” (Census, 2012, A More Diverse Nation section, para. 6). Furthermore, the 37% minority in 2012 of the U.S. population will become the majority 57% of the population in 2060. U.S. Census (2011) data indicated that more than 60 million people in the United States over the age of five spoke a language other than English at home, as compared to a slightly over 23 million in 1980, reflecting an increase of over 158%.

These rapid cultural and linguistic shifts in demographics are not without challenges, as they influence education in the United States (Chen 1997; Garcia, 2000).
Garcia believed that the “culturally and linguistically diverse population are soon to be the norm” (p. 4) in the educational settings. Garcia proposed that, as the world becomes more and more culturally diverse, teachers, administrators, and parents will play an important role. Garcia stressed teachers’ competencies and credentials to teach culturally and linguistically diverse student populations.

Dilg (2010) believed that today’s students of diverse classrooms will be a great asset to tomorrow’s multiculturalism. Dilg reflected that, due to their extraordinary experience with the complexity of multiculturalism, students will understand and thoughtfully deliver in multicultural communities and organizations in the future.

**International Students in the U.S.**

The 21st century marked a new era with respect to international student mobility (United Nations Educational, Scientific, and Cultural Organization, 2006). Chen (2008) stated, “International students serve as one of the important driving forces of the internationalization of higher education by driving policy, academic programs and curriculum, research and scholarly collaboration, export of knowledge and education, and student experience” (p. 5). The OECD (2013a) *Education at a Glance 2013* report claimed that worldwide enrollment of international students grew from 2.1 million in 2000 to 4.3 million in 2011. This number is estimated to reach over 7 million by 2025 (Altbach, 2004; Shanka, Quintal, & Taylor, 2005). The numbers already show a dramatic increase in international student mobility in the past decade. According to the findings of the OECD (2013a) *Education at a Glance 2013* report, “Australia, Canada, France, Germany, the United Kingdom, and the United States together receive more than 50% of all foreign students worldwide” (p. 305). As found in OECD (2009), Vincent-Lancrin
(2009) and Marginson and van der Wende (2009b) argued that international mobility also dramatically increased in many other countries, including Japan and Korea, in which it more than doubled in the last decade.

Many reasons are cited for this steep climb. Anderson, Lawton, Rexeisen, and Hubbard (2006) stated, “International education is becoming a necessity, not a luxury” (p. 458). Altbach (2004) stated, “Industrialized countries are recognizing the need to provide their students with a global consciousness and with experience in other countries in order for them to compete in the global economy” (p. 19). While discussing the purpose of the “global education” (p. 34), Bennett, Comwell, Al-Lail, and Schenck (2012) pointed out that the 21st century produced graduates of the world who take up the “stewardship” (p. 34) to make the world a better and a common place.

According to OECD (2008a), the evolution is a result of several factors such as the countries’ desire to stimulate academic and cultural exchanges; the greater mobility of qualified people and professionals within a global economy; the desire of higher education institutions to accrue additional income or raise their profile and visibility on the national and international stage; or even the need to benefit from an economically active population with a higher level of education in emerging or aging economies. (OECD, 2009, p. 64)

According to 2011 data, the United States led with the highest share of international student enrollment as a destination (OECD, 2013a). The Open Doors Report on International Education Exchange lists a total of 886,052 international students in the United States in the 2013/2014 year (Institute of International Education, 2014a), which is a record high. Each country defines an international student in a different manner
An international student in the United States is defined as “anyone studying at an institution of higher education in the United States on a temporary visa that allows for academic coursework, which include F (student) and J (exchange visitor) visa” (Institute of International Education, 2014b, FAQ. 4).

Discussing the advantages economic and social advantages of international students, Alberts (2007) believed that international students contribute by providing “teaching and academic expertise to research” (p. 1) at a lesser cost, as well as become a major source of cross-border connections for Americans in today’s global world. International students are an invaluable asset for the host nation in the global competitiveness (Altbach, 2004). They also contribute significantly to the U.S. economy (Institute of International Education, 2013). According to a U.S. Department of Commerce report, international students contributed an approximate $27 billion to the U.S. economy through their academic and living expenditures in 2013-2014 (Institute of International Education, 2014c). The report suggested that 65% of all international students receive funding from personal or family sources, while a total of 74% bring funds from overseas (Institute of International Education, 2014c).

As evident in Table 2, which illustrates the top 25 places of origin of international students in the U.S. for 2012/13, the total number of students from over the world increased by 7.2% in the United States from 2011/12 to 2012/13. More than 50% of international students in 2011/12 were from Asian countries, mainly China, India, and South Korea (Institute of International Education, 2013). China ranks highest in the number of international students in the United States (Institute of International Education, 2013). While certain countries showed a slight decline in 2012/2013, as compared to
2011/2012, a sharp surge was noted in students from China (21.4%), Saudi Arabia (30.5%), Brazil (20.4%), Iran (25.2%), and Kuwait, a country that showed the highest percentage increase (37.4%) (Institute of International Students, 2013). Table 2 displays the top 25 places of origin of international students in the United States for 2011/12 and 2012/2013 (Institute of International Education, 2013).

Despite the overall international enrollment growth in the United States in the last decade, as well as consistent growth over the years, the number of students choosing the United States as the destination for higher education fell to 17% of all international students worldwide in 2011, as compared to 23% in 2000 (OECD, 2013a). This decline in the share for United States as the destination is a result of, among many variables, aggressive marketing strategies by the rival countries in Asia, as well as a direct impact of a lack of a national education policy to recruit international students by the United States (Albers, 2007; Altbach, 2004; Becker & Kolster, 2012; OECD, 2013a). Until recently, “universities welcomed foreign students but made no efforts to recruit them” (OECD, 2009, p. 65).
### Table 2

**Top 25 Places of Origin of International Students in the U.S., 2011/12, 2012/13**

<table>
<thead>
<tr>
<th>Place of Origin</th>
<th>Total Number of Students 2011-2012</th>
<th>Total Number of Students 2012-2013</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>World Total</td>
<td>764,495</td>
<td>819,644</td>
<td>7.2</td>
</tr>
<tr>
<td>China</td>
<td>194,029</td>
<td>235,597</td>
<td>21.4</td>
</tr>
<tr>
<td>India</td>
<td>100,270</td>
<td>96,754</td>
<td>-3.5</td>
</tr>
<tr>
<td>South Korea</td>
<td>72,295</td>
<td>70,627</td>
<td>-2.3</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>34,139</td>
<td>44,566</td>
<td>30.5</td>
</tr>
<tr>
<td>Canada</td>
<td>26,821</td>
<td>27,357</td>
<td>2.0</td>
</tr>
<tr>
<td>Taiwan</td>
<td>23,250</td>
<td>21,867</td>
<td>-5.9</td>
</tr>
<tr>
<td>Japan</td>
<td>19,966</td>
<td>19,568</td>
<td>-2.0</td>
</tr>
<tr>
<td>Vietnam</td>
<td>15,572</td>
<td>16,098</td>
<td>3.4</td>
</tr>
<tr>
<td>Mexico</td>
<td>13,893</td>
<td>14,199</td>
<td>2.2</td>
</tr>
<tr>
<td>Turkey</td>
<td>11,973</td>
<td>11,278</td>
<td>-5.8</td>
</tr>
<tr>
<td>Brazil</td>
<td>9,029</td>
<td>10,868</td>
<td>20.4</td>
</tr>
<tr>
<td>Germany</td>
<td>9,347</td>
<td>9,819</td>
<td>5.0</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>9,186</td>
<td>9,467</td>
<td>3.1</td>
</tr>
<tr>
<td>Nepal</td>
<td>9,621</td>
<td>8,920</td>
<td>-7.3</td>
</tr>
<tr>
<td>Iran</td>
<td>6,982</td>
<td>8,744</td>
<td>25.2</td>
</tr>
<tr>
<td>France</td>
<td>8,232</td>
<td>8,297</td>
<td>0.8</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>8,032</td>
<td>8,026</td>
<td>-0.1</td>
</tr>
<tr>
<td>Indonesia</td>
<td>7,131</td>
<td>7,670</td>
<td>7.6</td>
</tr>
<tr>
<td>Nigeria</td>
<td>7,028</td>
<td>7,316</td>
<td>4.1</td>
</tr>
<tr>
<td>Thailand</td>
<td>7,626</td>
<td>7,314</td>
<td>-4.1</td>
</tr>
<tr>
<td>Malaysia</td>
<td>6,743</td>
<td>6,791</td>
<td>0.7</td>
</tr>
<tr>
<td>Colombia</td>
<td>6,295</td>
<td>6,543</td>
<td>3.9</td>
</tr>
<tr>
<td>Venezuela</td>
<td>6,281</td>
<td>6,158</td>
<td>-2.0</td>
</tr>
<tr>
<td>Spain</td>
<td>4,924</td>
<td>5,033</td>
<td>2.2</td>
</tr>
<tr>
<td>Kuwait</td>
<td>3,722</td>
<td>5,115</td>
<td>37.4</td>
</tr>
</tbody>
</table>

Source: IIE, 2013
In recent years, a number of initiatives have been undertaken by U.S. education personnel, as well as the Obama administration to “increase international mobility to the United States” (p. 34), which includes developing educational exchange programs and partnerships with countries of emerging economies (Becker & Kolster, 2012).

In 2007, a poll commissioned by NAFSA: Association of International Educators found that “more than 90 percent Americans believe that it is important to prepare future generations for a global society” (NAFSA: Association of International Educators, 2007a, p. 1). At the same time, NAFSA called for an international education policy for U.S. leadership, competitiveness, and security, which consisted of the following components: promotes internationalization and learning of foreign languages as well as cultures, encourages international student mobility and exchange of scholars, and promotes international competence and research (NAFSA: Association of International Educators, 2007b). Becker and Kolster (2012) emphasized a national and long-term educational policy to effectively recruit international students.

Factors that Influence International Students’ Decision Making and Destination Choice

Several factors influence international student mobility and choice (Hazen & Alberts, 2006; Mazzarol & Soutar, 2002; Cubillo, Sanchez, & Cervino, 2006). Factors such as the desire of higher education to raise job prospects, as well as limited access to education in developing countries, influence international students’ decisions to study in a foreign country (Hazen & Alberts, 2006; Mazzorol & Soutar, 2002). “Academic reputation, the variety of courses, the quality of education, campus safety, costs/fees, campus location, and opinion of others have been identified as significant contributors to students’ decision making process” (Shanka et al., 2005, p. 34). Cubillo et al. (2006) cited
four major factors believed to be significant in influencing international student decision making and “choice process” (p. 108). These factors include “personal reasons,” such as enhanced skills and career prospects, as well as the reason to improve language skills; “country image effect,” which includes cost of living and social and cultural reputation, among others; “institution image,” which includes variables such as academic and research reputation, as well as campus facilities; and “program evaluation,” which includes duration of program, specializations, and program recognition (Cubillo et al., 2006, p. 108). Also involved are push-pull factors for travel and destination choice of international students (Mazzarol & Soutar, 2002; McMahon, 1992). McMahon (1992) studied the concentration of students from 18 developing countries overseas and the United States as their choice of destination. McMahon suggested that push factors in international students’ decisions to study overseas included low economic conditions of the home country and its status in the global economy, as well as access and value placed on higher education. The pull factors that contributed to the United States as a choice of destination included the size of economy of the home country compared with the economy of the United States, level of bilateral trade, and size of foreign assistance, as well as institutional support by the United States.

Upon Degree Completion

Higher education institutions initiate many programs to grow international enrollment and international students contribute a great deal in reaching this goal (Chen, 2008). International students are temporary migrants to the United States, and their stay is valid for their academic duration (Alberts, 2007; Hazen & Alberts, 2006; Altbach, 2004). Hazen and Alberts (2006) conducted a study with international students at the University
of Minnesota to explore the factors that contribute to their return to the homeland or remain in the United States after completion of degree. The study found that the majority of international students come with an initial intent to return to their homeland after completing their coursework. The study argued that, for students who return home, familial, social, and cultural factors were on top of the list that contribute in their decision. However, several scholars (Alberts, 2007; Altbach, 2004; Hazen & Alberts, 2006) believed that many international students decide to stay permanently in the United States after completion of their degrees. The Hazen and Alberts (2006) study found that primarily economic and professional opportunities were in the top among the list of factors that impact international students’ decisions to remain in the U.S. Although no sufficient data is available on the number of international students who choose to remain after completion of their studies (Altbach, 2004; Hazen & Alberts, 2006), Altbach estimated that the numbers range from 66% to 92% for Chinese and 77% to 88% for Indian students. Alberts (2007) indicated that “many of these initially temporary migrants become highly skilled permanent immigrants, and therefore continue to benefit the United States in a number of ways” (p. 142). Many international students are attracted to the United States due to its global economy and higher education infrastructure, as well as U.S. employers’ willingness to hire skilled individuals (Altbach, 2004). As higher education institutions become more involved in the recruitment of international students, it is imperative that they learn to meet the varying social and cultural needs of international students. International students’ transition to a professional career in the United States can be a multicultural challenge, as they face multitudes of cultural issues.
(Sangganjanavanich, Lenz, & Carvazos, 2011). It is essential for employers to develop social and cultural proficiency programs if they are to hire skilled international graduates.

**Type of Housing and Roommate**

Shelter, a human safety need (Huitt, 2007), is vitally important for international students’ social and cultural adjustment upon arrival at a U.S. campus. Effectively planned housing facilities promote healthy living and learning communities consisting of mutual interest, a cooperative environment, and shared academic inspiration and learning (Hassanain, 2008). A limited number of relative studies exist that examine housing type of international students at higher education institutions (Obeng-Odoom, 2012). Fewer studies have been conducted on the living choice and its impact on the acculturation process of international students (Abe et al., 1998; Minson, 2000).

International students face many challenges in adapting to living in a new environment in which they are suddenly faced with language, cultural, and social barriers (Perrucci & Hu, 1995; Poyrazli & Grahame, 2007; Sarkodie-Mensa, 1998). Several studies have reported social problems as one of the major adjustment issues and suggested that better social support through peer programs can be beneficial for the positive cultural adjustment of international students in the United States (Abe et al., 1998; Constantine, Anderson, Berkel, Caldwell, & Utsey, 2005). Dorozhkin and Mazitova (2008) stated, “It is the job of the host country to provide the optimal conditions for international students living and educational needs, taking account of the complex process of adaptation to a new way of life” (p. 23). As cited in Sam (2001), many researchers believed that satisfactory “living arrangement including housing” (p. 320)
may help students enhance their social relationships, which ultimately results in greater academic achievement and cultural adaptation.

The majority of higher education institutions in the United States send a pre-departure information kit to international students upon their acceptance, which contains housing and other information important for their transition (Internationalstudent.com, 2015). A study conducted by Sam (2001) concluded that information received prior to international students’ travel was significantly relevant to satisfaction in the foreign country. Lin (2007) argued that Chinese students assume their accommodation is arranged prior to their departure, which is the case at most colleges and universities in China. However, upon their arrival in the U.S., they learn that they are responsible for their housing, which creates enormous pressure to find accommodations. In a report by Australian Education International (2012) on international students in Australia, one of the key findings was that pre-departure information sent to international students is instrumental in international students’ adjustment in Australia. The report recommends that higher education institutions send the pre-departure information in a timely manner and that it contain current practices and policies relating to study and life in Australia. The report also proposed that the “initial experience” is the key factor in “laying the foundation” (p. V) for success of international students.

**On-campus residence hall living.** Paltridge et al. (2010) defined on-campus living as an “accommodation that is located on or near campus and is administered by the university or an affiliated body” (p. 357). Schroeder, Mable, and Associates (1994) believed that the primary role of residence halls is a learning community for the students. They proposed that the residence halls at educational institutions, in the wake of diverse
global and economic factors, can transform student learning to a “well planned, integrated, and coherent educational experience” (p. 5). In a study by Pascarella et al. (1992) on the cognitive impact of living on campus vs. commuting to college, it was found that, in addition to increased social involvement and cultural awareness, cognitive, intellectual, and personal development of students living on campus were significantly improved as compared to those who commuted to campus. Additionally, research revealed that living on campus also positively impacts openness to diversity. Pike (2002) conducted a study of 502 first-year students at a major research university in the Midwest and found that living on campus resulted in openness to diversity, regardless of the background of the students, due to frequency of “strengthened and sustained interaction around common problems and shared interests” (p. 294).

Satisfaction with living on campus varies based on cultural or ethnic background (Lange, 1990; Turley & Wodtke, 2010), as well as individual reaction to the social and academic life experience (Poyzali & Grahame, 2007). Turley and Wodtke (2010) stated that “different groups of students are differently affected by the living environment” (p. 506). This claim was supported in the findings of a study on enrolled students in postsecondary institutions in the United States or Puerto Rico between July 1, 1999, and June 30, 2000. Results indicated that Black students who lived on campus were more academically involved and had significantly higher GPAs than Black students at the same institution who lived off campus with family. Similarly, the study found that liberal arts students who lived on campus performed academically better than liberal arts students at the same institutions who lived off campus with family. Turley and Wodtke concluded that “racial minorities who live on campus may benefit more from the campus living
environment because they tend to be more concerned about being academically integrated, interact with faculty more frequently, and are generally more involved in institutional activities” (p. 527).

Living on campus serves as a foundation for interactions such as providing opportunities to participate in social events, community services, cultural exchange programs, and sporting events (Paltridge et al., 2010). Additionally, on-campus living offers easy access to classes and other major services (Abe et al., 1998). Another perceived benefit of on-campus housing is security. In a study by Paltridge et al. (2010) at Monash University’s Clayton campus in Australia, all international students indicated that they felt safe living on campus. The researchers argued that university accommodations not only provide “safe living environment” (p. 362), but also serve as an extenuating factor for social interactions with students of all cultures. Safety is regarded as a top priority by many international students when living in an unfamiliar environment.

While there are academic and social benefits of living on campus, several studies report that international students face many challenges while living on campus. Cost of living is a major concern for international students (Murdoch et al., 2012; Obeng-Odoom, 2012; Poyrazli & Grahame, 2007). “Approximately 60% of off-campus students cited on-campus housing cost as a major factor contributing to their decision to move” (Murdoch et al., 2012, Recent Graduate Survey section, para. 1). As previously mentioned, many other problems may arise for international students that may be cultural, individual, or gender specific relative to alcohol use in the residence halls, loud music, noise, lack of social interaction or acceptance, perceived discrimination, as well as access and use of
community facilities such as bathrooms and kitchens. Sewell and Davidson (1961, as cited in Lange, 1990), conducted a study on 40 Scandinavian students at the University of Minnesota and found that these international students criticized American students for not recognizing the difference between work and recreation. According to Obeng-Odoom’s (2012) findings, the majority of the problems were “minor” and similar to those of local students, which included “personal conflicts, noise making, homesickness, and bad-natural lighting” (p. 208).

**Off-campus living.** Off-campus living includes the option of leasing a shared or single apartment or a house within close proximity to the campus (Internationalstudent.com, 2015). Reflecting on advantages and disadvantages of living off campus, Storck (n.d.) of Armstrong State University believed that advantages include “independence, space, and sense of responsibility” (Off-campus Pros section, para. 2), while disadvantages include “more responsibility, lease limitations, transportation, and isolation” (Off-campus Cons section, para. 3). During the first year, most international students do not own a personal mode of transportation. Other benefits include less costly, flexibility in the choice of a roommate(s), as well as healthy and more independent living (Stacey, 2013). Living off campus necessitates either walking or taking an alternate transportation to and from campus. In Obeng-Odoom’s (2012) study of international students at the University of Sydney, the majority of international students lived off campus, while 51% changed housing within the first semester of arrival. A web search revealed that these numbers vary among institutions.

**American Roommate.** Very limited research exists on living choices (roommate patterns) of international students. Washburn University in Topeka, Kansas, lists key
information on its housing and residence life website for American and international students who room together to help with the adjustment while living with an individual of a different culture. Suggestions for international students include asking for help from the American roommate when needed, politely indicating like or dislike something, requesting that something be repeated if not understood the first time, and seeking support when experiencing homesickness or culture shock (Washburn University, n.d.). Alison at University Language (2009) suggested five ways in which international students can benefit from American roommates: (1) “improve English, (2) learn the local ropes, (3) get to know American family, (4) get acquainted with the culture, and (5) get tips on American etiquettes” (How American Roommates Help section, para. 1).

A study by Marion and Stafford (1975) at North Carolina State University found that contact with foreign students resulted in more international activities for the freshman. Shook and Fazio (2008) investigated the effects of interracial long-term relationship among white and African American roommates. The subjects were white freshmen who had been randomly assigned to either a white or an African American roommate. They found that roommates in interracial rooms spent more time together and that “automatically activated racial attitudes and intergroup anxiety improved over time among students, but not among students in same-race rooms” (p. 717).

Saidla and Grant (1993) studied roommate rapport and understanding based on the following: American/international roommate, American/American roommate, between gender, and between “those who chose to live together and those who did not” (p. 336). Saidla and Grant found that “American/American pairs did not enjoy greater amount of rapport than international/American pairs” (p. 339); however,
international/American pairs were lower on understanding than American/American pairs. Saidla and Grant stated that possible reasons for the differences may be due to the “underlying needs” (p. 340). They found that American students were focused on relationship building, while international students considered privacy as their priority and were more concerned with “lifestyle issues” (p. 340).

**Social Interaction**

International students are young adults who bring distinctive perspectives to a new country in which they are faced with challenges of foreign language, new social and economic structure, accommodations, financial independence, and cultural problems (Dorozhkin & Mazitova, 2008; Furnham, 2004; Heikinheimo & Shute, 1986; Selltiz, Christ, Havel, & Cook, 1963). “Given the fact that foreign students are an increasing minority and vital to universities, it is important that they adapt to the new culture rapidly so they may operate effectively in whatever they are doing” (Furnham, 2004, p. 16). Ethnic and racial diversity is rapidly changing in the United States (Census, 2010), and “foreign student population on American college campuses differ markedly with respect to nationality, race, ethnicity, cultural norms and customs, and linguistic background” (Spencer-Rodgers, 2001, p. 639). In discussing the factors related to social interaction, Hayes and Lin (1994) believed that “individual differences, sex role differences, stigma, and language skills” (p. 11) are the primary contributors. Heikinheimo and Shute (1986) noted that “every foreign student encounters potential inhibitors and stimulators that affect his or her interaction with the host society” (p. 403).

Higher social interaction and social support also positively impact culture learning and competence. In a study at a large urban university in Northeastern U.S., Yeh and
Inose (2003) found that age, gender, English language, social connectedness, and social support had a significant and positive impact on “acculturative distress” (p. 23) of international students from non-European countries. Students generally participate in intercultural contacts at least one to two times per week, depending upon the form of contact, which varies racially and ethnically for each individual or group based on “socioeconomic class, past exposure, memories of past contact, and other racial groups” (Halualani, Chitgopekar, Huynh, Morrison, & Dodge, 2004, p. 368). A study at an Australian institution found that the majority of international students mix socially with co-culture students, whether on or off campus (Rosenthal et al., 2007). However, most intercultural interactions occur on campus rather than off campus (Rosenthal et al., 2007; Halualani et al., 2004).

In an earlier study by Selltiz et al. (1963) that was conducted at the beginning and end of students’ first year, a strong relationship was found between living arrangements and interactions of Asian students with the Americans; however, the “influence on the development of friendship” (p. 121) with Americans varied for European and non-European students. Selltiz et al. found that simply interaction with American students did not result in close friendships for either European or non-European students. However, international students’ “personal characteristics” (p. 121), previous travel outside their home country, and level of confidence directly impacted their degree of friendship with Americans.

Educational institutions hold many cultural and social events on campus (Paltridge et al., 2010); however, these events usually lack American participation (Williams & Johnson, 2011). International students desire to interact and befriend with
host nationals (Wright & Schartner, 2013), they do not actively create opportunities or “take full advantage of the opportunities” (Saidla & Parodi, 1991, p. 55). Although perceived to be vital, international students struggle with establishing friendships with American students (Sam, 2001; Hayes & Lin, 1994; Lange, 1990). Several studies reported that English language is among the most common barriers for these friendships (Dorozhkin & Mazitova, 2008; Hayes & Lin, 1994; Paltridge et al., 2010; Rosenthal et al., 2007; Wright & Schartner, 2013), particularly among Asian students (Heikinheimo & Shute, 1986). Heikinheimo and Shute (1986) found that, for many international students, “language skills,” “cultural differences,” “academic concerns,” and “racial discrimination” (p. 403) were major adjustment issues. They concluded that students who were both “isolated and dissatisfied” (p. 405) reported the most problems related to language, culture, and social adjustment than those who were isolated but not dissatisfied. However, international students who were socially active did not encounter adjustment problems (Heikinheimo & Shute, 1986). The Australian Education Survey conducted by the Australian Education International (2010) on international students in Australia found that the “lack of interest by Australian students and English ability were perceived as barriers in making friends with Australian students” (p. 7). Mastenhauser (1983, as cited in Sam 2001) believed that a lack of interest exists among host nationals to engage with international students who are perceived as “handicapped in several areas such as inadequate language ability, poor academic preparation, and general inferiority to domestic students” (p. 320), and subject to discrimination.

A reciprocal advantage of social interaction between international and American students is that social openness by host students toward international students also greatly
improves. Williams and Johnson (2010) examined the way in which American students differed on “multicultural attitude and experience” and their relationship to “report friendship with international students (p. 43). They found that open-mindedness toward other cultures was significantly higher among American students who had an increased level of friendship with international students.

**Overall Satisfaction**

Although international students experience initial adjustment issues, the majority are satisfied with life in the United States (Paltridge et al., 2010; Sam, 2001). Sarkodie-Mensah (1998) suggested the following tips to help international students adjust to the American culture: Participate in social activities with Americans, take up community projects, share culture and information about home country with host students, and attend American holiday celebrations with American families.

As cited by Rosenthal et al. (2007), international students desire to develop close friendships with host students (Daroesman, Looi, & Butler, 2005; James & Devlin, 2001) but lack the “capacity” to do so due to lingual and other differences (Wright & Schartner, 2013). According to Bennett (2001), “A person can be a witness to a tremendous parade of episodes and yet, if he fails to keep making something out of them…, he gains little in the way of experience from having been around when they happened. It is not what happens around him that makes a man experienced; it is the successive construing and reconstruing of what happens, as it happens, that enriches the experience of his life” (p. 218).
Theoretical Framework

The study utilized Chen and Starosta’s (2000) Model of Intercultural Sensitivity, which consists of five dimensions: (1) interaction engagement, (2) respect of cultural differences, (3) intercultural confidence, (4) interaction enjoyment, and (5) intercultural attentiveness.

The dimension of interaction engagement concerns the participants’ feeling of participation in the process of intercultural communication. Respect for cultural differences refers to how participants orient to or tolerate cultural differences in their counterparts. Interaction confidence indicates the participants’ degree of confidence during the intercultural interaction. Interaction enjoyment deals with participants’ reaction to communication that is culturally different. Interaction attentiveness reflects participants’ efforts to understand what is going on in intercultural communication. (Chen, 2010, p. 4)

A study by Dong, Day, and Collaco (2008) utilized Chen and Starosta’s (2000) Intercultural Sensitivity Scale. Dong et al. studied the relationship between higher intercultural communication sensitivity and multiculturalism to ethnocentrism at two universities in the western United States. Participants were 419 undergraduate college students. Results of the study revealed a negative correlation between intercultural communication sensitivity and ethnocentrism (Dong et al., 2008).

In another study that utilized Chen and Starosta’s Model of Intercultural Sensitivity (2000), Peng (2006) investigated the intercultural sensitivity level of 173 English majors, 135 non-English majors, and 74 Chinese employees of multinational companies in China. Peng noted that both English and non-English majors comprised the
total population at a liberal arts college in China, while 74 employees comprised the total population of a multinational company in Shanghai. The results of the multiple regression analysis across three groups on each of five dimensions of the Intercultural Sensitivity Scale indicated respect for cultural differences and interaction confidence were important factors for both English and non-English major students, Similarly, interaction confidence and interaction enjoyment were important factors for multinational employees. Table 3 shows factor loadings of Chen and Starosta’s (2000) model of intercultural sensitivity scale.
CHAPTER III: METHOD

This study measured international students’ intercultural sensitivity based on their total social interactions with American students in higher education institutions in the Midwest United States. This chapter provides an in-depth description of the research questions, the study design, instrumentation, specific procedures, and participant information. One major thrust was to examine the likelihood and possibility of identifiable differences between levels of intercultural sensitivity of international students who reside with other international students and those who reside with American students through the course of their academic years. The study also examined the differences in the intercultural sensitivity of international students based on level of social interaction with Americans.

The lack of research surrounding the levels of intercultural sensitivity of international students, based upon the variable of roommate choice as a measure of intercultural sensitivity in American institutions of higher education, is in serious need of deeper exploration. The significance of this study is its contribution to an understanding of specific variables related to the basis for intercultural sensitivity, as expressed by international students in American institutions of higher education.

Research Questions

Research Question 1: Is there a significant difference in intercultural sensitivity of international students based on their living choice?

Research Hypothesis 1: No significant difference will be found in intercultural sensitivity of international students based on their living choice.
Research Question 2: Is there a significant difference in intercultural sensitivity of international students based on their level of social interaction with American students?

Research Hypothesis 2: No significant difference will be found in intercultural sensitivity of international students based on their level of social interaction with American students.

Research Question 3a: Is there a significant difference in intercultural sensitivity of international students who live with American students and exhibit high or low social interaction?

Research Hypothesis 3a: No significant difference will be found in intercultural sensitivity of international students who live with American students and exhibit high or low social interaction.

Research Question 3b: Is there a significant difference in intercultural sensitivity of international students who live with other international students and exhibit high or low social interaction?

Research Hypothesis 3b: No significant difference will be found in intercultural sensitivity of international students who live with other international students and exhibit high or low social interaction.

Research Question 3c: Is there a significant difference in intercultural sensitivity of international students who live alone and exhibit high or low social interaction?

Research Hypothesis 3c: No significant difference will be found in intercultural sensitivity of international students who live alone and exhibit high or low social interaction.
Research Design

This descriptive study utilized a non-experimental quantitative research design. The study examined the relationships and differences among independent and dependent variables. The survey research was conducted to compare the total score on the Intercultural Sensitivity Scale (ISS) developed by Chen and Starosta (2000), and selected variables in the demographic survey developed by the researcher were addressed. The demographic questionnaire and the Intercultural Sensitivity Scale can be seen in Appendices A and B, respectively.

Research Hypothesis 1: No significant difference will be found in intercultural sensitivity of international students based on their living choice.

This hypothesis utilized an Analysis of Variance (ANOVA) to explore the differences on intercultural sensitivity of international students based on three types of living choices: American roommate, international roommate, and choice of living alone. Analysis of Variance is defined as “an inferential statistical procedure by which a researcher can test the null hypothesis that two or more population means are equal” (Wiersma & Jurs, 2005, p. 385). In addition, correlational analysis measured the extent of relationship (Wiersma & Jurs, 2005) between international students’ length of stay with American roommates and intercultural sensitivity of international students.

Research Hypothesis 2: No significant difference will be found in intercultural sensitivity of international students based on their level of social interaction with American students.

As seen in the demographic survey (Appendix A), social interaction is measured based on the amount of time spent with American friends (Bochner, McLeod, & Lin,
1977). These data were captured on three questions on which international students were asked to rate the degree of time they spent with Americans doing various activities, which included:

- participation in American sports with American students/friends
- field trips with American students/friends
- social events with American students/friends

Each question had five possible response category ratings for level of social interaction (Appendix A), which included: (1) never, (2) once a month, (3) once a week, (4) 2-3 times a week, and (5) every day. To estimate the total interaction with Americans, a total interaction score was calculated based on the overall mean rating for each of the three social interaction questions.

Respondents with a total interaction score at the median or higher were classified as those in the “high interaction” group, and those with values below the median were judged to be in the “low interaction” group.

To measure the difference between international students who exhibited high total social interaction with American students and those who exhibited low total social interaction, $t$-test statistics were utilized.

**Research Hypothesis 3a:** No significant difference will be found in intercultural sensitivity of international students who live with other international students and exhibit high or low social interaction.

A $t$-test determined whether any difference exists in the intercultural sensitivity among international students who lived with American students and exhibited high or low total social interaction with Americans.
Research Hypothesis 3b: No significant difference will be found in intercultural sensitivity of international students who live with other international students and exhibit high or low social interaction.

A t-test determined whether any difference exists in the intercultural sensitivity of international students who lived with international students and exhibited high or low social interaction with Americans.

Research Hypothesis 3c: No significant difference will be found in intercultural sensitivity of international students who live alone and exhibit high or low social interaction.

A t-test determined whether any difference exists in the intercultural sensitivity of international students who lived alone and exhibited high or low social interaction with Americans.

Participants

Participants consisted of international students enrolled at three major public institutions in a state in the Midwest United States.

Measures and Procedures

International students from three higher education institutions in a state in the Midwest United States were surveyed on demographic and Intercultural Sensitivity Scales via paper-and-pencil method. The researcher visited international student offices at each institution and conducted training sessions for the staff on data collection. Staff at international student offices on each campus invited all international students to visit the international student office and complete the survey. To encourage participation of international student in this study, three subsequent reminder emails at each institution
were sent out in the duration of one month of conducting the survey. Respondents’ names were entered in two $50 Walmart gift card drawings at each campus. The consent forms were attached to the surveys, and all Institutional Review Board (IRB) protocols and procedures were followed, as the study involved human subjects. The participation of subjects was voluntary, and participants could withdraw at any time. During data collection, each participating institution was assigned a color for the paper survey in order to avoid any possibility that surveys could become disorganized. Institution 1 was assigned white, and the surveys were printed on white paper. Institution 2 was blue, and Institution 3 was green.

**Demographic Scale**

A 13-item survey was developed by the researcher (Appendix A). Based on the research questions, the following variables were considered important, as they were directly relevant to the study.

*Social interaction:* Social interaction consisted of three different types of activities that include: Play sports, travel to field trips, and attend social events such as movies and dining out with Americans.

*Living Choice:* This question consisted of three types of living choices: American roommate, international roommate, or living alone. This question also included length of stay with American roommates.

**Intercultural Sensitivity Scale**

The Intercultural Sensitivity Scale (ISS) developed by Chen and Starosta (2000) was selected due to its simplicity and adaptive style. Use of a shorter survey that offers easy-to-answer questions is logical for international students to reduce any chance of error and ambiguity. The survey items required 5-point Likert-scale responses that ranged
from strongly agree to strongly disagree. The survey consisted of 24 items, with a total possible score range between 24 and 120. Individual item scores were summed to obtain a total score for each participant on the Intercultural Sensitivity Scale (ISS). The authors of the ISS did not identify a cut-off score, therefore, for the purpose of this study, all total scores were relevant and were hypothesized. Permission to use the survey was granted by the author (see Appendix C).

**Validity of Intercultural Sensitivity Scale**

Chen and Starosta (2000) developed and assessed the validity and reliability of the Intercultural Sensitivity Scale (ISS). A sample of 414 (average age was 20.65 among the 152 males and 262 females) students who were enrolled in the communication courses completed the initial 44-item scale, from which a final 24-item survey was generated. A factor analysis was performed, and five factors that showed an eigenvalue of 1 or above were extracted. As shown in Table 5, these five factors include: (1) interaction engagement, (2) respect for cultural differences, (3) interaction confidence, (4) interaction enjoyment, and (5) interaction attentiveness. Interaction engagement had an eigenvalue of 10.03; respect for cultural differences had an eigenvalue of 2.30; interaction confidence had an eigenvalue of 1.73; interaction enjoyment had an eigenvalue of 1.33; and interaction attentiveness had an eigenvalue of 1.00.

To evaluate the concurrent validity of the intercultural sensitivity scale with associated scales, Chen and Starosta (2000) conducted a second study on a sample of 162 students (average age was 19.46 among the 66 males and 96 females) in communication basic courses. As cited in Chen and Starosta, students were asked to complete a 24-item Intercultural Sensitivity Scale; Interaction Attentiveness Scale developed by Cegala
(1981); Impression Rewarding Scale developed by Whelless and Duran (1982); Self-Esteem Scale developed by Rosenberg (1965); Self-Monitoring Scale developed by Lennox and Wolfe (1984); Perspective Taking Scale developed by Davis (1996); Intercultural Effectiveness Scale developed by Hammer, Gudykunst, and Wiseman (1998); and Intercultural Communication Attitude Scale developed by Chen (1993). The authors reported significant correlations between the Intercultural Sensitivity Scale and all other scales, which resulted in high reliability of the ISS. Table 3 shows correlations between the Intercultural Sensitivity Scale and other measures. The reliability coefficients for all other scales were reported above .70.

Table 3

<table>
<thead>
<tr>
<th>Scale</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interaction Attentiveness Scale</td>
<td>.20*</td>
</tr>
<tr>
<td>Impression Rewarding Scale</td>
<td>.41*</td>
</tr>
<tr>
<td>Self-esteem Scale</td>
<td>.17*</td>
</tr>
<tr>
<td>Self-monitoring Scale</td>
<td>.29*</td>
</tr>
<tr>
<td>Perspective Taking Scale</td>
<td>.52*</td>
</tr>
<tr>
<td>Intercultural Effectiveness Scale</td>
<td>.57*</td>
</tr>
<tr>
<td>Intercultural Communication Attitude Scale</td>
<td>.74*</td>
</tr>
</tbody>
</table>

*p<.05. Taken from The development and validation of Intercultural Sensitivity Scale (Chen & Starosta, 2000, p. 11)

Factor analysis revealed a Cronbach Alpha value of 0.86 on the Intercultural Sensitivity Scale, which validated the internal consistency of the scale. Table 4 shows factor loadings of Chen and Starosta’s (2000) model of intercultural sensitivity scale.
Other Studies Validating Intercultural Sensitivity Scale

Fritz et al. (2001) tested Chen and Starosta’s (2000) Intercultural Sensitivity Scale in a German population using confirmatory analysis. The survey was administered to 541 students studying business administration at the University of Manheim in Germany. The students took the survey after it was translated into German. “The sample was then reduced by random selection to match Chen and Starosta’s sample as in central features” (Fritz et al., 2001, p. 4). As a result, the total sample size was 400 German students, of which 253. A confirmatory factor analysis confirmed the overall acceptance of Chen and Starost’s model in the “German context” (p. 6), however Fritz et al. found minor deficiencies that they stated could be improved. They believed that the reliability of several indicators was not substantially high and the discriminant validity of the factors ‘Interaction Enjoyment’ and ‘Interaction Attentiveness’ was rather low.
Table 4

*Factor Loadings of the Intercultural Sensitivity Scale*

<table>
<thead>
<tr>
<th>Factor</th>
<th>Item #</th>
<th>Factor Loadings</th>
<th>Intercultural Sensitivity Scale Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interaction Engagement</td>
<td>13</td>
<td>.51</td>
<td>I am open minded to people from different cultures.</td>
</tr>
<tr>
<td></td>
<td>23</td>
<td>.52</td>
<td>I often show my culturally distinct counterpart my understanding through verbal or non-verbal cues.</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>.70</td>
<td>I have a feeling of enjoyment toward differences between my culturally distinct counterpart and me.</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>.65</td>
<td>I enjoy interacting with people from different cultures.</td>
</tr>
<tr>
<td></td>
<td>22</td>
<td>.66</td>
<td>I avoid those situations where I will have to deal with culturally-distinct persons.</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>.53</td>
<td>I tend to wait before forming an impression of culturally distinct counterparts.</td>
</tr>
<tr>
<td></td>
<td>21</td>
<td>.52</td>
<td>I often give positive responses to my culturally different counterpart during our interaction.</td>
</tr>
<tr>
<td>Respect for Cultural Differences</td>
<td>7</td>
<td>.56</td>
<td>I don’t like to be with people from different cultures.</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>.50</td>
<td>I think my culture is better than other cultures.</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>.60</td>
<td>I think people from other cultures are narrow minded.</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>.67</td>
<td>I respect the values of people from different cultures.</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>.68</td>
<td>I respect the ways people from different cultures behave.</td>
</tr>
<tr>
<td></td>
<td>18</td>
<td>.62</td>
<td>I would not accept the opinions of people from different cultures.</td>
</tr>
<tr>
<td>Interaction Confidence</td>
<td>3</td>
<td>.66</td>
<td>I am pretty sure of myself in interacting with people from different cultures.</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>.50</td>
<td>I find it very hard to talk in front of people from different cultures.</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>.60</td>
<td>I always know what to say when interacting with people from different cultures.</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>.50</td>
<td>I can be as sociable as I want to be when interacting with people from different cultures.</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>.62</td>
<td>I feel confident when interacting with people from different cultures.</td>
</tr>
<tr>
<td>Interaction Enjoyment</td>
<td>9</td>
<td>.56</td>
<td>I get upset easily when interacting with people from different cultures.</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>.67</td>
<td>I often get discouraged when I am with people from different cultures.</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>.52</td>
<td>I often feel useless when interacting with people from different cultures.</td>
</tr>
<tr>
<td>Interaction Attentiveness</td>
<td>17</td>
<td>.55</td>
<td>I try to obtain as much information as I can when interacting with people from different cultures.</td>
</tr>
<tr>
<td></td>
<td>19</td>
<td>.52</td>
<td>I am sensitive to my culturally distinct counterpart’s subtle meanings during our interaction.</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>.63</td>
<td>I am very observant when interacting with people from different cultures.</td>
</tr>
</tbody>
</table>

Adapted from *An examination of Chen and Starosta’s Model of Intercultural Sensitivity Scale* (Fritz, Graf, Hentze, Mollenberg, & Chen, 2005, p. 56).
Pilot Study

To determine the test-retest reliability of the scale, a pilot study was conducted at Institution 1. Test-retest is “a procedure for determining test-reliability by correlating the scores of two administrations of the same test to the same individuals” (Wiersma & Jurs, 2005, p. 492). The Demographic Scale with Identifiers (Appendix D) and the Intercultural Sensitivity Scale were administered to 27 international students in a Navitas classroom, which is a pre-university and university pathway program (Navitas, 2015) that accepts international students for the first academic year before entering into the program at the university. The purpose for selection of the Navitas class was due to its structured cohort style classroom settings, which consisted of all international students and met at regular weekly intervals. The instructor’s verbal permission was granted, and all IRB protocols were satisfied before the students completed the paper-and-pencil survey. Researcher revisited the class one week later and re-administered the surveys to determine the test-retest reliability of the instrument. Identifiers were collected for the preliminary study; however, no identifiers for the actual study were collected. (See Appendix D, Pilot Study with Identifiers).

Reliability of the Intercultural Sensitivity Scale

Items 2, 4, 6, 7, 9, 11, 12, 14, 15, 17, 18, 20, 22, and 24 of the Intercultural Sensitivity Scale were reverse coded in order to maintain consistency across all items. In order to measure the reliability of the pre-test and post-test of the Intercultural Sensitivity Scale, a Kappa statistical procedure was applied. According to Viera and Garrett (2005), “the calculation is based on the difference between how much agreement is actually present (‘observed’ agreement) compared to how much agreement would be expected to
be present by chance alone (‘expected’ agreement)” (p. 361). Table 5 shows the agreement variation for Kappa, as interpreted by Viera and Garrett.

**Table 5**

*Interpretation of Kappa for Intercultural Sensitivity Scale (ISS)*

<table>
<thead>
<tr>
<th>Kappa</th>
<th>Poor</th>
<th>Slight</th>
<th>Fair</th>
<th>Moderate</th>
<th>Substantial</th>
<th>Almost Perfect</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;0</td>
<td>.01</td>
<td>.01 - .20</td>
<td>.21</td>
<td>.41 - .60</td>
<td>.61 - .80</td>
<td>.81 – 1.0</td>
</tr>
</tbody>
</table>

An increased Kappa value indicated an increased level of agreement for the participants who took both the pre-test and the post-test as a part of this preliminary study. The results indicated that the majority of questions fell into almost perfect agreement level. The pre-test and post-test participant agreement percentages and the weighted Kappa levels are shown in Table 6.

**IRB Approvals**

Permissions were granted for the study through the Institutional Review Boards (IRB) of all institutions. The approval letters and letters of cooperation are included in Appendix E, F, & G.

**Trade-offs and Limitations of Face-to-Face vs Online Survey**

With respect to data collection, both options, face-to-face and online data collection surveys were considered. However, the face-to-face administration was selected due to the anticipation of a better and quicker response rate and fewer threats to validity. Relative to the benefits of face-to-face surveys, Szolnoki and Hoffmann (2013) noted that face-to-face surveys are “clearly structured, flexible and adaptable, based on personal interaction, and can be controlled within survey environment” (p. 58).
Table 6

*Kappa and Agreement Values for Intercultural Sensitivity Scale Items*

<table>
<thead>
<tr>
<th>Item</th>
<th>N</th>
<th>% Agreement</th>
<th>Kappa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enjoy interacting with people from different cultures.</td>
<td>28</td>
<td>79</td>
<td>0.72</td>
</tr>
<tr>
<td>Think people from other cultures are narrow minded.</td>
<td>28</td>
<td>46</td>
<td>0.39</td>
</tr>
<tr>
<td>Pretty sure of myself in interacting with people from different</td>
<td>28</td>
<td>64</td>
<td>0.63</td>
</tr>
<tr>
<td>cultures.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Find it very hard to talk in front of people from different</td>
<td>28</td>
<td>36</td>
<td>0.63</td>
</tr>
<tr>
<td>cultures.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Always know what to say when interacting with people from</td>
<td>28</td>
<td>100</td>
<td>1.00</td>
</tr>
<tr>
<td>different cultures.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Can be as sociable as I want to be when interacting with people</td>
<td>28</td>
<td>100</td>
<td>1.00</td>
</tr>
<tr>
<td>from different cultures.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Don’t like to be with people from different cultures.</td>
<td>28</td>
<td>92</td>
<td>0.61</td>
</tr>
<tr>
<td>Respect the values of people from different cultures.</td>
<td>28</td>
<td>46</td>
<td>0.45</td>
</tr>
<tr>
<td>Get upset easily when interacting with people from different</td>
<td>28</td>
<td>46</td>
<td>0.44</td>
</tr>
<tr>
<td>cultures.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feel confident when interacting with people from different cultures.</td>
<td>28</td>
<td>69</td>
<td>0.82</td>
</tr>
<tr>
<td>Tend to wait before forming an impression of culturally distinct</td>
<td>28</td>
<td>62</td>
<td>0.81</td>
</tr>
<tr>
<td>counterparts.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Often get discouraged when I am with people from different</td>
<td>28</td>
<td>77</td>
<td>0.86</td>
</tr>
<tr>
<td>cultures.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open minded to people from different cultures.</td>
<td>28</td>
<td>92</td>
<td>0.96</td>
</tr>
<tr>
<td>Very observant when interacting with people from different cultures.</td>
<td>28</td>
<td>54</td>
<td>0.75</td>
</tr>
<tr>
<td>Often feel useless when interacting with people from different</td>
<td>28</td>
<td>38</td>
<td>0.63</td>
</tr>
<tr>
<td>cultures.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respect the ways people from different cultures behave.</td>
<td>28</td>
<td>54</td>
<td>0.86</td>
</tr>
<tr>
<td>Try to obtain as much information as I can when interacting with</td>
<td>28</td>
<td>46</td>
<td>0.83</td>
</tr>
<tr>
<td>people from different cultures.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Would not accept the opinions of people from different cultures.</td>
<td>28</td>
<td>85</td>
<td>0.95</td>
</tr>
<tr>
<td>Sensitive to my culturally distinct counterpart’s subtle meanings</td>
<td>28</td>
<td>54</td>
<td>0.71</td>
</tr>
<tr>
<td>during our interaction.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Think my culture is better than other cultures.</td>
<td>28</td>
<td>92</td>
<td>0.94</td>
</tr>
<tr>
<td>Often give positive responses to my culturally different counterpart</td>
<td>28</td>
<td>92</td>
<td>0.94</td>
</tr>
<tr>
<td>during our interaction.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avoid those situations where I will have to deal with culturally-</td>
<td>28</td>
<td>100</td>
<td>0.83</td>
</tr>
<tr>
<td>distinct persons.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Often show my culturally distinct counterpart my understanding</td>
<td>28</td>
<td>100</td>
<td>0.88</td>
</tr>
<tr>
<td>through verbal or non-verbal cues.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have a feeling of enjoyment toward differences between my</td>
<td>28</td>
<td>100</td>
<td>0.89</td>
</tr>
<tr>
<td>culturally-distinct counterpart and me.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Conclusion

This chapter described the methods that were employed to empirically support the evidence that illustrates the impact of social interaction and living choice on the intercultural sensitivity of international students. The research design, data collection methods, and procedures were reported. The validity and reliability of the instrument was described, and results of the preliminary study for the test-retest reliability of the instrument were reported. Chapter IV includes the statistical procedures utilized to analyze the data as well as the results.
CHAPTER IV: RESULTS

An analysis was completed that focused on the international student’s total social interaction and its impact on the intercultural sensitivity. This study examined the need for higher education institutions to initiate programs that engage international students with Americans, which may result in international students reducing isolation, cultural shock, and a slower pace of cultural learning and adaptation. As discussed in Chapter II, several factors influence the attainment of intercultural sensitivity of international students; however, this acquisition can be far more paced if universities take certain measures. The results were addressed based on five research questions that focused on international students’ social interactions with Americans.

**Research Question 1:** Is there a significant difference in intercultural sensitivity of international students based on their living choice?

**Research Question 2:** Is there a significant difference in intercultural sensitivity of international students based on their level of social interaction with American students?

**Research Question 3a:** Is there a significant difference in intercultural sensitivity of international students who live with American students and exhibit high or low social interaction?

**Research Question 3b:** Is there a significant difference in intercultural sensitivity of international students who live with other international students and exhibit high or low social interaction?

**Research Question 3c:** Is there a significant difference in intercultural sensitivity of international students who live alone and exhibit high or low social interaction?
The Statistical Analysis System (SAS 9.3) research software was applied to analyze the quantitative data. Descriptive statistics, Analysis of Variance (ANOVA), and t-tests were generated and reported. Table 7 shows population and samples by institution.

**Table 7**

*Population and Sample by Institution*

<table>
<thead>
<tr>
<th>Institution</th>
<th>International Student Enrolled (Fall 2013)</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Male</td>
</tr>
<tr>
<td>Institution 1</td>
<td>1097</td>
<td>63 (6%)</td>
</tr>
<tr>
<td>Institution 2</td>
<td>752</td>
<td>14 (2%)</td>
</tr>
<tr>
<td>Institution 3</td>
<td>347</td>
<td>19 (5%)</td>
</tr>
<tr>
<td>Total</td>
<td>2196</td>
<td>96 (4%)</td>
</tr>
</tbody>
</table>

Source: Door Reports, WKU, Murray State, and EKU (2014)

All international students ($N = 2196$) at three higher education intuitions in the same state were invited to complete the survey. All respondents ($n = 186$) confirmed that they were international students. A total of 186 surveys were sufficiently completed representing 8% of all international students enrolled at the institutions. The sample was evenly distributed between male ($n = 96$) and female ($n = 90$). All respondents ranged in age from 16 to 46 years for all three institutions (Institution 1 = 16 to 46 years, Institution 2 = 18 to 38 years, and Institution 3 = 18 to 46 years). The majority of the respondents were undergraduate ($N = 108$) students as compared to graduate ($N = 78$) students. The sample consisted of 150 single and 47 married international students. Table 8 provides demographic information (degree level, age, and marital status) by institution.
Table 8

*Age, Degree Level, and Marital Status by Institution*

<table>
<thead>
<tr>
<th>Institution</th>
<th>N</th>
<th>Age</th>
<th>Degree Level</th>
<th>Marital Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Min</td>
</tr>
<tr>
<td>Institution 1</td>
<td>110</td>
<td>24.63</td>
<td>4.51</td>
<td>16</td>
</tr>
<tr>
<td>Institution 2</td>
<td>33</td>
<td>24.12</td>
<td>4.67</td>
<td>18</td>
</tr>
<tr>
<td>Institution 3</td>
<td>43</td>
<td>27.19</td>
<td>7.20</td>
<td>18</td>
</tr>
<tr>
<td>Total</td>
<td>186</td>
<td>25.13</td>
<td>5.37</td>
<td>16</td>
</tr>
</tbody>
</table>

Regarding the living choice, the majority (*N* = 79) reported having an international student (co-national or foreign student) roommate, while 55 lived alone. The least number of respondents had an American roommate (*N* = 47). Table 9 shows the frequency distribution by living choice.

**Table 9**

*Frequency Distribution by Living Choice*

<table>
<thead>
<tr>
<th>Living Choice</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>International roommate</td>
<td>79</td>
<td>42%</td>
</tr>
<tr>
<td>American roommate</td>
<td>47</td>
<td>25%</td>
</tr>
<tr>
<td>Alone</td>
<td>55</td>
<td>29%</td>
</tr>
<tr>
<td>No response</td>
<td>8</td>
<td>4%</td>
</tr>
<tr>
<td>Total</td>
<td>186</td>
<td>100%</td>
</tr>
</tbody>
</table>

Findings Related to Research Question 1

*Is there a significant difference in intercultural sensitivity of international students based on their living choice?*
In the demographic section of the survey, participants were asked to respond relative to their current roommate. An Analysis of Variance (ANOVA) was utilized to find the differences between living choices and overall intercultural sensitivity of international students. The differences also were measured on five subscales of intercultural sensitivity, which included (1) interaction engagement, (2) respect for cultural differences, (3) interaction confidence, (4) interaction enjoyment, and (5) interaction attentiveness (see Chapter II).

No significant differences were found in the overall intercultural sensitivity of international students ($F = 1.02, 2, 178, p < 0.36$). Table 10 and 11 show Analysis of Variance and means and standard deviations respectively by living choice.

**Table 10**

*Analysis of Variance Summary for Overall Intercultural Sensitivity by Living Choice*

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Living Choice</td>
<td>2</td>
<td>334.56</td>
<td>167.28</td>
<td>1.02</td>
</tr>
<tr>
<td>Error</td>
<td>178</td>
<td>29139.09</td>
<td>163.70</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>180</td>
<td>29473.65</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 11**

*Means and Standard Deviations of Overall Intercultural Sensitivity by Living Choice*

<table>
<thead>
<tr>
<th>Living Choice</th>
<th>Overall Intercultural Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
</tr>
<tr>
<td>American</td>
<td>47</td>
</tr>
<tr>
<td>International</td>
<td>79</td>
</tr>
<tr>
<td>Alone</td>
<td>55</td>
</tr>
</tbody>
</table>
Only one scale, interaction enjoyment, showed a significantly higher mean score for international students who lived with co-nationals or other international students rather than with American students ($F = 3.01, 2, 178, p < 0.05$). Tukey’s post hoc analysis also revealed a significant difference between these two living choices for interaction enjoyment. Scores on the other four scales showed no differences: Interaction engagement ($F = 1.53, 2, 178, p < 0.22$); respect for cultural differences ($F = 0.13, 2, 178, p < 0.88$); interaction confidence ($F = 1.08, 2, 178, p < 0.34$); and interaction attentiveness ($F = 0.13, 2, 178, p < 0.88$). Table 12 shows mean scores of all subscales of the Intercultural Sensitivity Scale by living choice.

**Table 12**

*Means and Standard Deviations of Intercultural Sensitivity Subscales by Living Choice*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$N$</td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>American</td>
<td>47</td>
<td>16.14</td>
<td>4.77</td>
<td>13.06</td>
<td>4.75</td>
</tr>
<tr>
<td>International</td>
<td>79</td>
<td>15.79</td>
<td>4.21</td>
<td>12.87</td>
<td>4.72</td>
</tr>
<tr>
<td>Alone</td>
<td>55</td>
<td>14.78</td>
<td>3.60</td>
<td>11.94</td>
<td>3.88</td>
</tr>
</tbody>
</table>

The researcher also examined the relationship between international students’ length of time rooming with American students and overall intercultural sensitivity. A correlational analysis was performed to determine the relationship between length of stay with an American student as a roommate and intercultural sensitivity of international students. The data uncovered a weak negative relationship between length of stay with an
American roommate and international students’ levels of intercultural sensitivity 
\( r = -0.22 \). In addition, the relationships between international students’ length of stay with American roommates and five subscales for intercultural sensitivity also showed weak or no relationships. The relationships on the subscales showed similar results. Table 13 shows correlation coefficients between length of stay with American roommates and level of intercultural sensitivity of international students.

### Table 13

**Means, Standard Deviations, and Correlation Coefficients of Overall Intercultural Sensitivity by Length of Stay with American Roommate**

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Pearson Corr. Coefficients (r)</th>
<th>Length of Stay w/American Roommate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of Stay w/American Roommate</td>
<td>62</td>
<td>12.47</td>
<td>13.97</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall Intercultural Sensitivity</td>
<td>60</td>
<td>52.97</td>
<td>12.70</td>
<td>-0.22</td>
<td></td>
</tr>
<tr>
<td>Interaction Engagement</td>
<td>60</td>
<td>15.56</td>
<td>4.22</td>
<td>-0.19</td>
<td></td>
</tr>
<tr>
<td>Respect for Cultural Diff.</td>
<td>60</td>
<td>12.68</td>
<td>4.51</td>
<td>-0.26</td>
<td></td>
</tr>
<tr>
<td>Interaction Confidence</td>
<td>60</td>
<td>11.16</td>
<td>3.69</td>
<td>-0.26</td>
<td></td>
</tr>
<tr>
<td>Interaction Enjoyment</td>
<td>60</td>
<td>6.54</td>
<td>3.48</td>
<td>-0.03</td>
<td></td>
</tr>
<tr>
<td>Interaction Attentiveness</td>
<td>60</td>
<td>7.02</td>
<td>2.37</td>
<td>0.01</td>
<td></td>
</tr>
</tbody>
</table>

### Findings Related to Research Question 2

Is there a significant difference in intercultural sensitivity of international students based on their level of social interaction with American students?

Social interaction was measured based on total time spent with American friends (Bochner et al., 1977). These data were captured on three questions on which
international students were asked to rate the degree of time they spent with American students engaging in various activities, which included:

- participation in American sports with American students/friends
- field trips with American students/friends
- social events with American students/friends

Each question had five possible response category ratings for level of social interaction (Appendix A), which included: (1) never, (2) once a month, (3) once a week, (4) 2-3 times a week, and (5) every day. To estimate the total interactions with Americans, a total interaction score was calculated using the overall mean rating for each of the three social interaction questions. This calculation yielded total interaction scores in the range of 1 to 5, with a median value of 2.33.

Respondents with a total interaction score at the median or higher were classified as those in the “high interaction” group and those with values below the median were judged to be in the “low interaction” group. Table 14 summarizes the group classification values.

**Table 14**

*Social Interaction Group Classification based on Total Interaction Score*

<table>
<thead>
<tr>
<th>Social Interaction Group</th>
<th>Total Social Interaction Score</th>
<th>N</th>
<th>Mean Value</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Interaction</td>
<td></td>
<td>93</td>
<td>3.15</td>
<td>2.33</td>
<td>5</td>
</tr>
<tr>
<td>Low Interaction</td>
<td></td>
<td>90</td>
<td>1.63</td>
<td>1.00</td>
<td>2</td>
</tr>
<tr>
<td>All</td>
<td></td>
<td>183</td>
<td>2.40</td>
<td>1.00</td>
<td>5</td>
</tr>
</tbody>
</table>
To measure the differences between the level of total social interaction and intercultural sensitivity of international students among the two groups of international students, $t$-tests were performed. Ninety three international students reported high interactions with Americans, and 90 reported low interactions with Americans. The data found no statistically significant difference in the mean score on the overall intercultural sensitivity based on total social interactions with American students ($t = 1.82, p = .07$). Data revealed that the level of social interaction does not affect intercultural sensitivity of international students; thus, the hypothesis is retained. Table 15 shows means, standard deviations, and $t$-test results of overall intercultural sensitivity by total social interaction with Americans.

**Table 15**

*Means, Standard Deviations, and $t$-test Results of Overall Intercultural Sensitivity by Total Social Interaction*

<table>
<thead>
<tr>
<th>Social Interaction Group</th>
<th>$N$</th>
<th>Mean</th>
<th>SD</th>
<th>$t$</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Interaction</td>
<td>92</td>
<td>54.88</td>
<td>13.89</td>
<td>1.82</td>
<td>179</td>
</tr>
<tr>
<td>Low Interaction</td>
<td>89</td>
<td>51.51</td>
<td>11.78</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Of the five subscales of intercultural sensitivity, interaction engagement ($t = 2.52, p = .01$) and respect for cultural differences ($t = 2.61, 3, 175, p = .00$) showed significantly higher mean scores for international students who reported a high total social interaction with American students than those with low total social interaction with Americans. Data on the other three subscales - interaction confidence ($t = 0.54, p = .59$); interaction enjoyment ($t = -1.06, p = .29$); and interaction attentiveness ($t = 1.07, p = .28$) - revealed no significant differences. Table 16 shows means and standard deviations of
the five subscales of the Intercultural Sensitivity Scale by total social interaction with Americans.

**Table 16**

*Means and Standard Deviations of Intercultural Sensitivity Subscales by Total Social Interaction*

<table>
<thead>
<tr>
<th>Social Interaction Group</th>
<th>Interaction Engagement</th>
<th>Respect Differences</th>
<th>Interaction Confidence</th>
<th>Interaction Enjoyment</th>
<th>Interaction Attentiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>High interaction</td>
<td>16.38</td>
<td>4.78</td>
<td>13.60</td>
<td>4.54</td>
<td>11.37</td>
</tr>
<tr>
<td>Low interaction</td>
<td>14.83</td>
<td>3.34</td>
<td>11.89</td>
<td>4.28</td>
<td>11.08</td>
</tr>
</tbody>
</table>

**Findings Related to Research Questions 3a, 3b, and 3c**

Three types of living choices were studied, which included international students who lived with Americans, with other international students, and those who lived alone. Total social interaction and living choice were evaluated based on three variables: (a) American high or American low consisted of international students who lived with American students and exhibited high or low level of total social interaction; (b) international high and low consisted of international students who lived with other international students and exhibited high or low total interaction with American students; and (c) alone high or low consisted of international students who lived alone and exhibited high or low total social interaction with American students. To explore the difference in intercultural sensitivity of international students based on their total social interaction and living choice, *t*-tests were utilized across all groups.
Findings Related to Research Question 3a

Is there a significant difference in intercultural sensitivity of international students who live with American students and exhibit high or low social interaction?

A $t$-test was utilized to explore the differences in intercultural sensitivity between international students living with Americans and their total social interaction. Data revealed no significant difference in the intercultural sensitivity of international students who lived with American students and total social interaction with Americans ($t = 0.82, p = .42$); thus, the hypothesis is retained. Table 17 shows the means, standard deviations, and $t$-test results of intercultural sensitivity of international students who live with American students based on their total social interaction.

Table 17

American Roommate Means, Standard Deviations, and $t$-test Results for Overall Intercultural Sensitivity by Total Social Interaction

<table>
<thead>
<tr>
<th>Social Interaction Group</th>
<th>Overall Intercultural Sensitivity</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>$t$</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Interaction</td>
<td></td>
<td>35</td>
<td>54.03</td>
<td>13.62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Interaction</td>
<td></td>
<td>11</td>
<td>50.18</td>
<td>13.67</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Each subscale of the intercultural sensitivity showed similar results. The values on the five subscales included interaction engagement ($t = 1.08, p = .29$); respect for cultural differences ($t = 0.76, p = .45$); interaction confidence ($t = 1.27, p = .21$); interaction enjoyment ($t = -1.20, p = .24$); and interaction attentiveness ($t = 1.17, p = .25$). Table 18 shows the mean scores of five subscales of Intercultural Sensitivity Scale by American roommate and total social interaction.
Table 18

American Roommate Means and Standard Deviations for Intercultural Sensitivity Subscales by Total Social Interaction

<table>
<thead>
<tr>
<th>Social Interaction Group</th>
<th>Interaction EngagementMean</th>
<th>Interaction EngagementSD</th>
<th>Respect DifferencesMean</th>
<th>Respect DifferencesSD</th>
<th>Interaction ConfidenceMean</th>
<th>Interaction ConfidenceSD</th>
<th>Interaction EnjoymentMean</th>
<th>Interaction EnjoymentSD</th>
<th>Interaction AttentivenessMean</th>
<th>Interaction AttentivenessSD</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Interaction</td>
<td>16.57</td>
<td>5.25</td>
<td>13.51</td>
<td>4.32</td>
<td>11.37</td>
<td>3.93</td>
<td>5.14</td>
<td>5.34</td>
<td>7.43</td>
<td>2.80</td>
</tr>
<tr>
<td>Low Interaction</td>
<td>15.27</td>
<td>2.68</td>
<td>12.27</td>
<td>5.83</td>
<td>9.63</td>
<td>3.98</td>
<td>6.64</td>
<td>2.84</td>
<td>6.36</td>
<td>1.91</td>
</tr>
</tbody>
</table>

Findings Related to Research Question 3b

Is there a significant difference in intercultural sensitivity of international students who live with other international students and exhibit high or low social interaction?

The results of the t-test revealed a significant difference in the intercultural sensitivity of international students who lived with other international students and exhibited high total social interaction with Americans as compared to those who exhibited low total social interaction with Americans ($t = 3.18, p = .00$); thus, rejecting the hypothesis. Table 19 shows means, standard deviations, and t-test results of intercultural sensitivity based on international roommate and total social interaction with Americans.

Of the five subscales, the interaction engagement ($t = 3.39, p = .00$) and respect for cultural differences ($t = 3.45, p = .00$) scales showed significant differences, while the differences on interaction confidence ($t = 1.69, p = .09$), interaction enjoyment
$(t = 0.26, p = .79)$, and interaction attentiveness $(t = 1.63, p = .11)$ were not significant.

Table 20 shows the means and standard deviations of the five subscales of Intercultural Sensitivity Scale by international roommate and total social interaction.

**Table 19**

*International Roommate Means, Standard Deviations, and t-test Results for Overall Intercultural Sensitivity by Total Social Interaction*

<table>
<thead>
<tr>
<th>Social Interaction Group</th>
<th>Overall Intercultural Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$N$</td>
</tr>
<tr>
<td>High Interaction</td>
<td>34</td>
</tr>
<tr>
<td>Low Interaction</td>
<td>44</td>
</tr>
</tbody>
</table>

*p<.05

**Table 20**

*International Roommate Means and Standard Deviations for Intercultural Sensitivity Subscales by Total Social Interaction*

<table>
<thead>
<tr>
<th>Social Interaction Group</th>
<th>Interaction Engagement</th>
<th>Respect Differences</th>
<th>Interaction Confidence</th>
<th>Interaction Enjoyment</th>
<th>Interaction Attentiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$N$</td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>High Interaction</td>
<td>34</td>
<td>17.59</td>
<td>4.55</td>
<td>14.91</td>
<td>4.85</td>
</tr>
</tbody>
</table>

**Findings Related to Research Question 3c**

*Is there a significant difference in intercultural sensitivity of international students who live alone and exhibit high or low social interaction?*

Based on the t-test analysis of the data, no significant differences were found in the overall intercultural sensitivity of international students who lived alone between the high total interaction and low total interaction students $(t = -1.27, p = .21)$; thus,
accepting the hypothesis. Table 21 shows means, standard deviations, and t-test results of intercultural sensitivity based on living alone and total social interaction with Americans.

**Table 21**

*Living Alone Means, Standard Deviations, and t-test Results for Overall Intercultural Sensitivity by Total Social Interaction*

<table>
<thead>
<tr>
<th>Social Interaction Group</th>
<th>Overall Intercultural Sensitivity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean</td>
</tr>
<tr>
<td>High Interaction</td>
<td>22</td>
<td>48.82</td>
</tr>
<tr>
<td>Low Interaction</td>
<td>33</td>
<td>52.76</td>
</tr>
</tbody>
</table>

The values on the five subscales showed similar results and included interaction engagement ($t = -0.46, p = .64$); respect for cultural differences ($t = -0.95, p = .34$); interaction confidence ($t = -1.73, p = 0.09$); interaction enjoyment ($t = -0.26, p = .79$); and interaction attentiveness ($t = -0.92, p = .36$). Table 22 shows mean scores and Standard Deviations of the five subscales of the Intercultural Sensitivity Scale by choice of living alone and total social interaction with Americans.

**Table 22**

*Living Alone Means and Standard Deviations for Intercultural Sensitivity Subscales by Total Social Interaction*

<table>
<thead>
<tr>
<th>Social Interaction Group</th>
<th>Interaction Engagement</th>
<th>Respect Differences</th>
<th>Interaction Confidence</th>
<th>Interaction Enjoyment</th>
<th>Interaction Attentiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>High Interaction</td>
<td>22</td>
<td>14.50</td>
<td>3.75</td>
<td>11.36</td>
<td>3.37</td>
</tr>
<tr>
<td>Low Interaction</td>
<td>33</td>
<td>14.97</td>
<td>3.55</td>
<td>12.33</td>
<td>4.20</td>
</tr>
</tbody>
</table>
Summary of Results

This chapter presented an analysis of data based on the five research questions. An analysis of variance measure was utilized for Research Question 1 and $t$-test statistics for the remaining four research questions. Data on the first research question revealed no significant difference in the intercultural sensitivity of international students whether they lived with an American student, an international student, or alone. The second research question inquired about the scale of intercultural sensitivity of international students based on their level of total social interaction with Americans. No significant differences were found in the overall scale of intercultural sensitivity based on this measure. However, significant differences were found in the social engagement and respect for cultural differences subscales. The data for these subscales found that international students who spent more time with Americans had a higher scale of interaction engagement and respect for cultural differences of intercultural sensitivity. The third question explored the intercultural sensitivity based on total social interaction and living choice. Data revealed no significant differences based on living with Americans or alone; however, significant differences in the intercultural sensitivity were found for international students who lived with other international students and their level of total interaction with Americans. These findings will be discussed further in Chapter V. Limitation, implications, and recommendations also will be addressed in Chapter V.
CHAPTER V: CONCLUSION

This study examined the overall intercultural sensitivity of international students with respect to living choice and total social interaction with American students in three higher educational institutions in a state in the Midwest United States. The problem statement identified in Chapter I and the literature review in Chapter II provided an in-depth knowledge of the phenomenon of intercultural sensitivity. The measures discussed in Chapter III and the analysis of the data in Chapter IV provided a comprehensive understanding of the international student population at three institutions pertaining to their overall intercultural sensitivity. Chapter V provides an in depth discussion of the results, as found in Chapter IV. The data gathered from a sample of 186 international students provided insight into the level of intercultural sensitivity of international students. Chapter V particularly deliberates on these findings for each research question and concludes with a discussion of limitations, implications, and suggestions for further research. The study was guided by six research questions designed to measure the intercultural sensitivity:

Discussion of the Findings Related to Research Question 1

Research Question 1 was intended to explore whether internationals students who lived with American students exhibited differences in overall intercultural sensitivity when compared to those who lived with international students (co-nationals or other international students) or alone. The ANOVA conducted on the data supports the hypothesis that no significant differences exist in overall intercultural sensitivity of internationals students based on their living choice. The data analysis suggested that living choice has no impact on overall intercultural sensitivity of international students. Past studies have focused primarily on adjustment issues rather than intercultural issues.
A limited amount of literature exists that emphasizes housing type or living choice of international students, which results in a complex phenomenon making it difficult to assert and to understand. Marion and Stafford (1975) concluded that living with, or in close proximity to, international students guarantees more interaction for Americans with international students, as well as significantly higher participation in international activities and attitude. A similar assumption can be made for international students relative to increased interactions. Researchers stressed the need for peer programs for American and international students, which may help with the adjustment (Abe et al., 1998; Constantine et al., 2005), although intercultural sensitivity is a deeper occurrence than simply an adjustment issue (Bennett, 2001). The findings relate to a study by Saidla and Parodi (1991) who found no differences in roommate rapport and the understanding of American/international and American/American pairs.

On the five subscales of the Intercultural Sensitivity Scale, only interaction enjoyment showed any significant differences in the intercultural sensitivity of international students relative to their living choices. Interaction enjoyment showed a significantly higher score for students who lived with co-nationals or other international students, which indicated that their “reaction to communication that is culturally different” (Chen, 2010, p. 4) was a positive one.

This study also examined the relationship between length of stay of international students with American students and their intercultural sensitivity. The correlational analysis revealed no relationship between the length of stay with American students and overall intercultural sensitivity of international students. In addition, data on all five subscales showed the same results, as no relationship was found between the two
variables. Although international students may have more opportunities to interact with American students when living with them, the findings from the data suggested no relationship between their overall intercultural sensitivity and length of stay with American students as roommates.

**Discussion of the Findings Related to Research Question 2**

*Research Question 2:* Is there a significant difference in intercultural sensitivity of international students based on their level of social interaction with American students?

*Research Hypothesis 2:* No significant difference will be found in intercultural sensitivity of international students based on their level of social interaction with American students.

Data revealed no significant differences in the overall intercultural sensitivity of international students based on their level of social interaction with American students, which supports the hypothesis. These findings align with a study by Armfield (2004) who examined the relationship of student interactions with host nationals and impact on intercultural sensitivity. Armfield stated, “The study did not find significance between aspects of students’ interaction with host nationals and their development of intercultural sensitivity” (p. 102). The results contradict several previous findings reporting that social interaction is central to cultural adjustment and competence (Heikinheimo & Shute, 1986; Rosenthal et al., 2007; Williams & Johnson, 2010). One rationale may be that in intercultural encounters, individuals often focus on cultural similarities as compared to cultural differences. As previously noted in Chapter II, Bennett (2001) believed that intercultural sensitivity is a process where individuals learn from the experience and give significance and meanings to those experiences. Bennett stated, “It is not what happens
around him that makes a man experienced; it is the successive construing and reconstruing of what happens, as it happens, that enriches the experience of his life” (p. 218). Furthermore, Rosenthal et al. (2007) believed that international students do not lack contacts; rather, they lack support at the personal and emotional levels.

The interaction engagement and respect for cultural differences subscales revealed significant differences for international students who had high social interactions with American students than for those who had low social interactions with Americans. The findings suggested that international students showed a strong desire for participation in intercultural events and demonstrated a high tolerance for cultural differences (Chen, 2010). Data on the other three subscales of interaction confidence, interaction enjoyment, and interaction attentiveness revealed no significant differences.

Although no significant differences were found in the overall intercultural sensitivity, as well as three out of five of the subscales of intercultural sensitivity based on social interaction, Armfield (2004) still signified the importance of intercultural contacts and believed that these contacts likely will develop intercultural sensitivity. This indicates that social interactions with Americans should be encouraged and supported throughout the academic experiences of international students.

**Discussion of Findings Related to Research Questions 3a, 3b, and 3c**

Per the frequency distribution of data by living choice, the majority of the international students lived with other international students, followed by international students who lived alone. The smallest number of international students lived with American students. These data verified the assumption in chapter I that American students are selected the least as roommates for international students, as well as affirmed
the literature that Americans are the least selected friends for international students (Sam, 2001).

**Discussion of Findings Related to Research Question 3a**

Data revealed no significant difference in the intercultural sensitivity of international students who lived with American students and their level of social interaction, proving the hypothesis to be true. Furthermore, no differences were found in the subscales of the Intercultural Sensitivity Scale based on living with American students and total social interaction. Living choice is a phenomenon that has received little research (Minson, 2000). As cited in Chapter II, this lack of significance could be due to the findings of Saidla and Grant (1993), which indicated a difference in the focus of American and international students. They concluded that American students desired more social interactions, but international students were more concerned about their personal and “lifestyle issues” (p. 340). Many benefits can be perceived relative to living with American students, such as language acquisition, increased interactions with Americans, enhanced cultural orientation, etc.

**Discussion of Findings Related to Research Question 3b**

The results of the *t*-test revealed a significant difference in the intercultural sensitivity of international students who lived with co-nationals or other international students and had high levels of social interactions with Americans, as compared to those who had low social interactions with Americans; thus, rejecting the hypothesis. Of the five subscales, interaction engagement and respect for cultural differences showed significant differences, while the differences on interaction confidence, interaction enjoyment, and interaction attentiveness were not significant. These data supported the
findings of Saidla and Grant (1993) indicating that the understanding between same culture roommates was higher than interracial roommates. Data suggested that those international students who lived with other international students exhibited high social interactions with Americans, and their overall intercultural sensitivity was higher. An assumption may be made that international students may find supportive living environment when living with co-nationals or other international students, which may result in satisfaction with adjustment in an unfamiliar cultural environment. It may also be assumed that if students are satisfied with the living lifestyle, they may have more desire to socially interact with host students and thus may exhibit higher cultural learning.

**Discussion of Findings Related to Research Question 3c**

Data supported the hypothesis that no significant differences exist in the overall intercultural sensitivity of international students who lived alone and exhibited high or low social interaction with American students. Similarly, no differences were found on the subscales of the Intercultural Sensitivity Scale. A very limited research exists on the cultural learning and assimilation prospects of international students that live alone through their academic experiences.

**Implications**

The purpose of this study was to measure the overall intercultural sensitivity of international students based on social variables. The major focus was on social interactions of international students with American students, as well their living choice and the way in which these variables affected their intercultural sensitivity. For this purpose, data was collected and analyzed from three institutions.
Sample was significantly higher for Institution 1, as compared to the other two institutions. This could be due to the fact that the researcher was a graduate student at institution I, which may have contributed significantly to the higher sample size because of the researcher’s broad social network with international students. Although international student offices at other institutions frequently encouraged international students to complete the surveys, a well-respected international student at each of the other two institutions also would have been instrumental in inspiring international students to participate in the study, which may have produced an increased response rate from the other institutions.

Results contradict with several studies that social interaction is central to cultural learning and adjustment (Heikinheimo & Shute, 1986; Rosenthal et al., 2007; Williams & Johnson, 2010). Results did not show significance in the differences and relationships between social adjustment and intercultural sensitivity of international students. Although these results contradict previous findings of similar studies, Armfield (2004) suggested that social interaction is essential to intercultural development and should be encouraged.

The results may be significant if each institution had been studied separately. Although overall intercultural sensitivity showed no difference based on social interaction, results may be different when the sample is studied separately for each institution. Although not considered in this study, a separate study could be conducted on each institution.

**Limitations of the Study**

As mentioned in Chapter I, the participants were international students from three higher education institutions in a state located in the Midwest United States. The results
of this study cannot be generalized to all international student populations and institutions due to varying geographic areas, different international student representation, and various university initiatives. As the overall sample was relatively small, the proportional variation in the sample size for each institution can question the validity of the results, which is an additional reason to use caution in generalizing the results to the entire population of international students.

Although the Intercultural Sensitivity Scale is a reliable instrument (Armfield, 2004; Chen & Starosta, 2000; Fritz et al., 2001), the researcher of this study is in agreement with Armfield (2004) that the Intercultural Development Inventory (Hammer et al., 2003) would have been a better fit for this study due to its popularity, evidence base, and reliability. However, communication with the authors of the Intercultural Development Inventory indicated that it was not feasible due to travel for training and time limitations.

The five factor structure of the Intercultural Sensitivity Scale (Chen & Starosta, 2000) was not confirmed from the data of the overall sample for this study. As found in Fritz et al. (2005), this could be due to a small sample size. The sample utilized in this study was less than half the sample used by Chen and Starosta (2000) and Fritz et al. (2001) in the validation of the five factor structure of the Intercultural Sensitivity Scale. Additionally, the sample in this study is approximately equal to that used separately for American and German students by Fritz et al. (2005), which was unsuccessful in verifying the factor structure of Chen and Starosta’s Model of Intercultural Sensitivity.

This research did not focus on the evidence that English language (Dorozhkin & Mazitova, 2008; Hayes & Lin, 1994; Heikinheimo & Shute, 1986; Paltridge et al., 2010;
Rosenthal et al., 2006; Wright & Schartner, 2013) and personality type of international students (Hansson et al., 1984), were perceived as major factors that influence international students’ adaptation to American society and culture. As noted in Chapter I, all participants were international students and assumed to have had basic reading and comprehensive skills in English. However, due to a variance in intelligence and English language abilities, the responses on the demographic and Intercultural Sensitivity Scale surveys may have been affected.

As mentioned in Chapter IV, the average length of stay in the United States for this sample was 20 months. Another limitation lies in the fact that the length of stay, which is considered an important factor that contributes significantly to the cultural adjustment of international students, was not taken into account for this study. Additionally, international students’ previous stay in the U.S. or the pre-test of intercultural sensitivity were not included, which would make this a longitudinal study. Another limitation is that there can be many other factors that may impact the intercultural sensitivity of international students such as command of English language, students’ personality, etc., were not taken into account but may be studied together or separately.

**Future Research**

Social interaction is a two-way street and requires equal stimulants for effective relationships on both sides. Also it is equally as important for American students as for international students in the context of globalization. Although this study examined the factors that influence international students’ social interactions with American students,
future research can consider factors that influence American students’ social interactions with international students.

According to Bennett (2001), cross cultural contact alone is insufficient for developing intercultural relations or cultural competence. Of importance is the “recognition of cultural differences and maintenance of a positive attitude towards them (Bennett, 2001, p. 1). Therefore, it is important to measure the qualitative aspect of social interaction through in-depth interviews and open-ended questions related to true feelings and attitudes from those interactions. Rajapaksa and Dundes (2002) highly valued the quality of social interaction in order to predict adjustment for international students, which they believed to be possible only through qualitative data.

Further research is needed that explores international students’ housing and roommate behaviors and living patterns in the United States, as very little research currently exists on these phenomena. A need for further study on a similar or a larger sample is suggested for comparison purposes, as this study was the first of this nature on international students in the three institutions in the Midwest U.S.

A longitudinal study that explores the pre-travel or at-arrival intercultural sensitivity of international students, and a comparison post-study after a limited time, is suggested during which intercultural programs may be implemented. During this period, higher education institutions may have programs in place that are focused toward developing intercultural sensitivity of international students and their effectiveness.

A study which focuses on academic achievement and living choice of international students is also suggested, which may indicate how international students perform academically based on who they live with through their academic experiences.
Conclusion

The purpose of this research was to study the intercultural sensitivity of international students based on social interactions with American students at three higher education institutions in the United States. Based on the descriptive analysis, the study has laid a foundation for an examination of the social behaviors among international and American students, which can be instrumental for future research in this field. Although data indicated no significance in the social interactions and intercultural sensitivity, the study set a parameter in which further exploration can occur, particularly on the phenomenon of living choice. Saidla and Paroli (1991) pointed out that, “given the growing population of international students, student development staff have both a moral and a financial imperative to help these students successfully adapt to life on American campuses” (p. 64). Rosenthal et al. (2007) suggested that academic institutions should develop programs that “strengthen international students’ sense of connectedness and thus their well-being” (p. 72). In consideration of the importance of globalization and the sharp increase in international travel for education in the past decade, academic institutions must develop initiatives on international agenda, particularly, on international students’ cultural competence and adjustment in the United States.
REFERENCES


(Doctoral dissertation). Retrieved from

Montgomery, C. (2010). *Understanding the international student experience*. New York,
NY: Palgrave Macmillan.

multicultural psychology* (pp. 130-131). Thousand Oaks, CA: SAGE Publications,
Inc. doi: http://dx.doi.org/10.4135/9781412952668.n58

guide to doing business in more than 60 countries*. Avon, MA: Adams Media.

Richardson, A. (2012). *Concerns over affordability of on-campus housing*,
XXV(1). Retrieved on January 8, 2015, from
http://web.mit.edu/fnl/volume/251/murdoch_et%20al.html

http://www.nafsa.org/_/File/_/neip_rev.pdf


APPENDIX A: DEMOGRAPHIC SURVEY

This survey is used to learn about international students’ demographics and social interaction with American students during the course of study in the US. Your answers will not be shown to anyone outside of our research group. Please answer all questions. You may use an X or ✓ to mark your choice. Thank you for your time in filling out this survey.

Are you an international student (Not a U.S. Citizen, permanent resident, refugee, or immigrant)?

☐ Yes
☐ No

If yes, please continue with the survey. If your answer is no, please do not continue as this survey is focused on international students. Thank you for your time and participation.

1. Education phase:

☐ Freshman
☐ Sophomore
☐ Junior
☐ Senior
☐ Graduate

2. Gender: Male ☐ Female ☐

3. Your marital status: Single ☐ Married ☐

4. Your age (in years): ______________________

5. How long have you been in the US (in months)? ______________________

6. Have you been to US prior to starting this course of study?

☐ Yes
☐ No

If yes, how long did you stay combined all visits (in months)? ________________

7. With whom do you live now?

☐ American student(s)/Family
☐ International student(s)/Family
☐ Alone
If American(s), how long have you been living with an American student(s) or family (in months)? _____________________

8. If now living with an international student(s)/family or alone, have you had an American roommate(s) in the past?
   Yes □    No □
   If yes, for how long (in months)? _______________________

9. How often do you socially interact with American friends and students based on following activities?

   Never  Once a Month  Once a week  2-3 times a week  Everyday

[1]. Participate in American sports with American students/friends (e.g. Basketball, American Football, Soccer, Baseball, Softball, and Golf).
   □  □  □  □  □

[2]. Take field trips with American students/friends.
   □  □  □  □  □

[3]. Go to social events (lunch, dinner, movies, etc.) with American friends/students.
   □  □  □  □  □
10. How many American friends do you have that you socialize with 3 or more times per week?

Please give a number _____________________

11. Are you currently or in the past were a member of any professional/affinity* group? (*Affinity group is described as a business group or fund raising group that works on community projects).

Yes □  No □

12. What would you say are the greatest difficulties (if any) in making American friends?

Please list below:

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

13. What would you recommend to increase interaction between American and international students on campus? Please list your suggestions below:

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
APPENDIX B: INTERCULTURAL SENSITIVITY SCALE

Below is a series of statements concerning intercultural communication. There are no right or wrong answers. Please record your first impression by indicating the degree to which you agree or disagree with the statement.

SA=strongly agree; A=agree; UN= uncertain; D=disagree; SD=strongly disagree

Please choose your answer after each corresponding statement (Circle ☐ or check mark ✓)

<table>
<thead>
<tr>
<th>Statement</th>
<th>SA</th>
<th>A</th>
<th>UN</th>
<th>D</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I enjoy interacting with people from different cultures.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. I think people from other cultures are narrow-minded.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. I am pretty sure of myself in interacting with people from different cultures.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. I find it very hard to talk in front of people from different cultures.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I always know what to say when interacting with people from different cultures.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. I can be as sociable as I want to be when interacting with people from different cultures.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. I don’t like to be with people from different cultures.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. I respect the values of people from different cultures.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. I get upset easily when interacting with people from different cultures.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. I feel confident when interacting with people from different cultures.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. I tend to wait before forming an impression of culturally-distinct counterparts.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. I often get discouraged when I am with people from different cultures.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. I am open-minded to people from different cultures.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. I am very observant when interacting with people from different cultures.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. I often feel useless when interacting with people from different cultures.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. I respect the ways people from different cultures behave.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. I try to obtain as much information as I can when interacting with people from different cultures.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. I would not accept the opinions of people from different cultures.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. I am sensitive to my culturally-distinct counterpart’s subtle meanings during our interaction.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. I think my culture is better than other cultures.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. I often give positive responses to my culturally different counterpart during our interaction.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. I avoid those situations where I will have to deal with culturally-distinct persons.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. I often show my culturally-distinct counterpart my understanding through verbal or non-verbal cues.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24. I have a feeling of enjoyment towards differences between my culturally-distinct counterpart and me.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Dear Shabir,

Thank you for the request. You have our permission to use the IS Scale for non-profit purposes.

I’ll attach you a couple related papers in the next mail.

Best,

Guo-Ming Chen

On 03/04 PM 03/25/2013, Munawar Shabir wrote:

Hi Dr. Chen and Dr. Stewarta,

I am a doctoral student at Western Kentucky University and conducting my research on international student's intercultural sensitivity in Kentucky higher institutions. I am wanting to use Intercultural Sensitivity Scale (ISS) as part of my data collection method and want to request for your permission. Secondly, can you please guide me to some studies that prove the validity and reliability of the ISS.

If you would like to know more specifically about my research focus, I would be very glad to talk about it over the phone.

Best regards,

Munawar Shabir
Doctoral Student
Educational Leadership-Doctoral Program
Western Kentucky University
1906 College Heights Blvd. # 8310
Bowling Green, KY 42101
Phone: 270-745-3061
Fax: 270-745-3167
www.uky.edu/collegeofhumanities

*****************************************************
Guo-Ming Chen, Professor
IACIS Executive Director/CMB Co-Editor
Department of Communication Studies
University of Rhode Island

See more about gmchen.
APPENDIX D: DEMOGRAPHIC SCALE WITH IDENTIFIERS FOR PILOT STUDY

This survey is used to learn about international students’ demographics and social interaction with American students during the course of study in the US. Your answers will not be shown to anyone outside of our research group. Please answer all questions. You may use an X or ✓ to mark your choice. I thank you for your time in filling out this survey.

Are you an international student (Not a U.S. Citizen, permanent resident, refugee, or immigrant)?

☐ Yes ☐ No

If yes, please continue with the survey. If your answer is no, please do not continue as this survey is focused on international students. Thank you for your time and participation.

1. Provide only last 2 digits of your WKU Student ID ____________
2. Provide only first letter of your mother’s maiden name ____________
3. Provide only last digit of your cell phone number ________________
4. Your country of origin: ______________________

5. Education phase:

   Freshman ☐ sophomore ☐ Junior ☐ Senior ☐ Graduate ☐

6. Gender: Male ☐ Female ☐

7. Your marital status: Single ☐ Married ☐

8. Your age (in years): ______________________

9. How long have you been in the US (in months)? ______________________

10. Have you been to US prior to starting this course of study?
    Yes ☐ No ☐
If yes, how long did you stay combined all visits (in months)? __________________

11. With whom do you live now?
   □ American student(s)
   □ International student(s)
   If American(s), how long have you been living with an American student(s) (in months)?
   __________________

12. If now living with an international student(s), have you had an American roommate(s) in the past?
   Yes □             No □
   If yes, for how long (in months)? __________________

13. How often do you socially interact with American friends and students based on following activities?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never</th>
<th>Once a Month</th>
<th>Once a week</th>
<th>2-3 times a week</th>
<th>Everyday</th>
</tr>
</thead>
<tbody>
<tr>
<td>[1]. Participate in American sports with American students/friends (e.g. Basketball, American Football, Soccer, Baseball, Softball, and Golf).</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>[2]. Take field trips with American students/friends.</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>[3]. Go to social events (lunch, dinner, movies, etc.) with American friends/students.</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>
14. How many American friends do you have that you socialize with 3 or more times per week?

Please give a number _____________________

15. Are you currently or in the past were a member of any professional/affinity* group?
   (*Affinity group is described as a business group or fund raising group that works on community projects).
   Yes □ No □

16. What would you say are the greatest difficulties (if any) in making American friends?
   Please list below:
   __________________________________________________________________
   __________________________________________________________________
   __________________________________________________________________
   __________________________________________________________________
   __________________________________________________________________

17. What would you recommend to increase interaction between American and international students on campus? Please list your suggestions below:
   __________________________________________________________________
   __________________________________________________________________
   __________________________________________________________________
   __________________________________________________________________
   __________________________________________________________________
Dear International Student,

You are required to complete a detailed demographic and Intercultural Sensitivity Scales (ISS). The ISS assesses the intercultural sensitivity of international students at the University of Kentucky. Intercultural sensitivity is defined as “the ability to appreciate and experience cultural differences” (Hammer, Beuster, & Wrzesniewski, 2011, p. 432). This study is being conducted as part of my dissertation project.

Your participation in this study is completely voluntary and no information will be gathered that will identify you as a respondent and there are no financial rewards. While there may be no direct benefit to you, the information you provide will potentially benefit future international students, program administrators, and others as it will determine the factors that influence and enhance cultural learning of international students. The results of this study will be important for international students to consider in order to become more aware of certain social adjustments that may occur during their studies.

The research project has been reviewed and approved by the Institutional Review Board at Western Kentucky University. For verification of course, you may contact Paul Monier at pmonier@louisville.edu or the University at Compliance@uky.edu. If you have any questions or concerns, you may contact me at (502) 384-0671 or via email at lab@kentucky.edu. My advisor Dr. Raul Loveless can be reached at raul.loveless@louisville.edu.

Participation in this study will have no effect on any future services you may be entitled to from the University. Anyone who chooses to participate in this study is free to withdraw from the study at any time and for any reason.

The word “international” refers to a cultural factor that may impact students’ ability to adapt to a new environment, and this factor may influence one’s perception of potential risks to their health and safety.

I respectfully request your permission to participate in this study.

Sincerely,

[Signature]

[Name]

[Title]

[Institution]
APPENDIX F - CONSENT LETTER FROM MURRAY STATE IRB APPROVAL

Title: The Influence of Social Interaction with American Students on Intentional Sensitivity of International Students in Kentucky Higher Institutions.

Researcher: Shabab Musaou, Western Kentucky University
Faculty Mentor: Dr. Rasheed Zaman, Department of Psychology, Western Kentucky University, 1800 College Heights Blvd, Bowling Green, KY 42101

Dear International Student,

I am conducting a research study and I would like to invite you to participate by completing the attached demographic and Intercultural Sensitivity Scale (ISS). The ISS measures the intercultural sensitivity of international students in the U.S. Intercultural Sensitivity is defined as “the ability to discriminate and experience relevant cultural differences” (Timmers, Benet, & Wiemann, 2003, p. 42). This study is being conducted as part of my dissertation project.

Your participation should take about 20 minutes. You will answer questions about yourself and your attitudes toward and interactions with friends.

Your participation in this study is completely voluntary and no information will be gathered that will identify you as a respondent and there are no known risks involved. While there may be no direct benefit to you, the information you provide will potentially benefit future international students, program administrators, and others in the field to determine the factors that influence and enhance cultural learning of international students. The results of study will be important for international students to consider in order to become more aware that certain social adjustments may serve them well culturally.

Participation in this study is not part of your program of study at Murray State University and refusal to participate will have no effect on any future services you may be entitled to from the University. Anyone who agrees to participate in this study is free to withdraw from the study at any time with no penalty.

Your completion of the survey will indicate your voluntary consent to participate in my research study.

Sincerely,

Shabab Musaou
Doctoral student in Cohort 4
Educational Leadership Doctoral Program
Western Kentucky University
1800 College Heights Blvd 42101
Bowling Green, KY 42101
APPENDIX G – LETTER OF COOPERATION FROM EKU