BACKGROUND CHARACTERISTICS AND ACADEMIC FACTORS ASSOCIATED
WITH THE ACADEMIC BEHAVIORAL CONFIDENCE OF INTERNATIONAL
GRADUATE STUDENTS IN OHIO’S PUBLIC INSTITUTIONS

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by

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The number of international students on American campuses continues to increase. According to the Open Doors Report 2008, there were more than 600,000 international students studying on the tertiary level. Of this number, 48% were either enrolled in graduate or professional programs. The challenges faced by international graduate students have been documented in the social, cultural, linguistic and academic domain. Yet despite these challenges, international graduate students continue to finish their academic programs and graduate. In some academic areas the number of international graduate students enrolled and the number graduating with doctoral degrees has exceeded the number of American students in these same academic areas. What is it that contributes to the success of international graduate students in spite of empirical evidence that notes them facing a multiplicity of challenges? One possible explanation can be found in Sander’s concept of Academic Behavioural Confidence which has been derived from Bandura’s theory of self-efficacy. Academic Behavioural Confidence is based on a students’ ability to perform specific skills in a classroom setting. The purpose of this study was to identify the background characteristics and academic factors associated with Academic Behavioural Confidence in international students in Ohio’s public institutions. Quantitative data were collected using a modified version of Sander
and Sanders’ Academic Behavioural Confidence Scale. Demographic data was also collected for this study. A total of 267 international graduate students responded to the modified survey. The results of the survey found one background characteristic and two academic factors associated with the academic behavioral confidence. Complementary interviews were conducted with 16 of the 267 international graduate students who completed the survey. The results of the interview found two background characteristics and five academic factors associated with academic behavioral confidence. A discussion of the results is included as well as implications and suggestions for future research.
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CHAPTER I
INTRODUCTION

International students have been part of the landscape of higher education in the United States for the last three centuries. The first documented international student in U.S. history was a South American who enrolled at Yale during the 1700s (Maxwell, 1960). However, it was not until shortly after World War II that an organized annual count of international students studying in the United States was conducted by the International Institute of Education. Over the years, the number of international students studying in the United States continued to increase. The most recent exception to this trend was the three academic-years following the terrorists’ attacks of September 11, 2001. Changes in visa policies in response to this event resulted in a temporary decrease in the number of international students studying in the United States. However, at this writing, the United States remains the number one destination for international students studying abroad.

During the 2008-2009 academic-year, more than 625,000 international students were studying in U.S. colleges and universities, with nearly 50% of these international students pursuing graduate degrees (Open Doors Report, 2008). If the current rate of growth (7.1%) remains constant, there will be one million international students studying in the United States by the 2014-2015 academic-year, nearly half of whom will come to the United States to pursue master’s and doctoral degrees.

Whereas the number of international graduate students studying here is impressive, the impact they are having on graduate education in the United States is not
always appreciated. International graduate students are outpacing their American counterparts, especially in the STEM fields. For example, of all the doctoral degrees awarded in American universities in 2003, international students earned 55.3% of the engineering degrees, 44.3% of the mathematics degrees, and 43.8% of the computer sciences degrees (American Council on Education Issue Brief [ACE], 2006).

Furthermore, the increase in the number of females graduating from U.S. graduate schools in the STEM fields has been attributed to the increase in graduate degree obtainment among international female students only; domestic numbers remain unchanged (Ferriera, 2009). Still, others contend increased numbers of international graduate students are resulting in fewer opportunities for U.S. students to enroll in graduate school (Borjas, 2004).

Yet at the same time, the presence of international students on U.S. university campuses has added value to the internationalizing of higher education in the United States. Numerous benefits of an educational, cultural, and economic nature have resulted in higher education communities and beyond. For example, during the 2007-2008 academic-year, international students contributed over $15.5 billion to the U.S. economy as a result of the money spent on their tuition and living expenses (Altbach & Knight, 2007; Open Doors Report 2008; Tomkovich, Al-Khatib, Baradwaj, & Jones, 1996). Additionally, more than 62% of all international students studying in the United States are self-supporting. They pay for their own educational expenses (usually double the price paid by domestic students), from personal and family sources. In certain instances,
these monies have provided publicly-financed institutions with badly needed funding in the wake of state-level budget cuts.

Beyond the financial strain of studying in the United States for international students, there is a personal cost they must pay: learning to navigate a different academic and social landscape while trying to maintain high academic performance. When there is a significant cultural difference between the United States and the student’s home country, the academic and social landscape is vastly different. Thus, these students may find themselves unmoored (Bossman, 1991; Cushner & Brislin, 1996; Furnham & Bochner, 1986; Hofstede, 2001; House, Javidan, Hanges, & Dorfman, 2002; Schwartz, 1994; Schwartz & Bilsky, 1987; Ward, Bochner, & Furnham, 2001).

Numerous issues arise from these cultural differences that impact the academic experiences of international students. Empirical studies on international graduate students in the United States have indicated that adjusting to another culture can have an impact on the social, psychological, and emotional well-being of these students (Cemalcilar & Falbo, 2008; Dao, Lee, & Chang, 2007; Liu, 2001; Poyrazli, Arbona, Bullington, & Pisecco, 2001; Shupe, 2007; Swagler & Ellis, 2003; Wang, 2002; Ward et al., 2001). Additionally, the academic experiences of this student group are fraught with issues that domestic students do not have to address (Eland, 2001; Faid-Douglas, 2000; Gajdzik, 2006; Gonzales, 2006; Greer, 2005; Kaur, 2007; Lee & Rice, 2007; Liang, 2001; Liu, 1996; Seo and Koro-ljungberg, 2005; Tatar, 2005; Wakim, 1985; Womujuni, 2007).
While findings from research on international graduate students studying in the United States list issues related to the English language as the most significant source of academic problems, external factors also influence the academic experiences of these students. These influences include: gender bias and stereotyping (Beoku-Betts, 2004; Green & Kim, 2005), racism (Beoku-Betts, 2004; Lee & Rice, 2007), discrimination (Chen, 1999; Findsen, 1987), deportation and other immigration issues (Collingridge, 1999; Eland, 2001), hostility from poor diplomatic relations between the student’s home country and the United States (Abu-Hilal, 1986), limited time-frame in which to earn a degree (Findsen, 1987), a hostile or negative environment in academic departments (Eland, 2001; Trice, 2003), unfamiliarity with the American higher educational system, specifically graduate school programs and procedures (Greer, 2005; Tanaka, 2002; Tseng & Newton, 2002), and financial difficulties related to scholarships and assistantships (Findsen, 1987). Yet, despite these influences, challenges, and differences, international graduate students are able to navigate a foreign culture and educational system, persist, and graduate.

One of the reasons for these achievements may be related to academic behavioral confidence, as well as culture. According to Sander and Sanders (2003), “academic behavioural confidence is conceptualised as being how students differ in the extent to which they have a ‘strong belief, firm trust or sure expectation’ of how they will respond to the demands of studying at university” (p. 3). According to Hofstede (2001), cultural dimensions can impact the educational experiences of students studying outside their home countries. This study seeks to find an association between academic behavioral
confidence, background characteristics, and academic factors of international graduate students studying in the United States. A modified version of Sander and Sanders’ Academic Behavioural Confidence Scale was used to collect data and Hofstede’s Theory of Cultural Dimensions was used to interpret the results.

**Statement of the Problem**

Most of the research conducted on international graduate students examines the problems and challenges they face in U.S. higher education settings resulting from cultural differences. This line of research has repeatedly indicated that international graduate students experience academic difficulties in U.S. higher education classrooms on the basis of culture. Yet, enrollment of international graduate students and their completion numbers continue to climb. Perhaps there is another reason, a more positive lens through which we could look, to provide an explanation as to why international students continue to excel in U.S. graduate schools.

To date, there have been no well-established empirical data on academic behavioral confidence, Hofstede’s Cultural Dimensions, background characteristics, and academic factors of international students in U.S. graduate classroom settings. This study of international graduate students seeks (a) to examine associations between background characteristics, academic factors, and academic behavioral confidence; and (b) to investigate the role that culture may have on the academic experiences of international graduate students in these classrooms.
Purpose of the Study

The purpose of this study is to extend the work of Sander and Sanders (2003) on academic behavioral confidence by uncovering the association between background characteristics, academic factors, and the academic behavioral confidence of international graduate students in Ohio’s public institutions. By using a different population in a different setting, this research study specifically examines the association between academic behavioral confidence (the dependent variable) and the following predictor variables: (a) gender; (b) age; (c) marital status; (d) religious affiliation; (e) religiosity (practicing of religion); (f) having a friend or relative precede the international graduate student in earning a graduate degree in the United States; (g) country in which Bachelor’s degree was earned; (h) country in which master’s degree was earned; (i) years of study in the United States; (j) graduate degree sought (master or doctorate); (k) major field of study; and (l) language of instruction in home institution.

Hofstede’s (2001) Theory of Cultural Dimensions serves as the theoretical framework for this study and offers perspective on the possible impact of culture on the academic behavioral confidence of international graduate students studying in the United States. It is my goal to add to the existing body of literature on the experiences of international graduate students studying in the United States, by providing data from this study on the association between background characteristics, academic factors, and the academic behavioral confidence of international graduate students in Ohio’s public institutions.
Significance of the Study

The production of educational and psychological studies, which focused on international students, began to increase following World War II and during The Cold War (Ward et al., 2001). However, according to de Wit (1997), there is a growing need for the production of both basic and applied research as the number of international students in U.S. graduate schools continues to increase. One of the reasons for this need is that the United States attracts more international students than any other country, nearly half (46.8%) of whom are graduate students (U.S. Government Accountability Office [GAO], 2007).

The international graduate students who study in the United States face many challenges (cultural, linguistic, financial, psychological, etc.) so ostensibly one would expect their attrition rates to be high. Despite the need to adjust to numerous cross-cultural issues, the degree completion rate for international graduate students in the U.S. is higher than their U.S. counterparts in certain academic areas; international graduate students earn more than half of the master’s and doctoral degrees in the STEM fields (Committee on Science, Engineering, and Public Policy [COSEPUP], 2005). Their success may be attributed to their academic behavioral confidence.

This study seeks to answer the following question: What is the association of background characteristics and academic factors with the academic behavioral confidence of international graduate students in Ohio’s public institutions? Additional questions include: (a) Is there an association between academic behavioral confidence and the respondent’s background characteristics of age, gender, marital status, religious
affiliation, religiosity (practicing of religion), and having a relative or friend earn a graduate degree in the United States preceding the respondent? (b) Is there an association between academic behavioral confidence and the academic factors of the country in which respondent’s bachelor’s degree was earned, the country in which respondent’s master’s degree was earned; respondent’s years of study in the United States; graduate degree sought by respondent (master or doctorate); respondent’s major field of study; and language of instruction in respondent’s home tertiary institution?

It is my intent to add to the larger body of literature regarding the academic experiences of international graduate students studying in the United States. The results of this study will illuminate the impact culture, background characteristics, and academic factors have on academic behavioral confidence. This information will aid educators and student affairs practitioners in creating programming that more effectively addresses the needs of international graduate students to provide a better educational experience for international and domestic students. Additionally, this inquiry into the background characteristics and academic factors associated with the academic behavioral confidence of this student group will increase the understanding of what contributes to positive academic outcomes for these visiting students. A focus on what contributes to their academic achievement can increase understanding of cross-cultural learning experiences. Finally, but most importantly, this study extends the work of Sander and Sanders (2003) by investigating the association of background characteristics and academic factors with the academic behavioral confidence of international graduate students in a U.S. graduate school setting, specifically in Ohio’s 13 public institutions.
Assumptions

A few assumptions underlie this study. I assumed the international graduate students in this study possessed sufficient command of the English language to understand and complete the on-line survey. This assumption is based on the fact that international graduate students who have decided to come to the United States and study must take an English proficiency exam as part of their admissions requirements for graduate school, known as the Test of English as a Foreign Language (TOEFL). This test measures international students’ skills in the writing and reading of English, as well as their listening comprehension. Beginning in 2005, the TOEFL began to measure international students’ skills in spoken English.

I also assumed that not all international graduate students are prepared to navigate the nuances of a U.S. graduate school setting, specifically the demands of the U.S. graduate school classroom experiences. While their inability to maneuver is in no way reflective of their cognitive abilities, it is, instead, a reflection of their cognitive style (Witkin & Berry, 1975) and a result of not knowing the behavioral expectations of students in a U.S. graduate school classroom setting. As a result, I assumed that international graduate students lack only the additional orientation and training that focuses on developing the behaviors and/or skills necessary to succeed in U.S. graduate school classrooms.

Situating Self

I approached this study with an understanding of my role as an “instrument” in the research process (Guba & Lincoln, 1981). I have included a brief description of some
of my personal experiences as one who has experienced marginalization, cross-cultural adjustment, and matriculation in a graduate program. In so doing, my hope is to provide transparency and a lens to readers through which they can understand how my personal experiences have informed this study.

As an African-American, my childhood was bounded on one end by the Civil Rights Era and on the other end by the Black Power Movement. My family and I moved to the suburbs when I was 10, and I left the comforts of a racially segregated world. It was in that predominantly White, suburban setting that being Black became problematic for me. I was marginalized both in and out of the classroom. However, it was not until I began my studies in this doctoral program that I was able to recognize that what I had been feeling, thinking, and reacting to during my childhood and teenage years was marginalization.

Additionally, I have had numerous opportunities to live, work, and volunteer abroad. Just as the international students that were the participants in this study, I have also had to navigate through a foreign culture in the obtainment of a personal goal. While I was not a graduate student during my most recent stay abroad, I did spend 18 months in Ethiopia, where I was committed to being an effective volunteer, one who was determined to avoid the label of “Ugly American.” I believe these experiences abroad have created within me a greater capacity to empathize with my international graduate student interviewees, not only because of the acculturation challenges I faced but also because I know international graduate students are marginalized in this culture, much like I have been because of my ethnicity.
My decision to earn a doctoral degree that focuses on the internationalization of higher education is directly related to my experiences in Ethiopia, where I had been a volunteer faculty member at two teacher training colleges. My hope was that once accepted into Kent State University’s doctoral program, the plan of study I would undertake would prepare me to return to Ethiopia to work with the Ethiopian government in improving that country’s higher education system.

Once in the doctoral program, I began to read empirical studies and narrative accounts of the international student experience in the United States. I began to see parallels between international students’ experiences in higher education and my own. For instance, international students are marginalized because of their accents, dress, culinary choices, cultural values, and mores. As an African-American I have been marginalized too, but in a different way because of my language usage (slang), dress (natural hair styles, traditional African clothing and braids), culinary choices (I prefer fried chicken and sweetened ice tea to pizza and beer), and cultural values, and mores, which include a commitment to a Christo-centric viewpoint.

I have talked with and interviewed international students who have experienced being ignored, dismissed, minimized, intimidated, belittled, and ridiculed in America’s tertiary classrooms and laboratories. So, as I prepared to conduct this study, I began it with an affinity for my international brothers and sisters born out of similar experiences, coupled with a shared goal: to not leave the graduate program, no matter what it takes, until I get my degree. In addition to my cross-cultural experiences, I think being female and “Christo-centric” has also shaped my lens as a researcher.
Being female seemed to work to my advantage in the gathering of the qualitative data for this study. One of my interviewees said she felt more willing to open up to me during the interview because I was female and that she did not think she would have shared as much and as deeply had I been a male. Furthermore, the empowering experiences I have had as a Christian made me want to include questions on both my survey and in my interviews about the association of religiosity with academic behavioral confidence.

**Definitions**

Listed below are the definitions that were used in this research study:

**Graduate students:** Those students working toward a degree beyond the bachelor level, in either a master or doctorate program, excluding post-graduate professional programs such as law or medicine.

**International graduate students:** Perkins and Guglisimino’s study (as cited in Hamouda, 1986) defined international graduate students as those graduate students who have citizenship in a country outside of the United States and are in possession of a F-1 or J-1 (non-immigrant) visa that allows them the legal right to study in the United States.

**Non-immigrant visa:** These visas are issued to those people coming to the United States for a short period of time, that is, travelers, business people, and students. Among students the most common types of non-immigrant visas are the F-1 and J-1 visas.

**F-1 visa:** The F-1 visa is for full-time students enrolled in an academic or language program. F-1 students may stay in the U.S. for the full length of their academic
program plus 60 days. F-1 students must maintain a full-time course load (Bevis & Lucas, 2007, p. 197).

**J-1 visa:** The J-1 visa is for post-secondary students, college and university students, researchers, scholars, and professors who want to participate in educational and cultural exchanges in the United States. These programs are administered through third parties but under the auspices of the U.S. State Department’s Exchange Visitors Program (Information for Exchange Visitors, n.d.).

**U.S. graduate school setting:** Any tertiary institution, with the exclusion of online educational programs that offer a master’s and/or doctoral degrees.

**U.S. graduate school classroom experiences:** Any transmission of information that occurs within the physical space of a classroom or lecture hall, from a professor and/or teaching assistant to a graduate student about an academic subject.

**Academic behavioral confidence:** A concept that indicates the level of a student’s efficacy with respect to his or her academic skill (Sander & Sanders, 2003, p. 4).

**Summary of the Chapters**

Chapter 1 provides background information on international students studying in the United States, specifically graduate students, who represent nearly half of all international students in the United States. Empirical studies are included regarding acculturation, intercultural contact, international graduate students, the academic experiences of international graduate students, external factors faced by international graduate students during their academic sojourn in the United States and the growing
number of international graduate students who are outpacing their U.S. counterparts in degree obtainment in the STEM fields.

Chapter 2 is a review of the literature related to this study which include information on academic confidence in general and Sander and Sanders (2003) work on academic behavioral confidence; specifically, the impact of cultural values and behavior on the experiences of international graduate students in the United States, Hofstede’s Theory of Cultural Dimensions and its impact on cultural differences in teaching and learning; acculturation, intercultural contact, and international students in the United States, the academic experiences of international graduate students studying in the United States; the association of background characteristics and academic factors with the academic experiences of international graduate students; and an examination of the trends in international students in the United States over the last 30 years; and the current status of international students studying in the United States.

Chapter 3 contains information on the methodology of this study, including the population for this study; the survey instrument, which was a modification of the Academic Behavioral Confidence (ABC) Scale (Sander & Sanders, 2003), the data collection procedures including the electronic distribution of the survey instrument and interviews with 16 of the survey respondents enrolled in Ohio’s public institutions; and the data analysis procedures which included descriptive statistics, t-tests, one-way analysis of variance (ANOVA), as well as a supplemental analysis that included a multiple regression.
Chapter 4 presents the findings of the study, which include the background characteristics, and academic factors that were statistically significant, as well as data from the 16 interviews of international graduate students from Ohio’s public institutions and their responses regarding the background characteristics and academic factors associated with their academic behavioral confidence.

Chapter 5 includes a discussion of the findings of this study, the conclusions drawn from these findings, the resulting implications for both student affairs personnel and professors, and recommendations for future research.
CHAPTER II
REVIEW OF RELEVANT LITERATURE

This study was designed as an extension of the work of Sander and Sanders (2003) on Academic Behavioural Confidence. Specifically, this study has been designed to determine which background characteristics and academic factors are associated with the academic behavioral confidence of international graduate students in Ohio’s 13 public institutions. The literature for this review has been divided into four sections. The first body of literature encompasses information on the concept of academic behavioral confidence as created and developed by Sander and Sanders (2003). The second body of literature explains the impact of culture on the academic experiences of international graduate students in the United States. This section includes literature on cultural values and behavior theory, Hofstede’s Theory of Cultural Dimensions, and acculturation and intercultural contact theory, as well as empirical studies related to these concepts. The third body of literature uses empirical studies to describe the academic experiences of international graduate students studying in the United States, including studies on the impact of background characteristics and academic factors. The fourth body of literature explains the current status of international graduate students. Additionally, data on trends over the last 30 years related to international student mobility in the United States were examined.
Academic Confidence

Before discussing the concept of academic behavioral confidence (Sander & Sanders, 2003), a few examples of empirical studies on the broader concept of academic confidence and college and university students are discussed.

Empirical Studies on Academic Confidence

Researchers acknowledge the role of confidence as it relates to perceptions of students’ academic ability. Research-based evidence has resulted in iterations of this construct where researchers have labeled, defined, and operationalized confidence in a variety of ways. Although they have varying definitions of confidence, the researchers in the following studies have all investigated the role of background characteristics as they relate to the general concept of confidence.

For example, Santiago and Einarson (1998) conducted a study of 290 entering graduate students in science and engineering (using data from the 1995-1996 Graduate Experience Project) to determine possible predictors of academic self-confidence. In this study, academic self-confidence was defined as “student’s self-perceptions of their academic abilities” (p. 165). While the researchers anticipated finding differences in academic self-confidence based on gender, the results of the study found gender was not a significant factor in predicting academic self-confidence.

Similarly Laird’s (2005) study focused on gender. He added race as an additional background characteristic in his research on 289 undergraduates (primarily freshmen and sophomores). Laird investigated their experiences with diversity and its effect on their academic self-confidence. He defined academic self-confidence as “confidence in one’s
academic and intellectual abilities in general, as well as confidence in particular aspects of that ability (e.g., mathematical ability or skills in problem solving)” (p. 367). Results of Laird’s study indicated that background characteristics were the strongest predictors of academic self-confidence; females and students of color scored significantly lower on academic confidence than males and White students in the study. Furthermore, the study found that students with more experiences with diversity were more likely to score higher on academic self-confidence.

Beyond background characteristics, Jimenez-Soffa (2006) focused on academic factors in her study of female undergraduates at a single-sex college. Jimenez-Soffa defined academic confidence as “a student’s belief that she can achieve in specific academic tasks that fall within specific competency domains” (p. 21). Further, she used the terms “academic confidence” and “academic self-efficacy” interchangeably. The focus of her study was to determine the extent to which classroom experiences, background characteristics, and pre-course levels of academic self-efficacy affected students’ assessment of their confidence to succeed in competencies related to science and business management gateway courses (the required introductory courses in a series of courses in a major area of study). Results of the Jimenez-Soffa study indicated several academic factors were directly and positively associated with levels of academic confidence: (a) when instructors created learning experiences relevant to the students; (b) when students were engaged in hands-on learning; and (c) when instructors included real-life experiences into the learning environment.
The above-mentioned empirical studies included varying definitions of confidence and the association of background characteristics and academic factors with this concept. Academic behavioral confidence is another construct that has been created to measure how students view themselves as learners.

**The Construct of Academic Behavioral Confidence**

Academic behavioral confidence is a construct that explains the expectation that students have regarding their ability to perform behaviors that will lead to success in a college or university course. This construct was developed by Paul Sander, a Welsh scholar whose studies on academic behavioral confidence grew out of studies on student perceptions of university teaching (Sander, Stevenson, King, & Coates, 2000). Sander and Sanders (2003) conceptualized academic behavioral confidence as “being how students differ in the extent to which they have a ‘strong belief, firm trust or sure expectation’ of how they will respond to the demands of studying at university” (p. 4).

**Sources of Academic Behavioral Confidence**

Sander and Sanders (2003) agreed that academic behavioral confidence has self-efficacy as its theoretical foundation and that both academic behavioral confidence and self-efficacy have evolved from the same four sources. These researchers’ beliefs are reflective of the work of Bandura (1997) who defined the four sources of self-efficacy as: mastery experience, vicarious experience, verbal persuasion, and allied types of social experiences, and physiological and affective states.

**Mastery experiences.** Mastery experiences provide the most authentic evidence regarding academic behavioral confidence; it is through these experiences that a person
learns whether he or she has what it takes to succeed. Success results in one’s belief in one’s academic behavioral confidence; failure undermines one’s academic behavioral confidence beliefs (Bandura, 1997). For instance, an international student who completes an undergraduate degree in the United States and successfully obtains the degree may now possess enough academic behavioral confidence based on experiences to apply to and enroll in a master’s or doctoral degree program in a U.S. graduate school.

**Vicarious experiences.** Vicarious experiences are normative behaviors that help one appraise oneself by comparing herself to others. In educational settings, this comparison takes place in class. When students observe others modeling behaviors in a classroom setting this serves as a way to promote these students’ own sense of academic behavioral confidence. For instance, an international student may be motivated to complete a graduate program in the U.S. after having a relative or friend who has successfully completed a master’s or doctoral degree in the United States.

**Verbal persuasion/social experiences.** Verbal persuasion and allied types of social experiences are another source of academic behavioral confidence. Persuasive boosts, in the form of verbal encouragement or praise, can help one to exert greater effort in the completion of their tasks (Bandura, 1997). For example, an international graduate student who forges a relationship with an American classmate through shared study time or with a professor through regularly scheduled office visits may find these relationships provide the encouragement the international student needs to persist to degree completion.
**Physiological and affective states.** Physiological and affective states are the body’s response to external stressors. This response manifests itself in various ways: sweaty palms, butterflies in the stomach, hyperventilation, irritability, and anxiety attacks, and so forth. Physiological indicators help signal when one has reached a point of ineffectiveness, and thusly, they impact academic behavioral confidence. For example, an international student may experience periods of irritability or anxiety during preparation for a mid-term assessment (Bandura, 1997). While academic behavioral confidence and self-efficacy may share the same sources, there are differences between the two concepts.

**Differences Between Self-Efficacy and Academic Behavioral Confidence**

There are two major differences between self-efficacy and academic behavioral confidence. First, self-efficacy is focused on specific tasks, whereas academic behavioral confidence is focused on “students’ confidence in undertaking actions and plans related to their academic study” (Sander & Sanders, 2003, p. 3). Second, the measuring of self-efficacy is more context-specific, whereas, the measuring of academic behavioral confidence is based on an aggregate measure that helps to understand students (Paul Sander, personal communications, August 25, 2009).

**Empirical Studies on Academic Behavioral Confidence**

To date, 23 studies on various aspects of academic behavioral confidence have been conducted by Paul Sander and his associates. The sample population for these studies has focused solely on undergraduate students in higher education settings outside of the United States, primarily in Wales and Spain (Sander, de la Fuente Arias,
Stevenson, & Jones, accepted for publication; Sander & Sanders, 2003, 2006b; Sanders & Sander, 2007a). Additionally, some of these empirical studies have sought to establish the validity of the Academic Behavioural Confidence (ABC) Scale and its ability to discriminate based on gender, major field of study, length of stay, learning disability, and country of origin of the student populations studied. The following paragraphs discuss these findings.

Although there have been several studies conducted on how gender influences academic behavioral confidence, the findings have been inconsistent with respect to whether females or males have higher levels of academic behavioral confidence. Sander and Sanders (2003) conducted a study of the academic behavioral confidence of 286 level-one students from the United Kingdom (equivalent to college freshmen in the U.S.) during induction week and found that female students had higher levels of academic behavioral confidence. A subsequent study (Sander & Sanders, 2009) designed to determine the impact of gender on academic behavioral confidence confirmed the results of Sander and Sanders (2003). More recently, however, Sander et al. (accepted for publication), in a study of 2,429 Welsh and Spanish undergraduate psychology majors, found higher levels of academic behavioral confidence in male students on one subscale of the survey instrument; yet, higher levels of academic behavioral confidence in female students (enrolled in the Spanish universities) on two other subscales. Furthermore, Sanders, Sander, and Mercer (2009) conducted another study with 111 first-year students from Wales, to again determine if there were differences in gender associated with academic behavioral confidence. Data were collected during induction week and no
differences were found in student academic behavioral confidence based on gender. These contradictory results indicate the need for more research on the association of gender and academic behavioral confidence and help support the use of gender as a background characteristic in this study.

Other aspects of Sander and Sanders’ (2003) research were major field of study and length of stay (years of study) as a background characteristic and predictor variable of academic behavioral confidence. A sample population of undergraduate medical and psychology students at a Welsh university was compared. Research findings indicated medical students showed significantly higher levels of academic behavioral confidence in comparison to psychology students (Sander & Sanders, 2003; Sander & Sanders, 2007).

With regard to length of stay (measured during the first year of study) two studies were conducted, both comparing female and male students. In the first study (Sander et al., accepted for publication), the academic behavioral confidence of female and male students enrolled in a Welsh and Spanish university were compared. Findings from the study indicate a decrease in the academic behavioral confidence of the female students. In the second study (Sander & Sanders, 2009), the academic behavioral confidence of level-one students was compared. Findings from this study indicate that female students again showed a decrease in academic behavioral confidence when compared to their male counterparts.

Lastly, country of origin was included as a background characteristic and a predictor variable, in a study comparing Spanish and Welsh undergraduate psychology students (Sander et al., accepted for publication). Findings from the study indicate Welsh
students scored significantly higher than their Spanish counterparts, when comparing the
two student groups’ academic behavioral confidence.

To summarize, academic behavioral confidence is a construct developed by
Sander and Sanders (2003), which these scholars proposed has the same four theoretical
sources as self-efficacy. The creation, development, and testing of the psychometric
properties of the Academic Behavioural Confidence Scale has demonstrated this
instrument’s ability to discriminate between student groups and their academic behavioral
confidence, according to gender, major field of study, length of stay, and country or
origin. The present study extends their work by examining the association between
additional background characteristics and academic factors (age, marital status, religious
affiliation, religiosity, graduate degree sought, country in which bachelor’s degree was
earned, country in which master’s degree was earned, relative or friend preceding
respondent in earning a graduate degree in the United States, and language of instruction
in home institution) and the academic behavioral confidence of international graduate
students in Ohio’s 13 public institutions.

**Impact of Culture on International Students**

**Cultural Values and Behavior**

International graduate students studying in the United States bring with them
different cultural values and behaviors. This study identifies the impact culture may have
on the academic behavioral confidence of the participants by using Hofstede’s Theory of
Cultural Dimensions as a theoretical lens (Hofstede, 1986; 2001; Hofstede & Hofstede
(2004). Theories like Hofstede’s identify and acknowledge differences in people based
on their culture. These differences in culture are distinguished by human values held among individuals and groups of people. For purposes of this review, research on cultural values and behaviors by Schwartz and Project GLOBE are presented in addition to Hofstede.

While widespread agreement exists regarding the conceptual definition of values (Schwartz, 1994), scholars have nonetheless created their own definitions in their continued examination of the concepts of values and culture. According to Bossman (1991), “values constitute every society’s inherent moral fiber, describing what at the deepest level gives integrity and direction to individual behavior as well as the social order” (p. 661). Cushner and Brislin (1996) defined values as “the constructs, groupings, and orientation by which people decide what is normative, preferred, or obligatory of members of their society” (p. 319). Schwartz (1994) defined values as “desirable transsituational [sic] goals, varying in importance, that serve as guiding principles in the life of a person or other social entity” (p. 21).

Just as there are disparate definitions of values, there are also disparate definitions of value typologies. In an attempt to identify universal aspects in the structure and content of human values, researchers have developed various value typologies through which they explain cultural differences (Hofstede, 1986; House et al., 2002; Schwartz, 1994; Schwartz & Bilsky, 1987). Among these are Schwartz (1994), Hofstede (1986), and Project GLOBE (House et al., 2002). These cultural typologies are discussed below.

Schwartz’s Ten Motivational Types of Values were developed from a study of students from Israel and Germany. The results of the study helped to establish a typology
of values and their inter-relatedness as a way to advance cross-cultural understandings (Schwartz, 1994; Schwartz & Bilsky, 1987). Hofstede’s Theory of Cultural Dimensions resulted from the surveying of corporate employees of International Business Machines (IBM) in 50 countries and three regions of the world. The application of these dimensions has been used to advance cross-cultural understandings. Project GLOBE (Global Leadership and Organizational Behavior Effectiveness) a multi-national study focusing on culture and leadership in 61 nations, builds upon Hofstede’s cultural dimension’s theory by comparing attributes of effective leadership as a way to advance cross-cultural understandings.

**Hofstede’s Theory of Cultural Dimensions**

Anthropologists were among the first to examine the impact of cultural values and behavior on the experiences of international students (DuBois, 1956). However, during the 1960s and 1970s research findings from a survey of thousands of IBM employees would forever change the paradigm regarding cultural values. The data were classified and quantified according to national cultures (Baskerville, 2003). According to Hofstede, a total of five cultural dimensions were developed (power distance, uncertainty avoidance, individualism and collectivism, masculinity and femininity, and long-term and short-term orientation) to explain the societal norms in the 50 countries and three regions included in the study. There were several countries included in each of the three regions; The Arab World region consisted of the countries of Egypt, Iraq, Kuwait, Lebanon, Libya, Saudi Arabia, and The United Arab Emirates. The East African region consisted of the countries of Ethiopia, Kenya, Tanzania, and Zambia. The West African region
consisted of the countries of Ghana, Nigeria, and Sierra Leone (Hofstede & Hofstede, 2004). Originally conducted in a business organization, Hofstede’s findings have been applied in higher education settings to aid in cross-cultural understanding. Three of Hofstede’s five cultural dimensions have been selected for use in this study: individualism versus collectivism, power distance, and uncertainty avoidance. These three dimensions have received the most attention from researchers related to their applicability in educational settings, including higher education (Ling, 2007; Manligas, 2000). A detailed description of these three dimensions and their impact on the academic experiences of international graduate students follows.

The cultural dimension of individualism versus collectivism. According to Hofstede (2001), the cultural dimension of individualism as opposed to collectivism describes “the relationship between the individual and the collectivity that prevails in a given society” (p. 209). This dimension reflects whether that which is individually-focused in a culture is more highly valued than that which is collectively-focused. It is this dimension that most distinguishes the people of the United States from those in other countries. Hofstede was able to compute an Individualism Index (IDV) for the 50 countries and three regions in his study. The country IDV values ranged from 0 to 100. The United States had the highest IDV of all the countries and regions in Hofstede’s study with an IDV score of 91. A country that values individualism places importance on personal time and freedom in the workplace. Guatemala had the lowest IDV score of all the countries and regions in Hofstede’s study, with a score of 6. A country that values collectivism places importance on job training and the ability of workers to fully use their
skills in the workplace. In the next section, the impact of individualism and collectivism on education is discussed.

Several features of the purpose and focus of an education differ between those countries that are collective in nature and those that are individual in nature. According to Hofstede (2001), in a country that values individualism, the purpose of an education is to learn how to learn. Further, obtaining an education affords an individual an opportunity to experience new ideas, people, and concepts. Conversely, in a country that values collectivism, the purpose of an education is to learn how to do things that will prepare one to participate in society and to perpetuate the products of tradition. Further, education is considered as a one-time process that takes place in one’s youth. The diploma or certificate is seen as an honor that allows the holder to begin to associate with people from a higher status group.

Another feature regarding the difference between countries that value individualism and countries that value collectivism is found in the teaching methods used in the classroom, specifically the idea of using academic collaboration. For example, the idea of sharing and copying work among classmates in a U.S. graduate school (and in any tertiary setting in the United States) is perceived as academic misconduct and plagiarism. However, this same type of sharing among classmates from highly collectivist countries is acceptable. See Table 1. (Note: Table 1 is a selected listing of how the home countries/regions of the interview participants in this study rank on three of Hoefstede’s cultural dimensions: individualism, power distance, and uncertainty avoidance. The Bahamas is not included because it was not included in Hofstede’s 1984 study).
Table 1

Rankings of Hofstede’s Cultural Dimensions by Home Country of Interviewees

<table>
<thead>
<tr>
<th>Country</th>
<th>Individualism</th>
<th>Power Distance</th>
<th>Uncertainty Avoidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>1</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Colombia</td>
<td>9</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>East Africa</td>
<td>7</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>France</td>
<td>3</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Germany</td>
<td>4</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>India</td>
<td>5</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Italy</td>
<td>2</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>Taiwan</td>
<td>8</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Turkey</td>
<td>6</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Venezuela</td>
<td>10</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

The cultural dimension of power distance. According to Hofstede (2001), the cultural dimension of power distance involves the ways in which a society handles the issue of human inequality—dependence versus independence. This dimension includes inequality as it exists in areas of wealth, prestige, power, status, and class in organizations (especially the work place), families, schools, and educational systems. Hofstede was able to compute a Power Distance Index (PDI) for the 50 countries and three regions in the study. The country Index values ranged from 0 to 104. Malaysia had the highest PDI score of all the countries and regions with a PDI score of 104. A country or region that has a high PDI score views inequality as a way to establish societal order. Austria had
the lowest PDI score of all the countries and regions with a PDI score of 11. A country or region that has a low PDI score views inequality as something that is necessary, although the acknowledgement of such proves to be a source of personal embarrassment. The PDI score for the United States was 40, ranking it among the countries with lower PDI scores.

The relationships between students, parents, and teachers differ between those countries and regions that value large power distance and those countries and regions that value small power distance. According to Hofstede (2001), in a country that values large power distance the role of student and teacher is well-defined. Students defer to their teachers whom they treat with respect both inside and outside of the classroom and upon whom they are dependent. Distance between the students and teacher is created and maintained as a sign of respect. Parents are supposed to align with the teacher in matters of discipline, in order to keep the students in line. In comparison, in a country that values small power distance, the interaction between students and teachers is more equalized. Students are independent thinkers who expect their teachers to treat them with mutual respect. Parents are more likely to side with the student against the teacher in matters of discipline.

Another feature of the difference between countries that value large power distance and countries that value small power distance is found in the teaching methods used in the classroom. In a country or region where there is large power distance, the education is teacher-centered. The teacher is all knowing, sharing personal wisdom that is transferred to students in a classroom where all communication is initiated by the
Thus, the quality of the education received rests heavily upon the expertise of
the teacher. In a country or region where there is small power distance, the education is
student-centered. The teacher is an expert who shares impersonal truths with students in
a classroom where communication is two-way, initiated by both students and teacher.
Thus, the quality of the learning is dependent upon the communication between teacher
and students, where students bear some responsibility for the quality of what they learn in
the classroom (See Table 1).

The cultural dimension of uncertainty avoidance. According to Hofstede
(2001), the cultural dimension of uncertainty avoidance relates to “the extent to which the
members of a culture feel threatened by uncertain or unknown situations” (p. 161). This
dimension includes issues related to external forces, uncertainty about the future, and
ways of coping with death. Hofstede was able to compute an Uncertainty Avoidance
Index (UAI) for the 50 countries and three regions in the study. The country Index
values ranged from 8 to 112. Greece had the highest UAI score of all the countries and
regions with a UAI score of 112. Singapore had the lowest UAI score of all the countries
and regions with a score of 8. The United States has a UAI score of 43 ranking it among
the countries and regions with lower UAI scores.

The structure of the teaching process differs between those countries and regions
with high uncertainty avoidance and those with low uncertainty avoidance. In a country
or regions with high Uncertainty Avoidance, more structure exists in the classroom and in
the teaching and learning process. The teacher is seen as the resident expert whose
opinion supersedes that of well-intentioned parents who advocate on behalf of their
children’s education. Conversely, in a country or region with low Uncertainty Avoidance, there is less structure in the classroom and in the teaching and learning process. The focus of learning is to find the “Truth;” innovative thinking and intellectual debate are encouraged. The teacher is seen as a guide, whose knowledge is finite and the admission of such is acceptable. Input from parents is encouraged, as teachers and parents together determine what is best for the student (See Table 1).

To summarize, scholars have developed various typologies of cultural values and behaviors to explain differences in individual and groups. Cultural values first established within the family unit are further developed and reinforced in a school setting. Teachers and classmates both model the expected behaviors for the cultural/societal norm in question. This same modeling continues for sojourning students in graduate classrooms around the world as professors and classmates model the appropriate cultural/societal norm (Ward et al., 2001).

In addition to cultural values, three of Hofstede’s five cultural dimensions were discussed in detail to provide a framework regarding aspects of cross-cultural influences on international graduate students. The inclusion of these dimensions provides a way of understanding culture’s impact on the academic expectations, experiences, and the resulting behaviors of student sojourners. Additionally, Hofstede’s Theory of Cultural Dimensions is discussed in Chapter 5 as another perspective for understanding academic behavioral confidence and its association with background characteristics, academic factors, and the international graduate students in this study.
Acculturation and Intercultural Contact

The process of change that takes place as a result of contact between individuals of different cultures is known as acculturation. While acculturation literature focuses on the process of change, intercultural contact literature focuses on the critical incidences of social interactions between people of different cultures. Intercultural contact “is regarded by one or both of the participants as being of some importance and having a significant, non-trivial impact on their lives” (Ward et al., 2001, p. 5). Sojourners, or those people who study, work, or seek recreation outside their home countries (international students, international business people, and international travelers) have been the focus of most of the literature on acculturation and intercultural contact (Ward et al., 2001). For purposes of this review, only acculturation and intercultural literature that focuses on the experiences of international students who study in the United States were included.

Historical perspectives. The focus of research on acculturation and intercultural contact has changed over time. During the first half of the 20th century, scholars presupposed that problems experienced by international students studying in the United States indicated mental and physical illnesses. Most of the studies conducted at this time were large scale with an epidemiological focus on finding “a cure” for the problems international students were having while studying in the United States (Ward, Bochner, & Furnham, 2001). As this paradigm began to shift toward a more social and psychological focus, smaller scaled studies were conducted, which led to a proliferation of research and new findings after World War II (Ward et al., 2001).
One could surmise that this increase in research on acculturation and intercultural contact was motivated by several things: (a) the need to rebuild those nations that had been destroyed during WWII; (b) the need to increase hopes of future peace and good will among nations; and (c) the need for the United States to *win the Cold War* through the gathering of more foreign students than the former United Soviet Socialist Republic (de Wit, 2002). Furthermore, the new research findings focused on a stage theory of acculturation. Among the more popular scholars who embraced and advanced this theory were Lysgaard (1955), DuBois (1956), and Oberg (1960).

Lysgaard (1955) introduced the U-curve theory of acculturation after studying Norwegian Fulbright travel grant recipients returning from the United States. He stated:

> Adjustment as a process over time seems to follow a U-shaped curve. Adjustment is felt to be easy and successful to begin with; then follows a “crisis” in which one feels less well adjusted, somewhat lonely and unhappy; finally one begins to feel better adjusted again, becoming more integrated into the foreign community. (p. 17)

Subsequent research has raised questions regarding Lysgaard’s U-curve. For example, Gullahorn and Gullahorn (1963) suggested an extension of the work of Lysgaard (1955), which extends the U-curve to a W-curve. These researchers describe two additional phases of adjustment that sojourners experience upon their return to their home country. These would include the phases of re-entry-shock and readjustment. Kleinberg and Hull (1979) provided an alternative to the U-curve theory, which suggest that adjustment can be mediated by contact with local people in the host country. The
more contact with local people the greater the level of satisfaction which eases cultural adjustment.

DuBois (1956) created and introduced another four-stage theory to explain acculturation; the four phases are (a) the spectator phase, characterized by a psychological detachment where the visitor is excited about the new environment. Stress is minimized due to the lack of personal involvement the visitor has in the new environment; (b) the adaptive phase, characterized by the visitor’s active involvement in the new environment. Stress is apparent and the visitor uses personal strategies and tactics to adjust; (c) the “coming to terms” stage, characterized by the visitor’s ability to bring equilibrium to issues related to culture. This stage is marked with either positive or negative attitudes toward the host country; and (d) the pre-departure phase, characterized by thoughts of home. The host country is now viewed from a different perspective, as reflections upon the host country experiences may result in sojourners romanticizing their experiences. DuBois also discussed a readjustment phase which occurs after the visitors return home.

Oberg (1960) developed a four-stage theory explaining the emotional reactions behind acculturation; (a) the honeymoon stage, characterized by the excitement that results from being in a new environment; (b) the crisis stage, characterized by the visitor’s need to begin to navigate life in the new culture. This stage is full of stress caused by not knowing how to navigate the new environment and using former skills that are now ineffective. Oberg noted the frustration the visitor experiences could be high enough to make the visitor consider leaving; (c) the recovery stage, characterized by less
stress as the visitor learns to navigate in the new culture. The visitor will have acquired local language skills and will have developed personal strategies and tactics for navigating in the new environment; and (d) the adjustment stage, characterized by the visitor’s acceptance of the new environment as another way of life. Returning home will invoke memories of those things about the new culture the visitor will miss. Each of Oberg’s stages of acculturation focuses on the emotional reactions displayed by sojourners living in a foreign land. The totality of these emotional reactions became known as culture shock. Oberg’s definition is “culture shock is precipitated by the anxiety that results from losing all our familiar signs and symbols of social intercourse” (p. 1).

**Contemporary perspectives.** Acculturation and intercultural contact are two contemporary perspectives used by scholars to address cross-cultural adjustment issues. Contemporary perspectives on acculturation focus on affective, behavioral, and cognitive responses to address cross-cultural adjustment issues. Empirical studies on acculturation issues and international students have clearly demonstrated the impact that adjusting to another culture can have on the social, psychological, and emotional well-being of international students (Cemalcilar & Falbo, 2008; Dao et al., 2007; Poyrazli & Graham, 2007; Poyrazli et al., 2001; Shupe, 2007; Swagler & Ellis, 2003; Wang, 2002). International graduate students have been the subject of studies that incorporate all three perspectives for understanding contemporary issues related to acculturation (Abe, Talbot, & Geelhoed, 1998; Konyu-Fogel, 1993; Kuwahara, 2005/2006; Nebedum-Ezech, 1997; Ninggal, 1998; Surdam & Collins, 1984; Xia, 1991; Zain, 1965).
Contemporary perspectives on intercultural contact examine the affective, behavioral, and cognitive factors related to contact between people of different cultures (Cisco-Titi, 1991; Liu, 2001; Ward et al., 2001). Both acculturation and intercultural contact have had an impact on the academic experiences of international graduate students in the United States. However, this study focuses on the behavioral aspects of acculturation (cultural learning as a way to navigate cross-cultural adjustment) as they relate to academic behavioral confidence and the resulting associations with background characteristics and academic factors.

Previous studies on acculturation, intercultural contact, and international graduate students have demonstrated the impact that adjusting to and communicating in another culture can have on both the well-being and academic experiences of international graduate students who study in the United States. Researchers have identified a range of issues related to acculturation, intercultural contact, and international students. These issues impact the social (Abe et al., 1998; Pruitt, 1978), the psychological (Cemalcilar & Falbo, 2008), and the linguistic aspects of international students’ lives (Cisco-Titi, 1991; Dao et al., 2007). In terms of the social aspects of acculturation, Abe et al. (1998) conducted an experiment on two groups of international students (mostly Asian, graduate students), to determine the effects of participation in a semester-long peer program on student adjustment. Results suggested the international graduate students who participated in the peer program scored significantly higher than the control group on social adjustment, which measured a student’s ability to cope with the social and interpersonal demands of college. Conversely, research has shown that maladjustment in
the social realm can have a negative impact on an international graduate student’s academic experience (Pruitt, 1978).

Cemalcilar and Falbo (2008) addressed the psychological aspects of acculturation in a study of 216 international graduate students at the University of Texas, Austin, and found that after completing the first three months of graduate studies, most of the students in the study experienced significant declines in their psychological well-being. Further, Dao et al. (2007) in a study of 112 Taiwanese graduate students found those students who were at the greatest risk of being depressed were more likely to be low-acculturated students with low perceived English fluency.

In another study that examined the relationship between acculturation and language, Cisco-Titi (1991) found that language was a barrier. The 1991 study of African, African-American, and African-Caribbean university students indicated that African-Caribbean university students saw language differences as an inhibiting factor among the three groups, while members of all three groups found intercultural communication in a research setting as a way to enhance Black intercultural understanding.

**Academic Experiences of International Graduate Students**

Numerous empirical studies have been conducted on the academic experiences of international graduate students studying in the United States (Eland, 2001; Faid-Douglas, 2000; Gajdzik, 2006; Gonzales, 2006; Greer, 2005; Kamal, 1984; Kaur, 2007; H. H. Kim, 2007; Solem, Lee, & Schlemper, 2009; Lee & Rice, 2007; Liang, 2001; Liu, 1996; Nikpour, 1984; Payind, 1977; Seo & Koro-Ijungberg, 2005; Tatar, 2005; Wakim, 1985;
Wan, Chapman, & Biggs, 1992; Wang, 2002; Womujuni, 2007; Xu, 1991). For purposes of this section of the review, these empirical studies have been divided between internal and external factors that impact the academic experiences of international graduate students.

**Internal Factors and the Academic Experiences of International Graduate Students**

Research findings have shown that academic issues related to English language proficiency are the most challenging and the most prevalent stressor of international graduate students (Wan et al., 1992; Xu, 1991), especially for international graduate students from those countries where English is not the first language (Kamal, 1984; H. H. Kim, 2007; Nikpour, 1984; Payind, 1977).

Payind (1977) surveyed 120 Afghan and 125 Iranian students who were studying in selected universities and colleges in the United States to determine their academic, personal, and social problems. More than 25% of those surveyed reported having difficulty or great difficulty with aspects of their academic experience related to oral communications in the classroom (discussing, arguing or communicating thoughts), presenting in front of the class, and writing reports.

Other empirical research conducted by Nikpour (1984) had findings similar to Payind’s (1977). Nikpour studied Iranian students at the University of Southern California and found that they indicated their greatest area of difficulty was in writing, especially dissertations, theses, and other academic papers. This difficulty was attributed to, among other things, a lack of proficiency in English. Other academic difficulties included participating in class discussions (due to a lack of confidence resulting from low
proficiency in English), taking notes, understanding lectures, using the library, understanding the textbooks, and reading books written in English.

Similar academic difficulties with oral and written communications, including problems with writing, note-taking, and class participation were found in 224 Qatari students (27 of whom were studying on the graduate level) in a study conducted by Kamal (1984). Finally, H. H. Kim (2007) surveyed 139 international graduate students from China, Japan, South Korea, and Taiwan regarding their perceptions of active verbal participation in the classroom. The study’s findings again indicate that oral communications were of greatest concern to these students in the form of leading class discussions, participating in whole class discussions, giving formal oral presentations, and participating in small group discussions.

In addition to issues related to language proficiency, research on the academic experiences of international graduate students has included: studies related to teaching and learning styles (Carryl, 1966; Poyrazli & Graham, 2007; Wang, 2002), differences in classroom culture (Solem et al., 2009), pressure from family and government sponsors to succeed academically, as well as concerns that arise from lower standards of education in the host country (Wang, 2002), and curriculum that lacks applicability in students’ home countries impacting their academic experiences (Arthur, 2008; Carryl, 1966). While Carryl (1966) found that most of the 52 international graduate students (the majority of whom were from the Far East and pursuing master degrees) in his study indicated a high degree of satisfaction with their academic experiences at the institution, these students suggested areas for improvement. They included the need for better in-class
communications between students and professor, more variety in teaching methods, and course content that was pertinent to the conditions of the student’s home country.

External Factors and the Academic Experiences of International Graduate Students

External factors also influence the academic experiences of international graduate students studying in the United States. These influences include: gender bias and stereotyping (Beoku-Betts, 2004; Green & Kim, 2005), racism (Beoku-Betts, 2004; Lee & Rice, 2007), discrimination (Chen, 1999; Findsen, 1987), deportation and other immigration issues (Collingridge, 1999; Eland, 2001), hostility from poor diplomatic relations between the student’s home country and the United States (Abu-Hilal, 1986), limited time-frame in which to earn a degree (Findsen, 1987), a hostile or negative environment in academic departments (Eland, 2001; Trice, 2003), unfamiliarity with the American higher educational system (Greer, 2005; Tanaka, 2002; Tseng & Newton, 2002), and financial difficulties related to scholarships and assistantships (Findsen, 1987).

In addition to studies on the academic experiences of international graduate students, scholars have investigated the role of background characteristics and academic factors as they relate to the academic experiences of international graduate students studying in the United States.

Background Characteristics, Academic Factors, and International Graduate Students

Several researchers have considered the influence of background characteristics on the academic experiences of international graduate students. In this section of the
review the background characteristics of gender, age, and marital status are discussed.

Looking first at the impact of gender on the academic experiences of international graduate students, Al Shehry (1989) noted that female Saudi students working toward a master’s degree had more academic problems. Secondly, studies conducted related to the age of international graduate students have shown the older the student the more difficulties encountered. For example, Han (as cited in Lee, Abd-Ella, & Burke, 1981) reported more academic problems for those international students over 30 years of age in comparison to those international students less than 30 years of age. Xia (1991) also noted more academic problems in older graduate students. Those graduate students between the ages of 26 and 31 had more problems with English language than those graduate students who were 25 years of age or younger. Chen’s 1999 findings confirmed that older students have more academic problems. Older graduate students in his study had more problems with English language. Seo and Koro-ljungberg (2005), in a study of Korean graduate students over 30 years of age, found that all the study participants reported having trouble communicating their ideas in English and that this inability had been their greatest barrier to reaching their graduate school goals.

In addition to age, other background factors that have been found to impact the experience of international graduate students are marital status, religious affiliation, and religiosity. Poyrazli and Kavanaugh (2006), researching the background characteristic of marital status, found that married students experienced lower levels of adjustment strain. Few studies have considered the impact of religious affiliation and religiosity (religious activity) on the academic experiences of international graduate students. However,
Hsien-Chuan, Krageloh, Shepherd, and Billington (2009) conducted an exploratory study to determine if religion/spirituality could function as a coping mechanism for international students studying at a New Zealand university. The results of their study, indeed, indicate that religion/spirituality might function as a coping mechanism and may also have positively impacted their academic experiences.

Several researchers have considered the influence of academic factors on the experiences of international graduate students. In this section of the review the academic factors of length of stay, graduate degree sought, language of instruction in home institution, and country in which degree was earned are discussed.

Looking first at length of stay, Al-Shehry (1989) found Saudi students living in the United States less than three years had more academic problems. Similar results were found in a study by Xia (1991) where Asian students who had been in the United States six months or less indicated more problems with the English language than those students who had been here three years or more. These findings indicate a need for additional research on the association of length of stay with academic behavioral confidence.

Second, concerning graduate degree sought, Poyrazli and Kavanaugh (2006) found that doctoral students reported a higher level of academic achievement than master’s students. Third, empirical studies on the language of instruction in home institution were not found. However, Findsen (1987) noted that language had a significant effect on international graduate students’ performance in academic work. Those international graduate students in Findsen’s study with limited English ability demonstrated greater dependence on their classmates, were less prepared to participate in
class, especially to ask questions of the professor, and were most likely to express dissatisfaction with their class work. Those students in Findsen’s study with comparatively poor language skills struggled more than others during their first semester of study in the United States. Further, in a study of international graduate students in U.S. universities, Wan et al. (2006) found students with stronger English language skills were less likely to view academic situations as stressful. Indeed, Stoynoff (1997) confirmed that a statistically significant relationship exists between English language proficiency and academic achievement, although the relationship is modest.

Poyrazli and Kavanaugh (2006) noted similar issues in their study. They found that international graduate students with stronger English proficiency had higher levels of academic achievement. Finally, Hountras (1954) conducted a study of 587 international graduate students focusing on the country in which degree was earned. Those who had already earned advanced degrees in their home countries were less likely to receive disciplinary action than those international students who entered with bachelor degrees. To date, empirical studies could not be located addressing the variable of having a relative or friend who has preceded respondent in earning a graduate degree in the United States.

To summarize, research-based evidence exists regarding the association and impact of background characteristics and academic factors with the academic experiences of international graduate students. Studies were found that investigated gender, age, marital status, and length of stay. However, no studies were found that included the background characteristics of religious affiliation and religiosity and the academic factors
of language of instruction in home institution and having a relative or friend precede sojourning students in earning a graduate degree in the United States. This study aims to uncover the association between these variables and the academic behavioral confidence of international graduate students. The next section of this review focuses on the status of international students in the United States during academic year 2008-2009.

**Trends in International Student Enrollment 1978-1979 to 2008-2009**

The impact of the internationalization of higher education in the United States has resulted in numerous benefits of an educational, cultural, and economic nature in higher education communities and beyond (Altbach & Knight, 2007; Open Doors Report, 2009; Tomkovick et al., 1996). Over the last 30 years the number of international students studying in the United States continued to increase. See Table 2 and Figure 1. However, a temporary decline in the U.S. international student population (academic-years 2003-2004, 2004-2005, and 2005-2006) was attributed to the change in U.S. policy toward the issuing of non-immigrant visas to international students in response to the terrorists attacks of September 2001. Despite this temporary decline, statistics indicate the number of international students studying in the United States is once again on the rise.

**Demographic Information of International Students in the United States Academic Year 2008-2009**

Close to two-thirds (61%) of all international students studying in the United States are from the East Asian region of the world, with the countries of India, China, South Korea, and Japan being the top four places of origin. Most international students chose to study in the field of Business and Management. The other four most popular
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<th>Academic Year</th>
<th>International Students</th>
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Figure 1. International student enrollment 1978/79 – 2008/09
fields of study include: Engineering, Physical and Life Sciences, Social Sciences, and Mathematics and Computer Science. Of the top 10 host states, 4 are located in the mid-west. They are Illinois, Michigan, Ohio, and Indiana. Female students comprise more than one third (34.4%) of all international students studying in the United States. During the 2008-2009 academic-year, nearly 50% of international students (48.8%) were studying toward a master’s (23.6%), doctoral (19.2%), or professional (Law or Medical) degree (6.0%; Open Doors Report, 2008). The typical international student studying in the United States during the 2008-2009 academic-year was a single male, from the East Asian region of the world, pursuing a graduate degree, in business or a STEM field.

**Summary**

International student enrollment declined temporarily for several academic years following a change in U.S. policy toward the granting of visas to international students, in response to the terrorists attacks of September 11, 2001. This decrease threatened to remove the United States from its position as the top hosting country to international students from around the world. Periods of declining enrollments negatively impact universities, with respect to research enterprises and financial health. However, it appears that international student enrollment is returning to its former status of reported annual increases, which will assure that the United States’ 4,000 colleges and universities will continue to benefit from ever-increasing international student enrollment (Open Doors Report, 2009).

While this review noted the climbing enrollment of international students in U.S. tertiary institutions, overall student performance in these settings was discussed using the
concept of academic confidence. This concept has been defined in a variety of ways by different scholars and has been the subject of various empirical studies involving college and university students. The results of these studies have shown that academic confidence can predict academic success. However, the concept of academic behavioral confidence, the focus of this study, is a fairly new concept, developed by Sander and Sanders (2003). Empirical studies involving this concept have been conducted exclusively in European higher education settings. Findings from these studies have shown the Academic Behavioural Confidence Scale (the instrument used to determine one’s academic behavioral confidence) is able to discriminate by various background characteristics, including gender, major field of study, length of stay, learning disability, and country of origin.

**Conclusion**

This literature review was organized into four primary areas of focus. The first body of literature encompassed information on the concept of academic behavioral confidence as created and developed by Sander and Sanders (2003). The second body of literature explained the impact of culture on the academic experiences of international graduate students in the United States. This section included literature on cultural values and behavior theory, Hofstede’s Theory of Cultural Dimensions (the theoretical framework for this study), acculturation and intercultural contact theory, as well as empirical studies related to these concepts. The third body of literature used empirical studies to describe the academic experiences of international graduate students studying in the United States, including studies on the impact of background characteristics and
academic factors. The fourth body of literature explained the recent status of international graduate students and provided a 30-year trend related to international student mobility in the United States.
CHAPTER III

METHODOLOGY

This study was designed as an extension of the work of Sander and Sanders (2003) on Academic Behavioural Confidence. Specifically, its purpose was to determine which background characteristics and academic factors are associated with the academic behavioral confidence of international graduate students in Ohio’s 13 public institutions. An electronic survey instrument was distributed to all international graduate students who held an F-1 or J-1 visa, attended any of Ohio’s 13 public institutions, were pursuing a master’s or doctorate degree and were enrolled in classes during the 2007-2008 academic year. Additionally, complementary interviews were conducted with 16 of the survey respondents. This study was non-experimental and used a cross-sectional design. In other words, the study was designed to collect data at one time point, from a convenience sample of international graduate students from Ohio’s 13 public institutions. The survey data and the interviews were conducted during the summer of 2008. The purpose of this chapter is to describe the methodology used in the execution of this study.

Study Design

The research question for this study was “What is the association of background characteristics and academic factors to academic behavioral confidence in international graduate students in Ohio’s public institutions?” Whereas a longitudinal study would have provided data on trends in international graduate students’ academic behavioral confidence, issues related to the threat of mortality would have been a concern. Also, given the nature of the research question, a cross-sectional design was appropriate. This
design provides a snapshot that allows the researcher to determine what is occurring during a specific point in time with the sample population. Shadish, Cook, and Campbell (2002) described this study’s design as a post-test only, where participants experience the phenomenon of interest (i.e., attending graduate school in the United States) followed by a one-time post observation (the completing of the study survey).

**Study Participants**

Although the selection of graduate students in Ohio’s public institutions was based primarily on convenience, this state’s higher education system has a couple of characteristics that add to its value as a choice. First, of the top 10 states hosting international students in the United States, Ohio ranks ninth (Open Doors Report, 2008). There were 18,607 international students in the state during the 2007-2008 academic-year. Of this number, it is estimated that nearly 9,000 were seeking graduate degrees (Open Doors Report, 2008). Second, the majority of international graduate students who study in Ohio are enrolled in graduate programs in Ohio’s public institutions. The target population for this study was comprised of all international graduate students who were holders of non-immigrant visas and were enrolled in academic courses in any of Ohio’s 13 public institutions during the 2007-2008 academic-year. Electronic surveys were distributed to 5,248 students. Eleven of Ohio’s 13 public institutions participated in the study; the other two institutions were not eligible for this study because neither of these schools had international graduate students at the time of survey administration.
Instrumentation

Adaptation of the Academic Behavioural Confidence Scale

The Academic Behavioural Confidence Scale (ABC; Sander & Sanders, 2006a), a 24-item scale, is designed to measure “how students differ in the extent to which they have a ‘strong belief, firm trust, or sure expectation’ . . . in their ability to respond to the demands of studying at [the] university” (p. 33).

The ABC Scale was developed through an iterative process involving input from “teachers” in a higher education setting in the United Kingdom. These educators were asked to identify “appropriate academic behaviors that students faced.” A list of 24 statements resulted, thus establishing the face validity of this instrument. The stem for the ABC Scale asked, “How confident are you that you will be able to . . .” which asked respondents to rate their academic confidence on a five-point Likert Scale from Very confident to Not at all confident. Sample questions included: “How confident are you that you will be able to prepare thoroughly for tutorials?” “How confident are you that you will be able to engage in profitable debate with your peers?” “How confident are you that you will be able to attend tutorials?”

The scale has been used with undergraduate students in the United Kingdom and Spain. The ABC Scale is scored by taking the mean response of each person’s responses to the 24-item instrument. The psychometric properties of the Academic Behavioral Confidence Scale have been reported in several studies conducted on students in the United Kingdom. The reliability of the ABC Scale (Cronbach’s Alpha of .88) was explored in studies conducted by Sander and Sanders (2003, 2006a), and Sanders and
Sander (2007b). The concurrent validity of the ABC Scale was established by Sander and Sanders (2006a), where the respondents were asked to estimate their final year degree grades. These grades correlated significantly with their ABC score. Those respondents in Sander and Sanders’ study who were confident they could produce the behaviors needed for academic study were also the ones who felt they would do well academically.

The ABC Scale was originally designed for use with undergraduate psychology majors in Welsh tertiary institutions. However, this study has been designed to measure the academic behavioral confidence of international graduate students in the United States, making it necessary to modify the original instrument. As a result, the modified version of the ABC Scale is a broader construct, designed to measure academic behavioral confidence regardless of major and culturally specific to the graduate school context in the United States. The modified version of Sanders and Sanders’ (2003) Academic Behavioral Confidence (ABC) scale, was created, adapted, and used by the researcher with permission from the primary author (see Appendix B).

Unlike the original ABC Scale, the adapted version was divided into three parts, two of which consisted of 27 items each. Although the stems of these parts were different, the items on each part were the same. The stem for Part One asked, *Listed below are skills needed to complete a graduate degree (master, doctoral) in a U.S. graduate school. How often were these experiences required in YOUR HOME COUNTRY?* The five-point Likert-type scale responses for this Part One were: 5 = *In all classes*, 4 = *In most classes* 3 = *In half the classes*, 2 = *In a few classes*, 1 = *In no classes.*
The stem for Part Two asked, *Listed below are skills needed to complete a graduate degree (master, doctoral) in a U.S. graduate school. How confident do you feel doing these things now that you are studying in the U.S.?* The five-point Likert-type scale responses for this Part were $5 = \text{Extremely confident}, 4 = \text{Highly confident}, 3 = \text{Moderately confident}, 2 = \text{Little confidence}, 1 = \text{No confidence}$.

**Psychometrics of the Modified Academic Behavioral Confidence Scale**

Although there was no pilot study conducted using the modified version of Sander and Sanders’ (2003) Academic Behavioral Confidence Scale, the reliability of the modified instrument was determined using Cronbach’s Alpha and the validity of the modified instrument was determined using face validity.

**Reliability of the Modified Academic Behavioral Confidence Scale**

Cronbach’s Alpha was used to establish the reliability of the two parts of the modified Academic Behavioural Confidence (ABC) instrument. The first part of the survey was $\alpha = .90$ and $\alpha = .92$ for the second part of the survey. The third part of the instrument was designed to collect demographic data.

**Validity of the Modified Academic Behavioral Confidence Scale**

The validity of the original ABC Scale was determined using predictive validity. The validity of the modified ABC instrument was determined using face validity. Copies of the modified version of the instrument were distributed to international graduate students who were participating in an exchange program under the auspices of the Gerald Read Center for International and Intercultural Education at Kent State during the spring and summer semesters of 2008. These students were selected as experts to review the
modified instrument to determine if it was ethical and measured what the researcher intended. All of the ten international graduate students who took the survey provided feedback which indicated they understood that the purpose of the modified ABC instrument was to measure the academic behavioral confidence of international graduate students studying in a U.S. graduate school setting.

Data Collection

Survey Data

Approval of the research protocol was obtained from the Institutional Review Board of Kent State University and participating public institutions. The director of each institution’s office of international student and scholar services was identified through a search of Ohio’s public institutions’ websites. These directors (or their designee) received a telephone call from the researcher regarding the planned study. The telephone call was followed by a cover letter sent electronically to the directors to explain the details of the study. Due to institutional policies regarding access restrictions to international student populations, as well as a desire to increase survey responses, administrators in the 13 offices of international student and scholar services in Ohio’s public institutions thought it more appropriate to administer the study survey electronically through their list-serves. As a result, I was not able to personally obtain prospective participants’ e-mail addresses directly and relied on international student and scholar office personnel to distribute the survey. As such, another cover letter addressed to the international graduate students was attached to the letter addressed to the administrators.
The student letter was to be electronically disseminated to all the international graduate students who met the study criteria. The target participant for this study was a non-immigrant visa holder enrolled in academic courses leading to a master’s or doctoral degree during the 2007-2008 academic-year in one of Ohio’s 13 public institutions. It is estimated that between 8,000 and 9,000 international graduate students met the criteria to participate in the survey. The letter to these international graduate students contained a link to the on-line survey for this study. Finally, a telephone call was made to the directors to discuss the survey dissemination schedule.

The survey became available to participants near the end of the 2007-2008 academic-year (April 2008) and was closed in July 2008. The survey was hosted electronically through Flashlight Online, a web-based, survey creation program under the auspices of Washington State University. The on-line survey was comprised of three parts: two that collected data on academic behavioral associated and one that collected data on demographic information in the form of background characteristics and academic factors associated with academic behavioral confidence. There were 12 components: gender, age, marital status, religious affiliation, religious activity, language of instruction in home country institution, relative or friend preceding the international graduate student in earning a graduate degree in the United States, country where respondent earned bachelor degree, country where respondent earned master degree, length of stay in the United States, major field of study, and graduate program level: master’s or doctorate.
**Interview Data**

After data were collected via the electronic survey, it was decided to conduct a series of complementary, semi-structured interviews (DiCicco-Bloom & Crabtree, 2006). A convenience sample of 16 of the 267 survey respondents was interviewed face-to-face, to provide rich stories to complement the data collected from the survey. Each interviewee was given the choice to select a pseudonym for the purpose of anonymity. In some cases, the international students requested the researcher select their name.

**Semi-structured interviews.** The purpose of using interviews as a data collection tool is to assist the researcher in gathering information on the human experience through conversation. According to Kvale (1996), interview data should provide “meaningful relations to be interpreted” (p. 11). Specifically, semi-structured interviews should not be random in nature, but instead proceed with a purpose and structure (Kvale, 1996). Although this study has been guided by one basic research question and two sub-questions, DiCicco-Bloom and Crabtree (2006) recommended developing between 5 and 10 interview questions to be used to uncover aspects of the research issue. One of the advantages of this type of interviewing is in its iterative nature. Any question that does not elicit the information desired can be dropped and new questions can be added.

**Data Analysis**

**Survey Data**

The modified version of the Academic Behavioral Confidence Scale used in this study was scored by calculating the mean response of the 27 items on the survey for each
respondent; each survey question had a possible score of between 0–5. Cronbach’s alpha was used to test the reliability of the modified survey instrument. The two parts of the survey demonstrated a high level of reliability (Cronbach’s Alpha of 0.90 for the first part of the survey and 0.92 for the second part of the survey). The statistical significance of the background characteristics and academic factors was determined using descriptive statistics, *t*-tests, and analysis of variance (ANOVA).

**Interview Data**

The major components of data analysis of this part of the study included transcribing the interviews, coding and organizing the data according to themes, creating files organized by their relevance to the research question and sub-questions, and analyzing patterns and themes among the participants. The interviews were recorded on a digital tape recorder and then burned onto a compact disc. Analysis of the interview data began by listening to the digital files, during the time the interviews were being transcribed. Once the transcription was completed, both paper and electronic copies of the transcripts were available for analysis. The data were coded; notes were recorded in the margins of the paper transcripts, while the electronic copies of the transcripts were uploaded into the NVivo, computer software program designed for qualitative data analysis.

According to Fetterman (1998), “Looking for patterns is a form of analysis” (p. 97). Once the transcripts were uploaded, an on-screen line-by-line review of each transcript was conducted to search for patterns in the responses of the interviewees. The constant comparative method (Bogdan & Biklen, 1998; Glaser, 1978) guided the on-
screen analysis of the data. Additionally, Miles and Huberman (1994) suggested using analysis that creates and affixes codes to interview data. Combining the coding with the constant comparative method of analysis, the researcher was able to identify patterns, themes, and relationships across the 16 interviews.

As each copy of the transcript was read, categories of possible factors that might be associated with academic behavioral confidence were created. Sentence excerpts from students’ transcript were organized under these categories. For example, one of the categories created of possible factors associated with academic behavioral confidence was named the impact of being female on academics. The following sentences were classified under this category:

I would say that in my field it [being female] really does not represent a main obstacle . . . I would say that so far I have never felt like I was underestimated or threatened, on the contrary, [I have felt] favored because I was a female.

There were many smaller categories in the initial coding system, which were collapsed toward the end of the analysis and creation of the final system of coding. The criteria used for inclusion of a category were based on the number of different students who commented on it. Categories that were unique to individual students were discarded. Sentences that related to the same factors were categorized together. Links and associations between these factors were established. Broader themes were created from an analysis of these associations, according to their occurrences (Willis, 2005). These themes provided rich stories about the background characteristics and academic factors associated with academic behavioral confidence that had been found during the analysis.
of the survey data, as well as new information on background characteristics and academic factors discovered during the interviews of the 16 international graduate students.

**Limitations**

As a researcher, I acknowledge the following limitations of this study:

1. Due to institutional policies and restricted access to international students, the directors involved at the participating institutions in the study thought it was more appropriate to send the study surveys through the offices of international student and scholar services to the target population.

2. Because the criteria to conduct research at each of Ohio’s public institutions differed, I was not able to distribute the survey to all public institutions at the same time. It was less time-consuming for me to gain permission to distribute the survey at some schools, more time-consuming at others. (For example, to gain permission to distribute my survey at Bowling Green State University, I had to complete an on-line course on human subjects review and research. I was administered a post-test regarding this on-line course, which I had to pass, before I was allowed to forward my survey to be electronically distributed.) As a result, some survey respondents had more time to respond to the survey than others. Additionally, some schools were on different academic calendars; quarters versus semesters, which became problematic in the distribution of the surveys.
3. A total of 5,248 surveys were electronically distributed to the international graduate students in Ohio’s public institutions who met the study criteria. Of this number, only 267 completed surveys were returned, for a response rate of 5%. This low response rate limits the generalizability of the findings to the general population of international graduate students in Ohio’s public institutions.

4. The lack of random sampling limits the generalizability of the findings to the general population of international graduate students in Ohio’s public institutions.

5. The research design of the study does not infer causation between the background characteristics, academic factors, and academic behavioral confidence. Instead, this study only reflects associations between the background characteristics, academic factors, and academic behavioral confidence.

6. The findings from this study were derived primarily from a quantitative methodology. Complementary interviews were conducted to elicit descriptive details regarding the study’s quantitative findings. Different findings may have been uncovered with the use of qualitative data collection methods such as observation, focus groups, and one-on-one interviews using a semi-structured interview protocol.

7. The qualitative questions were narrowly focused on certain background characteristics and not on others, such as the impact of being female, and the
impact of being Black on the academic experiences of international graduate
students studying in the United States. Thus, further study is warranted.

In this chapter the details of this study’s methodology were presented.
Information was provided on the study’s design and how the study’s participants were
selected. Details were provided regarding the parametric properties of Sander and
Sanders’ 2003 ABC Scale and how this Scale was adapted for use in this study. Details
were included on how the data in this study were collected and analyzed. Finally, a list
of the study’s limitations was included. In Chapter 4 the results of the analysis for this
study are presented.
CHAPTER IV

RESULTS

This study was designed as an extension of the work of Sander and Sanders (2003) on Academic Behavioural Confidence. Specifically, its purpose was to determine which background characteristics and academic factors are associated with the academic behavioral confidence of international graduate students. The purpose of this chapter is to present the results of the study’s survey, based upon the analyses of data from 267 international graduate student participants from Ohio’s public institutions. Additionally, complementary interviews were conducted with 16 of the 267 survey respondents. The research question for this study was, “What background characteristics and academic factors are associated with the academic behavioral confidence of international graduate student’s in Ohio’s 13 public institutions?” The findings related to the research question are presented in two sections: research findings–statistical data and research findings–complementary interview data.

Table 3 presents demographic information on the 267 international graduate students who completed the survey (Note: some respondents did not answer every survey question, so there is a mathematical disparity in the totals for each variable.). The data in this table are presented according to the frequencies and percentages of the students’ background characteristics and academic factors.
Table 3

*Background Characteristics and Academic Factors of Survey Respondents*

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>129</td>
<td>48.3%</td>
</tr>
<tr>
<td>Female</td>
<td>137</td>
<td>51.3%</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>192</td>
<td>71.9%</td>
</tr>
<tr>
<td>Married</td>
<td>73</td>
<td>27.3%</td>
</tr>
<tr>
<td>Separated</td>
<td>1</td>
<td>.4%</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-22</td>
<td>21</td>
<td>7.9%</td>
</tr>
<tr>
<td>23-30</td>
<td>191</td>
<td>71.5%</td>
</tr>
<tr>
<td>31-40</td>
<td>45</td>
<td>16.9%</td>
</tr>
<tr>
<td>41-50</td>
<td>7</td>
<td>2.6%</td>
</tr>
<tr>
<td>51+</td>
<td>1</td>
<td>.4%</td>
</tr>
<tr>
<td>Religious Affiliation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buddhist</td>
<td>11</td>
<td>4.1%</td>
</tr>
<tr>
<td>Christian</td>
<td>97</td>
<td>36.3%</td>
</tr>
<tr>
<td>Hindu</td>
<td>80</td>
<td>30.0%</td>
</tr>
<tr>
<td>Jewish</td>
<td>1</td>
<td>.4%</td>
</tr>
<tr>
<td>Muslim</td>
<td>21</td>
<td>7.9%</td>
</tr>
<tr>
<td>Confucianism</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>None</td>
<td>46</td>
<td>17.2%</td>
</tr>
<tr>
<td>Other</td>
<td>9</td>
<td>3.4%</td>
</tr>
</tbody>
</table>

*(table continues)*
Table 3 (continued)

*Background Characteristics and Academic Factors of Survey Respondents*

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religiosity (Activity)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active</td>
<td>124</td>
<td>46.4%</td>
</tr>
<tr>
<td>Not Active</td>
<td>136</td>
<td>50.9%</td>
</tr>
<tr>
<td>Relative or Friend with Graduate Degree earned in U.S.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent</td>
<td>8</td>
<td>3.0%</td>
</tr>
<tr>
<td>Sister/Brother</td>
<td>22</td>
<td>8.2%</td>
</tr>
<tr>
<td>Other Relative</td>
<td>65</td>
<td>24.3%</td>
</tr>
<tr>
<td>Husband/Wife</td>
<td>9</td>
<td>3.4%</td>
</tr>
<tr>
<td>Friend</td>
<td>112</td>
<td>41.9%</td>
</tr>
<tr>
<td>None</td>
<td>40</td>
<td>15.0%</td>
</tr>
<tr>
<td>Country Where Bachelor’s Degree was Earned</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home Country</td>
<td>229</td>
<td>85.8%</td>
</tr>
<tr>
<td>United States</td>
<td>19</td>
<td>7.1%</td>
</tr>
<tr>
<td>Another Country/Abroad</td>
<td>18</td>
<td>6.7%</td>
</tr>
<tr>
<td>Country Where Master’s Degree was Earned</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home Country</td>
<td>67</td>
<td>25.1%</td>
</tr>
<tr>
<td>United States</td>
<td>65</td>
<td>24.4%</td>
</tr>
<tr>
<td>Another Country/Abroad</td>
<td>134</td>
<td>52.6%</td>
</tr>
<tr>
<td>Years Studying in U.S.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 year or less</td>
<td>101</td>
<td>40.8%</td>
</tr>
<tr>
<td>1-2</td>
<td>72</td>
<td>29.1%</td>
</tr>
<tr>
<td>2-4</td>
<td>35</td>
<td>14.1%</td>
</tr>
</tbody>
</table>

*(table continues)*
Table 3 (continued)

Background Characteristics and Academic Factors of Survey Respondents

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-6</td>
<td>30</td>
<td>12.1%</td>
</tr>
<tr>
<td>6+</td>
<td>9</td>
<td>3.6%</td>
</tr>
<tr>
<td>Graduate Degree Sought</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Master’s</td>
<td>137</td>
<td>51.3%</td>
</tr>
<tr>
<td>Doctorate</td>
<td>123</td>
<td>46.1%</td>
</tr>
<tr>
<td>Major Field of Study</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STEM</td>
<td>117</td>
<td>44.3%</td>
</tr>
<tr>
<td>Non-STEM</td>
<td>99</td>
<td>37.5%</td>
</tr>
<tr>
<td>Business</td>
<td>48</td>
<td>15.3%</td>
</tr>
<tr>
<td>English as Language of Instruction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>174</td>
<td>65.2%</td>
</tr>
<tr>
<td>No</td>
<td>92</td>
<td>34.8%</td>
</tr>
</tbody>
</table>

In terms of the demographic make-up of the sample, 51.3% were female and 48.3% male. The majority of respondents (71.5%) were between the ages of 23 and 30. Whereas 27% of respondents reported being married, most were single (71.9%). Only one student reported being separated (0.4%). The largest group of respondents’ religious affiliation was Christian (36.3%), followed by Hindus who made up 30.0% of those responding. More than fifty percent of the respondents (50.9%) described themselves as not actively practicing their religion, whereas 46.4% described themselves as active. Of
the respondents who noted that either a friend or relative preceded them in completing a graduate degree in the United States, 41.9% had a friend, and 38.9% of the respondents had a relative do so. Although all of the respondents earned a Bachelor degree, 85.8% earned their degree in their home country; 7.1% earned their degree in the United States; 6.7% earned their degree in a country other than their home country or United States. The majority of the respondents (52.6%) earned their master’s degree outside of their home country. The largest group of respondents (40.8%) had been studying in the United States a year or less. More than fifty percent of the respondents (51.3%) were enrolled in a master’s degree program and 46.1% of the respondents were enrolled in a doctoral degree program. The largest group of respondents (44.3%) was studying in the STEM fields; 37.5% were studying in non-STEM fields; and 15.3% were studying business. English was reported as the language of instruction in the higher education institutions of 65.2% of the respondents.

**Research Findings—Statistical Data**

The dependent variable in this study was academic behavioral confidence. The independent/predictor variables in this study were: (a) gender; (b) religiosity (practicing of religion), (c) graduate degree sought by respondent (master’s or doctorate), (d) language of instruction in respondent’s home tertiary institution, (e) age, (f) marital status, (g) religious affiliation, (h) having a relative or friend earn a graduate degree in the United States preceding the respondent, (i) the country in which respondent’s bachelor’s degree was earned, (j) the country in which respondent’s master’s degree was earned, (k) respondent’s years of study in the United States, and (l) respondent’s major field of study.
Analyses

The mean Academic Behavioral Confidence (ABC) score was computed for each participant’s response to the survey questions on the adapted ABC instrument. Separate analyses were run on each predictor variable. Specifically, t-tests were run on the predictor variables of (a) gender, (b) religiosity, (c) graduate degree sought by respondent (master’s or doctorate), and (d) language of instruction in respondent’s home tertiary institution. Additionally, an analysis of variance was run on the predictor variables of (a) age, (b) marital status, (c) religious affiliation, (d) having a relative or friend earn a graduate degree in the United States prior to the respondent, (e) the country in which respondent’s bachelor’s degree was earned, (f) the country in which the respondent’s master’s degree was earned, (g) respondent’s years of study in the United States, and (h) respondent’s major field of study.

Background Characteristics

In terms of background characteristics, one predictor variable was found to be statistically significant: religiosity, \( t(257) = -2.692, \ p < .01 \). Specifically, this finding indicates that those international graduate students in Ohio’s public institutions who practice their religion and are active participants in religious activities reported higher academic behavioral confidence scores than those who do not practice their religion and are not active participants in religious activities. Therefore, differences in academic behavioral confidence are associated with religiosity. The results of the statistically significant predictor variable of religiosity can be found in Table 4.
### Table 4

**T-Tests Results**

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>t-Stat</th>
<th>P = Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religiosity</td>
<td>257</td>
<td>-2.69</td>
<td>0.008*</td>
</tr>
<tr>
<td>Gender</td>
<td>262</td>
<td>1.792</td>
<td>0.074</td>
</tr>
<tr>
<td>Graduate Degree Sought</td>
<td>260</td>
<td>-3.001</td>
<td>0.013</td>
</tr>
<tr>
<td>Language Of Instruction in Home Country</td>
<td>260</td>
<td>-1.634</td>
<td>0.117</td>
</tr>
</tbody>
</table>

*Note.* Asterisk indicates significant difference at $p < .05$.

**Academic Factors**

In terms of academic factors, two predictor variables were found to be statistically significant: years of study in the United States and country in which bachelor’s degree was earned. The results of the statistically significant predictor variables of *years of study in the U.S.* and *country in which bachelor’s degree was earned* can be found in Table 5.
Table 5

ANOVA Results

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F-Stat</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>2</td>
<td>.689</td>
<td>.344</td>
<td>1.119</td>
<td>.328</td>
</tr>
<tr>
<td>Within Groups</td>
<td>262</td>
<td>80.677</td>
<td>.308</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>264</td>
<td>81.366</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relative With a Degree From U.S.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>2</td>
<td>1.463</td>
<td>.731</td>
<td>2.407</td>
<td>.092</td>
</tr>
<tr>
<td>Within Groups</td>
<td>263</td>
<td>79.918</td>
<td>.304</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>265</td>
<td>81.380</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country of Masters’ Degree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>2</td>
<td>1.597</td>
<td>.799</td>
<td>2.632</td>
<td>.074</td>
</tr>
<tr>
<td>Within Groups</td>
<td>263</td>
<td>79.783</td>
<td>.303</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>265</td>
<td>81.380</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>4</td>
<td>1.136</td>
<td>.284</td>
<td>.928</td>
<td>.448</td>
</tr>
<tr>
<td>Within Groups</td>
<td>259</td>
<td>79.257</td>
<td>.306</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>263</td>
<td>80.393</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Years of Study in the U.S.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>4</td>
<td>2.946</td>
<td>.737</td>
<td>2.610</td>
<td>.036*</td>
</tr>
<tr>
<td>Within Groups</td>
<td>242</td>
<td>68.301</td>
<td>.282</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>246</td>
<td>71.247</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country of Bachelor’s Degree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>2</td>
<td>3.197</td>
<td>1.598</td>
<td>5.377</td>
<td>.005*</td>
</tr>
<tr>
<td>Within Groups</td>
<td>263</td>
<td>78.184</td>
<td>.297</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>265</td>
<td>81.380</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religious Affiliation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>2</td>
<td>.454</td>
<td>.454</td>
<td>1.521</td>
<td>.220</td>
</tr>
<tr>
<td>Within Groups</td>
<td>261</td>
<td>.298</td>
<td>.298</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>263</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic Area of Study</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>6</td>
<td>1.938</td>
<td>.323</td>
<td>1.046</td>
<td>.396</td>
</tr>
<tr>
<td>Within Groups</td>
<td>257</td>
<td>79.366</td>
<td>.309</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>263</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Asterisk indicates significant difference at p < .05
**Years of study in the United States.** Statistical significance was found in the predictor variable of years of study in the United States. The five subcategories for this variable were: *less than one academic year of study in the United States; one to two academic years of study in the United States; two to four academic years of study in the United States; four to six academic years of study in the United States;* and *six or more academic years of study in the United States.* Overall, this variable was found to be statistically significant $F(4, 242) = 2.620, p < .05$. However, a post-hoc test was necessary to determine among which sub-categories statistical significance exists. A Games-Howell Post-Hoc Test was used in the analysis of data for this study. It is appropriate for use when there is unequal variance in the sample population and unequal group sizes in the sample population. Additionally, this Post Hoc Test is appropriate for use when the size of the sample cell is small (Kirk, 1995). The results of the Games-Howell Post-Hoc Test found significance between those international students who had been studying in the United States one academic year or less and those international students who had been studying in the United States one to two academic years. Specifically, those international graduate students who had been studying in the United States one academic year or less reported higher academic behavioral confidence than those international graduate students who had been studying in the United States one to two academic years. See Table 6.
Table 6

*Group Means for Length of Study in the United States*

<table>
<thead>
<tr>
<th>Length</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 Year</td>
<td>1.978*</td>
<td>0.59</td>
</tr>
<tr>
<td>1-2 Years</td>
<td>1.749*</td>
<td>0.45</td>
</tr>
<tr>
<td>2-4 Years</td>
<td>1.797</td>
<td>0.46</td>
</tr>
<tr>
<td>4-6 Years</td>
<td>1.726</td>
<td>0.59</td>
</tr>
<tr>
<td>6 Or More Years</td>
<td>1.886</td>
<td>0.54</td>
</tr>
</tbody>
</table>

*Note.* Asterisk indicates significant difference at $p < .05$

**Country in which bachelor’s degree was earned.** In addition to the academic factor of *years of study in the United States*, statistical significance also was found in the predictor variable *country in which bachelor’s degree was earned* which was further divided into three subcategories of *bachelor’s degree earned in home country*, *bachelor’s degree earned in the United States*, and *bachelor’s degree earned in another country*. Overall this variable was found to be statistically significant, $F(2, 263) = 5.377, p < .01$, which indicates that where international graduate students earned their bachelor’s degree is associated with academic behavioral confidence. However, a post-test was necessary to determine among which categories statistical significance existed.

The results of the Games-Howell Post-Hoc Test found a significant difference between two of the three sub-categories: those who earned their bachelor’s degree in their home country versus those who earned their bachelor’s degree in a third country and...
those who earned their bachelor’s degree in the United States versus those who earned their bachelor’s degree in a third country. This means that international graduate students who received their bachelor’s degree in their home countries reported higher academic behavioral confidence than those international graduate students who earned their bachelor’s degree in a country outside the United States. Additionally, those international graduate students who earned their bachelor’s degree in the United States reported higher academic behavioral confidence than those international graduate students who earned their bachelor’s degree in a third country. This relationship is indicated in Table 7.

**Table 7**

*Games-Howell Post-Hoc Test Results for Country in Which Bachelor’s Degree Was Earned*

<table>
<thead>
<tr>
<th>Comparisons</th>
<th>Mean Difference</th>
<th>Std. Error</th>
<th>Sig.</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>*BA Home country vs. BA Abroad</td>
<td>-0.34</td>
<td>0.13</td>
<td>0.03</td>
<td>-0.66</td>
<td>-0.02</td>
</tr>
<tr>
<td>*BA US vs. BA Abroad</td>
<td>-0.58</td>
<td>0.18</td>
<td>0.00</td>
<td>-1.01</td>
<td>-0.15</td>
</tr>
</tbody>
</table>

*Note.* *95% Confidence Interval

**Research Findings—Complementary Data Interviews**

Complementary interviews were conducted to provide rich data and additional information regarding background characteristics and academic factors that are associated with the academic behavioral confidence of international graduate students in
Ohio’s public institutions. This part of the study attempted to address the following question: “What background characteristics and academic factors are associated with the academic behavioral confidence of international graduate students in Ohio’s public institutions?

Throughout this section, the results of the interview data are reported in the international graduate students’ own words. Please note: English was the native language of only 2 of the 16 students interviewed. As a result, any English usage errors found in the quotations is an attempt by the researcher to provide the unfiltered voice of the interviewee. Only in the interests of clarity and to protect the identity of the student have changes been made to the students’ responses.

**Background Characteristics Associated With Academic Behavioral Confidence**

The international graduate student interviewees identified two background characteristics associated with academic behavioral confidence: religiosity and being female.

**Religiosity.** Religiosity was reported as a factor in both the survey and interview data in this study. Those interviewees who identified themselves as actively practicing their religion noted that prayer, service, and faith sustained them and positively impacted their academic behavioral confidence by helping them to adjust to graduate study in the United States. Edward, a master’s student from Rwanda, shared:

I believe that I’ve been able to make it through undergrad education and even at this moment because God helped me. I believe He helped me to give me, you know, means to be in school. So I believe that God is my life . . . that He has a
plan for me and this is because most of the times whatever I’ve prayed for I get it. I get it . . . when I’m in a situation, I just say God please help me. I need your help.

Edward’s reliance on prayer seems to be associated with his academic behavioral confidence. Thus, beyond merely having a positive impact on their academic behavioral confidence, these religious practices have become a part of this student’s strategy for succeeding academically. Additionally, the interview data indicated that two other students’ religiosity appears to be associated with their academic behavioral confidence.

Another example of the association of religiosity and academic behavioral confidence can be found in the comments made by Zeynep, a doctoral student from Turkey, regarding her interaction with her classmates:

My personal thing [is] if you help somebody God will help you, even if he [the student] doesn’t help you, God will help you because he sees you. So sometimes [the] whole day I don’t do anything for myself and I’m like okay what did I do today? I helped this guy.

Zeynep’s belief in the reciprocity of service seems to motivate her to help others, with the understanding that when she needs help, it will be provided. This belief may stem from the fact that she comes from a collectivist culture where academic collaboration is expected. Accordingly, her faith in the reciprocity of service is associated with her academic behavioral confidence.
Barack, a doctoral student from Kenya, provided another example of how religious practices are associated with academic behavioral confidence. He noted the impact of the practice of faith on his academic pursuits:

My religious faith helps me to stay focused on my academics . . . as a Christian I know—I’ve been taught the virtue of having hope and I always have hope in my academics. So my goal is to get a doctoral degree. I know from my religious faith, that faith is one [thing] that helps me to keep on with hope.

Because of his faith, when Barack is presented with academic challenges, he depends on his faith to sustain his sense of efficacy. And, thus, his religious beliefs are associated with his academic behavioral confidence.

That religiosity was mentioned three times by interviewees would seem to suggest that it is associated with their academic behavioral confidence. Furthermore, because religiosity was found to be statistically significant as a predictor variable in the survey (see Table 4) religiosity appears to be associated with academic behavioral confidence for more than just these three respondents. Additionally, given that each of the aforementioned interviewees were from different countries and practice different religions, religiosity appears to transcend cultural and religious boundaries.

**Being female.** Most of the interviewees for this study were female international graduate students who represented a variety of academic majors. However, they shared similar experiences as females who have been both empowered and demoralized by their family’s expectations, as females studying in the STEM fields, and as females who aspire to traditionally-male career choices.
Family expectations. Maria, a doctoral student from Colombia, talked about the support she received from her parents throughout her K-12 educational experience, which appears to be associated with her academic behavioral confidence as an international graduate student in the United States. She stated, “Well, first coming from an all-girls family . . . we never knew what it was being compared to a man. . . . I mean my parents taught me there wasn’t any difference.” This confidence, learned early on, could explain why Maria pursued academic studies outside of her home country and in a field of study traditionally associated with males.

Although Maria’s family appeared to be comfortable with her academic and career choices, Unjali, a master’s student from India, did not fare as well. Unjali was and continues to be tormented by her family’s expectations. They insist that she adhere to a cultural expectation that females marry by age 25. She explained,

My mother, especially, feels that she needs to be a grandma now to find some kind of fulfillment . . . I mean she’s actually told me, “I’m not really bothered about how successful you are at your studies. For me you are successful if you have a family.”

This family expectation had such a negative impact on Unjali that she considered quitting her master’s program and returning to India to get married. However, Unjali was able to overcome what she perceived as a negative blow to her self-worth as a female. She has taken the pressure she has felt from this family expectation and used it as an incentive for her continued efforts at completing her degree.
**Females in STEM (Science, Technology, Engineering and Math) fields.** More than one-third of the female student interviewees were studying in STEM fields. Each of these women shared experiences where their male professors and male peers made negative comments regarding their academic abilities.

Zeynep, a doctoral student from Turkey, discussed one negative experience she had as a female in a male-dominated STEM area of study. The incident occurred when she went to one of her professors for help: “I was very sad and disappointed that he asked me ‘why don’t you quit [the doctoral program] and get married?’ I said I came for a PhD. What the heck are you talking about?” Rather than discourage her, this negative interaction served to motivate her and provided the resolve she needed to continue to pursue her doctoral degree. Thus, being female appears to be associated with her academic behavioral confidence.

**Career aspirations.** Career aspirations related to being the first female to earn a degree in a specific academic field and related to becoming an expert in that field appear to be related to academic behavioral confidence. Wu, a master’s student from Taiwan, shared her dreams of gaining notoriety for being the first female in her country to obtain a doctorate degree and to work in her chosen field. She explained:

I want to be the first female who is the professor in this field and I will be the one who does all the translation with the materials and books. I want to be the top of it . . . saying “I am the professor, I am in charge of everything” . . . then that will be something even more awarding [sic] than just [being] a professor.
Wu asserted that she wants to assume a position of leadership and authority. Moreover, she wants to be the one who will be responsible for translating scholarly works from her language to English, that is, she aspires to be the locus of translation and gatekeeper of scholarship. She mentioned that assuming this role would be rewarding not only because she would be a world-renown scholar of Taiwanese nationality, but because she is a female. In order to meet this goal, she will need to function at a high level of proficiency in all of her academic work, which would be reflected in a higher academic behavioral confidence score. Wu’s desire to be the first female professor from Taiwan in her field of study appears to be associated with her academic behavioral confidence.

**Academic Factors Associated With Academic Behavioral Confidence**

The international graduate student interviewees reported five academic factors associated with academic behavioral confidence: solutions to eliminate educational advantages, limited tertiary resources and social capital, academic collaboration, academic rigor, and the country in which the bachelor’s degree was earned.

**Solutions to eliminate educational advantages.** The possible association of race with academic behavioral confidence was the subject of one of the interview questions. It was only asked to those international graduate students who would be classified as Black by U.S. standards. The resulting discussion from this question revealed these students understood the impact of race on academic pursuits, specifically as it relates to race-based educational disadvantages. Furthermore, these Black students acknowledged their use of systemic solutions and personal goals designed to help them overcome any educational advantages that may exist.
One example of this was, Barack understood that affirmative action policies were in place at his university and that they would serve as a way to support him as a Black international student. This awareness appeared to bolster his academic behavioral confidence. He commented:

They [professors and administrators] talk about affirmative action all the time. I feel I’m part of whatever is referred to as affirmative action. They want to increase diversity... I’m a beneficiary of that and I know before this idea of affirmative action becomes diluted [in this university] I will have benefited.

At the time of the interview, Barack had only been a graduate student at his university for one year. However, his perception was that affirmative action was an issue that the professors and administrators talked about often. Barack identified himself as being a part of his university’s affirmative action program. His perception is that his university wants to increase its diversity. As a result he believed that he would be a beneficiary of both affirmative action and diversity policies at his institution. This belief appears to be associated with his academic behavioral confidence.

Additionally, the struggles associated with being Black and competing in a predominantly White world have resulted in one interviewee developing a personal goal to address any educational disadvantages that may present themselves as obstacles to obtaining a graduate degree in the United States. Catherine, a master’s student from the Bahamas, was inspired by her father to overcome limitations set as a result of being Black and he encouraged her to be the best at whatever she tried to accomplish, which included always doing well in school. In so doing, her father believed that she would
somehow be able to overcome any disadvantages that presented themselves based on her being Black. She commented:

And my father was born in an era where there was still racism and there was still slavery. Not slavery in the sense where you were owned by such and such, but slavery in the terms that Black folks were not allowed to do and mix with White folks. . . . His experiences alone and growing up listening to the stories he endured, that allowed me to grow up knowing that I will always try to be better than the White man.

Catherine’s comments may appear to be an example of prejudice against White people. However, it is important to place her comments in context. Catherine grew up and lives in a country where the standard of academic excellence was established and maintained by British colonial powers, even though the majority of the people in the Bahamas are Black. Her comment here is a way for her to honor her father’s memory and his experiences as a victim of racism. This vicarious experience provides a way for Catherine to overcome any educational advantages, afforded to Whites, while studying in the United States. This personal goal to eliminate and overcome educational advantages based on race appears to be associated with her academic behavioral confidence.

Limited tertiary resources and social capital. In countries where the tertiary resources are limited, students sometimes believe their best option is to study abroad. This study found that limited tertiary resources could manifest themselves in a variety of ways: lack of institutional resources, limited top-tier graduate program resources, and limited curricular resources. Comments from several of the international graduate
students in this study indicated there is a relationship between these educational limitations, social capital, and academic behavioral confidence.

The Bahamas is one of the countries where limited tertiary resources have resulted in graduate students studying abroad. The College of the Bahamas is the only public, higher education institution in the Bahamas, and it only offers bachelor’s degrees (although at this writing, the institution is in the process of being accredited as a university). Catherine is enrolled in a joint graduate program between the College of the Bahamas and one of Ohio’s public institutions. She shared how this opportunity for cross-border, tertiary education, and the resulting social capital it affords is associated with her academic behavioral confidence:

This is quite an opportunity to come to the United States and study . . . it was based on grades, you couldn’t enter the program unless you had a 3.3, 3.5 something like that GPA. There’s a drive that we as Bahamians have because there is only one college in my country. It’s cut throat . . . We all [sic] vying for the same thing.

Catherine tells us that coming to the United States to study as part of this offshore graduate program is an opportunity made available to those students who obtained B averages or above. As a Bahamian scholar, Catherine and the rest of her cohort possess a drive to achieve academically that is fueled by limited tertiary resources. Because the resources are so limited, there is a tremendous amount of competition and students know they must outperform their peers in order to secure post-graduate employment. Furthermore, securing a graduate degree from the United States will afford them social
capital that would be otherwise unavailable. This quest for social capital appears to be associated with her academic behavioral confidence.

As opposed to not having the tertiary institutions as is the case with the Bahamas, other countries’ limited tertiary resources are the result of not having enough top quality educational programs for the number of students interested in enrolling in them. This is the case in India, which graduates 25,000 engineering students with bachelor’s degrees annually. As a result of this large number of graduates, the prospects for employment are slim, unless one can gain admission to one of India’s Institutes of Technology (IIT), to pursue an advanced degree. This is the situation in which Talat, a graduate student from India, finds himself. Because demand for top-tier graduate programs exceeds supply, Talat opted to study in the United States. He explained:

In India [the] only master’s which count is if you get [sic] into good Institute [Indian Institute of Technology/IIT] and that would fetch you a good job . . . IIT is, I think, recognized throughout the world so they are really the cream. I was not sure that I would qualify for that, and I felt getting a master’s from ok [sic] university in United States can make me, get me a good job probably here or back in India.

By his own admission, a degree from the United States does not provide the same amount of social capital that can be acquired from obtaining a degree from an IIT. However, obtaining a degree from the United States would be good enough to help him secure employment that would afford him a comfortable lifestyle. While his inability to study in his own country (the result of limited top-tier graduate programs) was a
motivating factor for him to study here, this educational situation also appears to be associated with his academic behavioral confidence.

While not having adequate top-tier graduate programs reflects limited tertiary resources in India, in other countries the resources are limited by the available curricula. Students in these countries must study abroad in order to major in their academic area of interest. This was the case for both Barack and Wu. They were both prompted to undertake graduate study in the United States because of limited curricular choices in their own countries. Barack described his situation:

There are about 10 government Universities in Kenya and none of those Universities have academic programs in [my major] apart from one that have [sic] an associate’s degree. So if I look at [my major] from an African perspective, I see some opportunities . . . when Kenyan Universities embrace [the] teaching of [my major], I know that’s when I’m assured of a job . . . So I’m getting an American education that will have an application in an African setting.

Barack was pushed from studying in the universities in his own country because they did not offer a graduate program in his academic area of interest. However, earning a doctorate degree in his academic area of choice in the United States will enable him to secure employment and return to Kenya with the social capital he needs to lead scholarship, research, and teaching in his area of study.

**Academic collaboration.** Some forms of academic collaboration are acceptable in a U.S. graduate school setting, usually assignments related to a group project. However, for those international graduate students coming to the United States to study,
academic collaboration can be a confusing concept because the definition varies according to culture. Not understanding this difference in definition can have severe consequences, including dismissal from graduate study. Petra, a doctoral student from Germany, is one of those students whose country accepts a much more collaborative approach in the graduate school classroom setting. She explained:

So it’s sort of [like] this in Germany: you may have like a friend who really struggles and you at least want them to get the homework [*sic*] right . . . you want at least to get them through the class . . . and if [they] want to copy it (the homework), that’s fine. Yeah, sure copy mine; I’m gonna help you out here. And, then I expect you to help me out if I need to copy somebody’s homework. . . . So you would do that for your friends, yeah. And, actually from a cultural perspective, for me that’s really not a problem. . . . people who don’t share their homework in Germany, they’re called *straba* . . . you’re not friendly, you’re being mean, you’re not sharing . . . you’re definitely shunned if you don’t share.

Petra has a different understanding of the concept of academic collaboration and this difference in understanding is culturally-based. In her Germany, academic collaboration is expected and, as indicated in the quote above, Petra’s academic behavioral confidence is associated with the reciprocity of academic collaboration. Furthermore, her understanding of academic collaboration is antithetical to the general understanding of academic collaboration in the United States’ education system. Not only is her understanding different but for her to be successful in a U.S. graduate classroom setting, she must embrace qualities for which she would be ostracized in her
Petra was one of three interviewees who commented on the cultural differences of academic collaboration in their home countries versus what they have found here in graduate school in the United States. The other two were Maximillan from Austria, and Gianina from Italy.

Maximillan talked about how academic collaborative behavior manifested itself in Austria. “Like in Austria for example if a student asks me during an exam to give him an answer, you know, it’s required among students you would be considered an asshole not to do it.” Giannina expressed the greatest disbelief in the differences between her home country of Italy and in the United States as it relates to what was considered acceptable academic collaboration. She shared:

Copying during the exam is absolutely common. And if it happens to be like [you’re] caught . . . the professor is like, come on, don’t do that. When they told me here, [for] academic misconduct—you get thrown out of school, I’m like what?? They take your degree away, I’m like what? And I told my friends, and they were like all shocked—that’s craziness for us.

This difference in the cultural understanding of academic collaboration between the home institutions of these international graduate students’ and their host institution could have resulted in academic disaster. This lack of understanding needs to be identified and addressed to ward off potential academic problems for all international students.

**Academic rigor.** Educational scholars have created varying definitions for the concept of academic rigor; at this writing there has been no commonly agreed upon
definition of the concept. A review of several definitions of rigor (Blackburn, 2008; Hechinger Institute, 2009) reveals a concept which describes the quality of education received through a process that challenges and engages learners, provides them with opportunities to become critical thinkers and problem solvers, through the use of relevant curriculum and stimulating teaching methods that go beyond lectures, with the goal to prepare students to contribute as college and graduate students as well as professionals in the workforce.

The absence of a commonly agreed upon definition is problematic in that academic rigor can vary. In this study the international graduate students who were interviewed mentioned differences in the academic rigor between the tertiary institutions in their countries and the United States. Most of the international graduate students’ comments described the academic work required of them in a U.S. graduate setting as being easier than that which had been required of them in their home countries. Catherine reflected on the differences:

I found that actually school in the U.S. is definitely a lot less difficult to me than school in the Bahamas . . . I couldn’t believe how easy it was. It was easy, I’m telling you college in the Bahamas it was harder . . . The lecturers are more hard on you in my place, [because of] their requirements and the deadlines.

One of the components of academic rigor involves teaching. Catherine attributed the difference in academic rigor between the U.S. and the Bahamas to the lecturers she had. Based on her comments, the Bahamian lecturers demanded and expected more from their students than the professors Catherine has encountered in the United States. This
difference in teacher expectation also reflects a difference in academic rigor on the classroom level. This difference is important to note because Catherine implies that she did not have to put forth the same amount of effort in a U.S. graduate classroom as she had to in a Bahamian classroom to achieve the same academic results. This difference in the amount of academic rigor required of Catherine could help explain differences in academic behavioral confidence, especially related to discrepancies between the frequency of the skill used in the international graduate students’ home institutions and their academic behavioral confidence.

**Country in which bachelor’s degree was earned.** According to the quantitative analysis the country in which international graduate students earn their bachelor’s degrees was found to be statistically significant. International graduate students who received their bachelor’s degree in their home countries and those who earned their bachelor’s degree in the United States both reported higher academic behavioral confidence than those who earned their bachelor’s degree in a third country. Furthermore, the association between where the bachelor’s degree was conferred and one’s academic behavioral confidence was mentioned during interviews of the international graduate students in this study. Wu obtained her bachelor’s degree from one of Ohio’s public institutions. She explained the association regarding where she earned her bachelor’s degree and her academic behavioral confidence:

"Yes, I was lucky I could . . . come in undergrad. [As a result] I am very familiar with the class setting with how to take notes and . . . the pace of the professor speaking. Undergrad in Taiwan does not prepare you to write a paper . . . I
learned APA style and MLA [in undergrad]. I was prepared to read the textbook in English [once I began my academic work as a graduate student] because I was doing that in undergrad.

Although she attributed her opportunity to attend undergraduate in the United States to good fortune, Wu represents the second-generation of international students from her family to choose the United States as their study abroad location. While studying toward her bachelor’s degree, Wu was able to familiarize herself with the nuances of the higher education system in the United States. Having had time to adjust to differences between the educational culture in Taiwan and the United States gave her an advantage once she decided to pursue a graduate degree in the United States. Wu, having earned her bachelor’s degree in the United States, appears to be associated with her academic behavioral confidence.

Research Findings—Interpersonal Relationships and Sources of Academic Behavioral Confidence

All of the interviewees mentioned at least one inter-personal relationship they associated with their academic behavioral confidence. These inter-personal relationships included those between the interviewees and their family members, professors and teachers, and their friends and classmates. The respondents indicated that their inter-personal relationships positively impacted their academic behavioral confidence through verbal persuasion and mastery experience, two sources of academic behavioral confidence as noted by Sander and Sanders (2003).
**Relationships with family members.** One of the familial relationships that was reported as having an impact on academic behavioral confidence was between the international graduate students and their parents. Talat mentioned the role his mother played in building his confidence in undertaking graduate coursework in the United States and securing a scholarship to underwrite his educational costs. Talat explained,

I have this confidence that I can do whatever I put my mind to. It’s because of my mother . . . She said, “Once your professor knows you, definitely you will get funding, once they see your work.” She was very sure about me.

The affirmation Talat received from his mother was a source of verbal persuasion and instilled within him the academic behavioral confidence he needed to succeed in a U.S. graduate school setting.

**Relationships with professors and teachers.** The interviewees mentioned that their instructors had confidence in their academic ability. Unjali’s confidence in her statistics ability waned following a demoralizing failure on her statistics mid-term. She credited feedback (a form of verbal feedback) from her professor as restoring her confidence. She stated, “I was looking to the professor for validation of my academic ability. He would write feedback on my papers that helped to build me back up. I posted these papers on my wall.”

**Relationships with friends and classmates.** The academic behavioral confidence of the interviewees appears to be associated with the interpersonal relationships with their friends and classmates. Alaire, a master’s student from France, admitted that language was a challenge for him, especially as it related to making oral
presentations in class. His native language is French and his English is heavily-accented. He participated in a group project for a graduate class and was required to present his results. Because his accent was so heavy and he was not comfortable with his English, Alaire was concerned about the presentation. However, with the help of one of his classmates, he was able to achieve the mastery experience necessary to enable him to make an effective oral presentation in English. He commented on the experience: “We had [one of our first big oral presentations]. I had one of them [classmates] get me at six [the morning of the presentation] . . . he made me practice for half an hour, my two minute points.”

Although Alaire’s remarks were only two minutes in length, he practiced these remarks for 30 minutes. Alaire credited this period of repeated practice with helping him to overcome his fear. In so doing, he was able to achieve mastery of his oral presentation skills and minimize his accent. This finding is aligned with Bandura’s assertion on the source of self-efficacy, which Sander and Sanders (2003) use as the basis for their concept on Academic Behavioral Confidence.

Areas of Convergent Findings

Convergent findings in this study are being defined as those background characteristics or academic factors found to be statistically significant and also mentioned in the complementary interviews. In this study, the convergent findings include the background characteristic of religiosity and the academic factor of the country in which bachelor’s degree was earned.
Religiosity. This variable was found to be statistically significant as a background characteristic associated with the academic behavioral confidence of the international graduate students in this study. Furthermore, interviewees expressed their views on how the religious practices of prayer, faith, and service are associated with academic behavioral confidence.

Country in which bachelor’s degree was earned. According to the quantitative analysis the country in which international graduate students earn their bachelor’s degrees was found to be statistically significant. International graduate students who received their bachelor’s degree in their home countries reported higher academic behavioral confidence than those international graduate students who earned their bachelor’s degree in a country outside the United States. Additionally, international graduate students who earned their bachelor’s degree in the United States reported higher academic behavioral confidence than those international graduate students who earned their bachelor’s degree in a third country.

Areas of Divergent Findings

Divergent findings in this study are being defined as those background characteristics or academic factors that were neither found to be statistically significant nor were addressed on the survey instrument, but were mentioned in the complementary interviews. In this study, divergent findings include the background characteristic of being female and the academic factors of solutions to eliminate educational advantages, limited tertiary resources, social capital, academic collaboration, and academic rigor.
**Being female.** The data from the female international graduate students who were interviewed for this study provided examples of how being female presented obstacles that their male counterparts did not have to face. The respondents mentioned issues related to family expectations, studying in the STEM fields, and career aspirations and how these issues are associated with their academic behavioral confidence.

**Academic factors.** Only four academic factors were noted during the complementary interviews. The first factor was solutions to eliminate educational advantages. This was mentioned by the Black international students in this study who came to the United States prepared to address and overcome raced-based educational disadvantages.

The second factor was *limited tertiary resources and social capital*, which has three subcategories. Among these subcategories are: limited tertiary institutions (only one college from which to choose), limited top-tier graduate programs, limited curricular resources (area of study is unavailable). All of these tertiary resources were both related to social capital and at the same time associated with academic behavioral confidence.

*Academic rigor* was the third academic factor associated with academic behavioral confidence. The lack of academic rigor was an issue for those international students who came to the United States and complained that the work was easier. This perceived difference in the quality of education provided and the resulting expectation made it easier for them to matriculate in a U.S. graduate school. The resulting social capital from having earned a graduate degree through a U.S. graduate school was easier to obtain than it would be in their home countries.
Academic collaboration was negatively associated with academic behavioral confidence. Cultural differences dictate how academic collaboration is understood. In certain countries outside of the United States, the level of academic collaboration expected would constitute academic misconduct in a U.S. graduate school. Furthermore, failure to provide the expected level of academic collaboration in one’s home country could lead to social rejection and ridicule.

Conclusion

The findings from this study include a total of two background factors and six academic factors identified as being associated with the academic behavioral confidence of international graduate students in Ohio’s public institutions. T-test analysis found religiosity to be statistically significant. This background characteristic was also mentioned in the student interviews.

Being female was the other background characteristic that appeared to be associated with academic behavioral confidence. Findings from the interview data indicate that career aspirations, being in the STEM fields, and family expectations were areas in which being female appeared to be associated with academic behavioral confidence.

There were six academic factors for which findings suggested there could be an association with academic behavioral confidence. An (analysis of variance) ANOVA found statistical significance with the variables years of study in the United States and country in which the international graduate students’ bachelor’s degree was earned. Additional analysis using a Games-Howell post hoc test was used to determine between
which group means the significance existed. In looking at the variable of years of study in the United States, significance was found between those international students who had been studying in the United States one academic year or less and those who had been studying in the United States one to two academic years. Specifically, those international graduate students who had been studying in the United States one academic year or less reported higher academic behavioral confidence than those international graduate students who had been studying in the United States one to two academic years. In looking at the results of the country in which the international graduate students earned their bachelor’s degree, the Games Howell post hoc analysis found that international graduate students who received their bachelor’s degree in their home country and in the United States reported higher academic behavioral confidence than those who earned their bachelor’s degree in a third country.

The remaining academic factors, solutions to eliminate educational advantages, academic collaboration, academic rigor, and limited tertiary resources, which appeared to be associated with academic behavioral confidence, were found during an analysis of the interview data. Finally, interpersonal relationships, while neither background characteristics, nor academic factors, appeared to be associated with academic behavioral confidence. This information was discovered during the analysis of the data and was not directly elicited from the interview protocol. Yet, every interviewee mentioned having at least one relationship that appeared to be associated with their academic behavioral confidence.
Chapter 5 includes an overview of the study and a discussion of the study’s conclusions. The study’s implications as they relate to theory, practice, and research methods are discussed. Recommendations for future research follow.
CHAPTER V
CONCLUSION, DISCUSSION, IMPLICATIONS AND FUTURE RESEARCH

Overview of the Study

This study was designed as an extension of the work of Sander and Sanders (2003) on Academic Behavioral Confidence. It was designed to determine which background characteristics and academic factors are associated with academic behavioral confidence. The study’s research question specifically asked, “What background characteristics and academic factors are associated with the academic behavioral confidence of international graduate students in Ohio’s 13 public institutions?” The background characteristics included: gender, age, marital status, religious affiliation, religiosity, years of study in the United States, and having a relative or friend who completed a graduate degree in the United States prior to the respondent’s arrival in the United States. The academic factors included: the country in which the bachelor’s degree was earned, the country in which the master’s degree was earned, language of instruction in home country institution, degree sought, and major field of study. Both background characteristics and academic factors were predictor variables in this study, while academic behavioral confidence was the dependent variable.

The data for this study was gathered through an on-line survey and complementary interviews. The analysis of the statistical data from the survey highlighted one background characteristic and two academic factors that were statistically significant and associated with academic behavioral confidence. They were religiosity and years of study in the United States and country in which bachelor’s degree was
earned, respectively. The analysis of the complementary interview data highlighted two themes related to background characteristics associated with academic behavioral confidence, religiosity and being female. Five themes were identified that related to academic factors and were associated with academic behavioral confidence: country in which bachelor’s degree was earned, solutions to eliminate educational advantages, limited tertiary resources and social capital, academic collaboration, and academic rigor. Two other findings were associated with academic behavioral confidence: interpersonal relationships and the predictive relationship between the deployment of skills required in the international graduate students’ home institutions and their academic behavioral confidence in a U.S. graduate school setting.

The purpose of this chapter is to present and discuss the study’s conclusions, to explain the study’s implications, and to provide recommendations for future research. Throughout this chapter Hofstede’s (2001) Theory of Cultural Dimensions provides the study’s theoretical framework.

Discussions

The following conclusions are based on the findings from both the statistical data and the complementary interviews. Instances of convergent findings are discussed based on both the statistical data and the complementary interview data.

Background Characteristics

1. Religiosity was an essential background characteristic associated with the academic behavioral confidence of international graduate students in Ohio’s public institutions.
Religiosity was the only background characteristic that was found to be statistically significant and reported by the interviewees as being associated with their academic behavioral confidence. Three aspects of religious practices were found to be associated with the academic behavioral confidence of the international graduate students in this study. They were prayer, faith, and service. Whereas the role of religious practices in the academic achievement of post-secondary students has been documented in other studies (Green & Kim, 2005; Jeynes, 1999; Johnson, Oates, Jackson, Miles & Strong, 2003; Trockel, Barnes, & Egget, 2000; Trusty & Watts, 1999), the findings from this study revealed three aspects: (a) these practices were mentioned by both Christian and non-Christian (Muslim) students, (b) two of the three students who mentioned the importance of religiosity to their academic behavioral confidence were of African descent, and (c) all the interviewees who mentioned an association between their religiosity and their academic behavioral confidence were from countries that were more collectivist in nature (Turkey, Rwanda and Kenya). There are several possible explanations for these results.

Based on the findings of this study, it appears that both Christian and Muslim students share a common need for religious practices as a strategy to help them manage the academic adjustments they need to make in a U.S. graduate school setting. Religiosity also appears to be associated with their academic behavioral confidence. Despite efforts by the U.S. and western media to demonize Muslims, especially those of Arab descent (since the terrorist attacks of September 11, 2001, and other world-wide terrorist attacks), this aspect of the study’s findings speaks to the similarities between
Muslims and Christians, as opposed to their differences. Religiosity, in this study, is a common denominator that provides strength to those international graduate students who actively practice their religion.

While Hofstede’s (2001) Theory of Cultural Dimensions has been used as a lens for understanding the impact of culture on academic behavioral confidence, the work of other scholars provides an example of stronger support for a relationship between religiosity and collectivism. Cukur, de Guzman, and Carlo (2004), in a study of undergraduate students from the Philippines, Turkey, and the United States, found that students who came from countries that were more collectivist in nature had higher levels of religiosity.

2. The academic behavioral confidence of female international students is impacted both positively and negatively because of their gender, family expectations, and cultural dimensions.

The results of this study indicate that gender matters for international graduate students who come to the United States to study. Qin and Lykes (2006) in their study of Chinese students in American higher education found that these women went through a process by which they developed “a critical understanding of culture and self” (p. 192). This process of “rewraving” of self was the result of experiences both positive and negative, sifted through the cultural lens of who they were as women in their home country and who they became as women in their host country. While Qin and Lyke’s study illustrates the impact that another culture can have on one’s understanding of one’s self as a woman, other women in the study illustrated what happens when international
female students chose to adhere to the traditional roles for women dictated by their culture.

Several of the females in this study come from countries where women assume a more traditional role. That is, a woman’s priority is marrying, raising a family, and managing a home. This gender-role expectation is culturally based and reinforced by the family and other institutions in these female students’ home countries. This is the quandary Unjali, a master’s student from India, found herself in (see Chapter 4, p 77). Her family expects her to return to India to marry after she completes her master’s degree. In fact, her mother told Unjali that she did not care about her academic success and she should return to India to marry in order to be successful. This example demonstrates the low priority given to the education of women and the high priority given to the identification and securing of suitable marriage partners in certain countries. This practice is most common in the countries of Sub-Saharan Africa (Niger, Uganda) and Asia (Afghanistan, Bangladesh). However, these traditional gender-role expectations, fueled by conservative culture in countries where traditional gender roles are strongly enforced, have also been noted in the countries of the Middle East and North Africa (Yemen, Egypt) (Roudi-Fahimi & Moghadam, 2003; UNICEF, 2001).

According to Hofstede (2001) this cultural value placed on marriage is found more in collectivist cultures, where marriage is regarded as a union between two families, not two individuals. In the home countries of some of the female respondents in this study, there is an expectation that they are to focus on identifying a suitable marriage partner shortly after obtaining their bachelor’s degree as in the case of Unjali from India.
However, in the United States (which ranked as the least collectivist culture in Hofstede findings), studies of female college students have found that marriage is delayed in favor of educational and career pursuits and there is less of a cultural expectation placed on females to marry after completing a bachelor’s degree (Furstenberg, 2010; Settersten & Ray, 2010).

Additionally, data from this study showed that inter-personal conflicts can arise when international female students come to the United States for graduate study. Once in the U.S., these international female graduate students may experience inter-personal conflicts resulting from acculturation issues related to living in a society where there is less of an emphasis on traditional gender-roles for women. That is, they are thrust into a culture where women have greater parity with men than in their own countries. There are choices these women must make related to whether they will operate in the traditional gender-roles of their home countries or embrace the less traditional gender-roles of women and female graduate students as found in the United States. Some of the female interviewees who chose to study in traditionally male dominated academic fields faced additional challenges related to their gender roles.

Several of the female respondents in this study reported having challenging interactions with their professors and fellow students. These challenges were based on differences in opinions on the role of women who study in the STEM fields. Empirical studies conducted on the experiences of domestic female students in the STEM fields have focused on gender bias against females in the STEM fields (Blickenstaff, 2005), negative experiences of undergraduate women in the STEM fields (Tate & Linn, 2005),
and remedies to counteract gender bias against female students (Kahveci, Southerland, & Gilmer, 2006; Margolis & Fisher, 2002). While research has been conducted on these three aspects, there has been little research documenting the academic experiences of international female graduate students in the STEM fields. However, trend data from the Survey of Earned Doctorates (SED) indicates it is solely the female international students who have been credited with contributing to the increase in earned doctorates by female students in the fields of science and engineering in U.S. graduate schools (Ferreira, 2009). This study provides a starting point from which additional research may need to be conducted.

**Academic Factors**

1. Earning a college or university degree is associated with academic behavioral confidence and social capital.

Whereas the benefits that result from a domestic student earning an undergraduate degree have been documented and include reports of better health than high school graduates (Baum & Ma, 2007), positive effects on voting and other civic engagement (Dee, 2004), fostering of intellectual and social growth (Brock, 2010) and increased earning potential (Baum & Payea, 2004; Feldman & Newcomb, 1994; Pascarella & Terenzini, 1991, 2005; Porter, 2002; U.S. Census Bureau, 2002), the findings from this study provide empirical evidence regarding the benefits an international student can receive from earning a bachelor’s degree and a graduate degree in the United States.

As Wu mentioned in Chapter 4, earning a bachelor’s degree in the United States serves a dual purpose for international students: (a) the skills learned on the
undergraduate level prepare international students to meet the academic demands of graduate school in the United States; and b) having earned a bachelor’s degree in the United States provides additional social capital for international students that can be used for better employment opportunities should they decide to return home to work.

Additionally, the association between academic behavioral confidence and social capital appears to also be related for those seeking an advanced degree in the United States. The desire for social capital may help to explain the association of academic behavioral confidence with issues related to educational capacity.

Portes (1998) examined the origins and early writings related to the sociological concept of social capital. While there is no commonly agreed upon definition of this concept, the commonalities of the definitions include references to the benefits of social relations; the differences stem from the context in which the concept is used and the discipline in which it is studied. Coupled with social capital (as a benefit of international students obtaining a degree from the United States) is human capital. Coleman (1988) defined human capital as being “created by changes in persons that bring about skills and capabilities that make them able to act in new ways” (p. S100).

Both social capital and human capital appear to be associated with academic behavioral confidence by serving as underlying motivations for international students earning a college or university degree in the United States. In addition to these two concepts, by using the theoretical lenses of Sander and Sanders’ (2003) sources of academic behavioral confidence and Hofstede’s (2001) cultural dimension of uncertainty
avoidance, another explanation may be found as to why international students who earn degrees in the United States reported higher levels of academic behavioral confidence.

Hofstede’s (2001) research on uncertainty avoidance asserts that people from countries ranked as having high uncertainty avoidance do not accept ambiguity and/or the unknown well. Studying in the United States then, for many international students, inherently involves ambiguity and uncertainty as the social and academic landscape may be unfamiliar terrain. Successful matriculation under these circumstances depends on the student’s ability to identify and develop strategies to address this ambiguity. The ability to navigate these ambiguous situations is accomplished through mastery experience, which Sander and Sanders (2003) asserted as a source of academic behavioral confidence. This mastery experience is gained during the four years that international students are earning a bachelor’s degree in the United States, as they learn to master the skills they need to successfully earn an undergraduate degree and adjust to the nuances of the higher education system in the United States. Many of these skills can also be used in graduate school, if these international graduate students decide to continue to their education. Thus, studying and earning a degree in the United States provides international students the opportunity for cross-cultural, experiential learning, which appears to be associated with academic behavioral confidence.

2. International graduate students’ academic behavioral confidence decreases the longer they spend time studying in the United States.

According to some acculturation theorists (DuBois, 1956; Gullahorn & Gullahorn, 1963; Lysgaard, 1955; Oberg, 1960), international students’ adjustment to
their host country occurs in stages. These theories hold true, that upon arrival in their host country, international students possess a positive attitude and are excited about their future academic undertakings. This excitement can turn to frustration and anger as the difficulties of these students’ new living and learning environment become a reality. Over time, however, students gain an understanding of the cultural differences in their host countries and develop strategies to assist them in navigating the new cultural landscape. Finally, international students return to a point of cultural equilibrium, where they again are able to effectively manage the world in which they live.

The results of this study support these early stage theories of acculturation in that the data show that the respondents’ academic behavioral confidence is highest during their first year of study, decreases during the second year of study, and remains fairly constant through the sixth year of study. Other empirical studies have found similar results. A study conducted by Parr, Bradley, and Bingi (1992) surveyed undergraduate international students regarding how they felt while attending school in the United States. The students ranked their feelings of confidence 4th out of 15 of the positive feelings they experienced most frequently. This confidence and other positive feelings were ranked highest during these students’ first year of study in the United States. The students reported feeling less positive during their second year of study, with their positive feelings remaining relatively stable during their remaining years of study.

While stage theories of acculturation provide a plausible explanation for the course of the international graduate students’ academic behavioral confidence in this study, alternative paradigms of acculturation such as cultural integrity and cultural
perseverance may provide another perspective to explain this decrease in academic behavioral confidence. These theories assert that when international graduate students are exposed to values in their host country that are different from the values in their home countries, they still choose to adhere to the values of their home country (Andrade, 2006/2007; Durkin, 2008). One could speculate that these paradigms of acculturation could negatively impact academic behavioral confidence, especially as it relates to cultural differences in teaching and learning.

According to Hofstede’s (2001) Theory of Cultural Dimensions, differences exist between countries based on the degree of inequality or equality that exists within a culture. Hofstede's research investigated these differences known as power distance. China, for example, values large power distance. This means social hierarchies are clearly defined and transgressing those boundaries is taboo. The United States, on the other hand, values small power distance. This means that while social hierarchies exist, interactions and relationships between those of varying social backgrounds are common and acceptable. In a stage theory model of acculturation, we would expect international graduate students from China who study in the United States to be reluctant to take advantage of a professor’s office hours to receive extra help. Eventually, however, they overcome their fear, follow the social norms of higher education in the U.S., and become less reluctant to seek assistance from their professors.

In a cultural integrity or cultural perseverance model of acculturation, we would expect international graduate students from China who study in the United States to understand why American professors provide office hours but still be reluctant to
schedule an appointment (Andrade, 2006/2007; Hofstede, 2001). Based on the large power distance in China, visiting a professor’s office hours would be bothersome to the professor and would be also an admission that the student is not being adequately prepared to matriculate through graduate school. Instead, a student in this situation would likely seek counsel from another Chinese student—one who is held in higher academic esteem—as a way to retain his or her cultural integrity.

Thus, the decrease in academic behavioral confidence as noticed in the second year of this study could be explained as the time when international graduate students are negotiating the academic landscape by finding solutions to their academic challenges in ways that allow them to maintain their cultural integrity. Durkin (2008) in her study of international students in the United Kingdom refers to this as international students choosing the middle way. No longer do international students have to choose between two cultures. Instead, they are freed from having to divorce themselves completely from their culture and are able to selectively and purposefully choose the cultural aspects of their host country they want to incorporate into their daily lives.

Those international graduate students who operate with cultural integrity would become cultural hybrids. This subsequent adoption of host country values may stem from the international graduate student seeking a viable solution to alleviate acculturation difficulties. In so doing, the international graduate student seeks to keep from failing academically and socially. As a result, there may be a temporary decline in academic behavioral confidence as the international graduate student must find the right balance
between the expectations of the values of his home country and the demands and differences that may result from adapting his host country values.

Thus, instead of being perceived as a negative consequence of studying in the United States, or worse yet, an undesirable consequence of acculturation, perhaps a decrease in an international graduate student’s academic behavioral confidence over time is an indication that such students have decided to maintain their cultural values and traditions while selectively embracing aspects of the culture of U.S. graduate school settings.

3. The Black international graduate students who understand that they faced an educational disadvantage because of their race were prepared to address this disadvantage and overcome it.

Gender, class, income, and race have been the basis for discrimination and educational disparity in the United States. In this study race was a consideration of the international students who would be classified as Black in this country. Johnson (2006) addressed the genesis of racial discrimination and the significance of skin color in the United States, which he asserted is based on the concepts of privilege and power and is socially constructed. He explained that the social construction of race is predicated upon the significance given to racial differences in the United States. This social construction of race includes White privilege, which is privilege that White people have as a group simply because of their skin color. This privilege, of course, denies power to those who are not White. Thus, White privilege results in Whites having “unearned advantages” and “conferred dominance” over those who are not White.
For international students who come the United States, this culture’s social 
construction of race can be confusing and provide additional cross-cultural challenges 
with which students of color may need to address. Johnson (2006) gave an example of 
the impact of White privilege on an unsuspecting woman of African origin who comes to 
the United States:

A Black woman in Africa who has not experienced white racism [as it exists in 
the United States] does not think of herself as black, or experience herself as 
black, nor do those around her. African, yes, a woman yes, but not a black 
woman. When she comes to the United States, however, where privilege is 
organized according to race, suddenly she becomes black because people assign 
her to a social category that bears that name and they treat her differently as a 
result. (Johnson, 2006, pp. 17-18)

This illustration provides the background for understanding the reactions of the “Black” 
international students in this study.

Unlike the woman in the example above, the Black respondents in this study were 
aware of the history of race-based discrimination in the U.S. and were prepared to 
address the resulting educational disparity. A couple of examples of this preparedness 
are Barack and Catherine. Barack was aware that affirmative action programs were in 
place in his university and was determined to exploit the programs to his benefit. There 
appears to be an association between his knowledge of this systemic support and his 
academic behavioral confidence.
Similarly, Catherine was aware of racism because of her experience as a resident of a former British colony that was part of the mid-Atlantic slave trade. Her father instilled in her the idea that she was not inferior to Whites. Furthermore, she adopted his mantra “to always be better than the White man.” Catherine’s determination can be explained using Sander and Sander’s (2003) theory that holds that verbal persuasion is a source of academic behavioral confidence. The findings from this study indicate that this preparedness provided a solution to overcome educational disadvantages, which is associated with academic behavioral confidence.

4. The perception of differences in academic rigor between a U.S. graduate school and an international graduate student’s home institution is associated with academic behavioral confidence.

Currently, there is no standardized definition of academic rigor. Research on this subject has yielded multiple and varying definitions of this concept and there is scant research on this topic in a higher education context. What has been documented, however, are the differences in achievement on the K-12 level of education, which could be related to academic rigor. Findings from the last two decades consistently show public school children in the United States lagging behind their counterparts academically, especially in the fields of Math and Science (U.S. Department of Education, 2007). Asian and European countries like Hong Kong, Korea, Japan, Hungary, England, and the Russian Federation continue to achieve higher science and mathematics scores for their fourth and eight grade students than those of the fourth and eight grade students in the United States (U.S. Department of Education, 2007). This
researcher found no empirical studies on whether this achievement gap between U.S. and international students continues into a post-secondary setting. While empirical studies like the TIMSS 2007 have yet to be conducted on the graduate level, findings from this study suggest there may be a need to research cross-cultural differences in academic rigor on the graduate school level. Thus, one can only speculate that perhaps these academic differences are reflective of the quality of education provided on the graduate school levels in the United States.

5. Cultural differences in academic collaboration impact academic behavioral confidence.

Academic collaboration, as revealed in this study, varies according to culture. Hofstede’s (2001) research findings on individualism provide a lens through which we can examine this difference. According to Hofstede, one of the traits of a country that is collective in nature is that people are more inclined to put the well-being of the group ahead of their own individual desires. As a result, when a student leaves a collectivist culture and comes to the U.S., which is the highest ranked country in terms of individualism according to Hofstede’s Individualism Index, we could expect to see actions taken by this student to help others academically. While some of these actions like providing answers to other students during testing are expected and considered acceptable in the international graduate students’ home country, they could result in international graduate students being accused of plagiarism, cheating, and other types of academic misconduct in a U.S. graduate school setting. As such the assumption that international graduate students understand what constitutes academic misconduct in the
U.S. and that they understand how this culture defines academic collaboration needs to be abandoned.

Furthermore, based on Hofstede’s (2001) findings one would expect international graduate students in this study that come from collective cultures to have voiced the greatest misunderstanding of how academic collaboration is understood and applied in a U.S. higher education setting. However, it was the students from countries that were highly ranked as individualistic (Maximilian from Austria, Petra from Germany, and Gianina from Italy) who voiced these differences. Thus, it appears that there may be something else besides collectivistic values that are motivating these academic collaboration practices. Another possible explanation for practicing this type of academic collaboration may be found in the religious heritage of these students.

Austria, Germany, and Italy are all nations that are predominantly Catholic (The World Factbook, 2010). One of the tenets of Catholicism is the belief in the idea that through works one can earn grace. “Good works are not only a requirement of Catholic life and a route to unity with Jesus, they also provide the opportunity to work for justice and equality” (Keeler & Grimbly, 2005, p. 235). That is, Catholics believe that benevolent acts toward others result in ultimate benefits for the person providing the act. Thus, the willingness of these international students to help their fellow students may be considered a form of benevolence. So, instead of perceiving academic collaboration as taboo, these international students perceive themselves as providing a service to other students based on the tenets of their faith.
Finally, the factor of academic collaboration was one of the few factors that was negatively associated with academic behavioral confidence. As mentioned earlier in this Chapter, what is considered acceptable academic collaboration is culturally defined. There were three international graduate students who came from countries where the definition and use of academic collaboration is much broader in scope than it is here in the United States. While their acts of academic collaboration in their home countries included sharing of homework, giving answers to test questions to other students during a test and the working together on assignments. They were culturally astute enough to understand that these same actions in a U.S. graduate school setting could result in serious consequences, including dismissal from their academic programs.

**Interpersonal Relationships and Sources of Academic Behavioral Confidence**

1. Interpersonal relationships have both a positive and negative impact on academic behavioral confidence and are influenced by culture.

Empirical studies have found that international students who establish interpersonal relationships with people in the host country experience a more positive acculturation process (Al-Sharideh & Goe, 1998; Trice, 2004). These relationships have been documented primarily between international students and their classmates. This study found there were inter-personal relationships that involved negative interactions between international graduate students, their classmates, and their professors based primarily on differing cultural values. Zeynep, a doctoral student from Turkey, discussed one negative experience she had as a female in a male-dominated STEM area of study. The incident occurred when she went to one of her professors for help: “I was very sad
and disappointed that he asked me ‘why don’t you quit [the doctoral program] and get married?’ I said I came for a PhD. What the heck are you talking about?” Rather than discourage her, this negative interaction served to motivate her and provided the resolve she needed to continue to pursue her doctoral degree.

Of all the findings from this study, interpersonal relationships were mentioned more often by the interviewees, all of whom had both positive and negative interpersonal relationships. However, of the females in this study who were pursuing degrees in the STEM fields, there were more negative interactions reported between them and their professors and peers, mostly related to their ability to succeed in fields of study that have been historically dominated by males.

The extent of this finding suggests that interpersonal relationships had the most impact on the academic behavioral confidence of the international graduate students in this study. This finding is in keeping with other empirical studies that have found that supportive relationships are important to international students’ academic experiences during their stay in the United States (Poyrazli, Kavanaugh, Baker, & Al-Timimi, 2004; Trice, 2004).

2. Verbal persuasion as a source of academic behavioral confidence may also extend to include written persuasion in the form of feedback.

While not conclusive by any means, the findings from this study indicate that written feedback may be as persuasive a source of academic behavioral confidence as verbal persuasion. Unjali, an interviewee from India, was devastated following her receipt of low marks on a test. By her own admission she felt a loss in confidence and
began to question her academic ability. It was not until she began to receive written positive feedback from her professor that her confidence began to return. Although the positive feedback/reinforcement Unjali received from her professor was not verbal in nature, researchers have found that written feedback can impact academic performance. Written comments have been investigated and have been found to be more effective than providing grades for students (Black & William, 1998), to significantly improve test performance (Page, 1958) and to lead to learning gains (Butler, 1988). Thus, one could surmise that written feedback functions in a similar manner to verbal persuasion as a source of efficacy and, thus, is associated with academic behavioral confidence.

**Implications**

The implications for this study are based on the findings from both the survey and the interview data. The implications that follow focus on theory and practice. These implications are directed toward student affairs professionals and professors for two reasons: (a) these higher educational professionals will spend the greatest amount of time with international graduate students, and as a result of these interactions, (b) they have the potential to greatly impact international graduate students.

**Implications Related to Theory**

While Sander and Sanders (2003) developed the theory of academic behavioral confidence, scholars from Wales and Spain must receive the credit for conducting empirical studies with undergraduate students to establish the parametric identity of this theory (Sander et al., accepted for publication; Sanders & Sander, 2007a). Furthermore, Bandura’s Theory of Self-Efficacy provides the theoretical foundation upon which these
studies have expanded and from which the Academic Behavioural Confidence Scale was developed. As of this writing, research on Academic Behavioural Confidence has been limited to a European undergraduate higher education setting. However, the findings of this study suggest that when Sander and Sanders (2003) Academic Behavioural Confidence Scale is modified for use with international graduate students in a U.S. graduate school setting, the modified instrument is determined to be a reliable and valid measure of academic behavioral confidence in this population.

**Implications Related to Practice**

I make four recommendations based on this study’s findings, which focused on international graduate students who have persevered. However, not all international (graduate) students do persist (Ejiofo, 2010). As I drafted implications for practice, I was aware that many programs and services currently exist, and have for decades; thus, I believe practitioners must reconsider the delivery of services they provide to the international students under their charge. While the practices to which we subscribe in aiding international students studying in the United States have not changed radically, there has been little change in the documented experiences of these students over the last 60 years. These students continue to be challenged socially, linguistically, financially, emotionally, academically, and culturally. Yet, they continue to succeed. How effective can our practices be if the problems faced by students studying in the United States in the 1950s still plague those studying here 60 years later? Perhaps the problem is reflective of thinking that needs to be changed in order to identify and execute effective, lasting
solutions to the issues facing international students. I believe there needs to be a change in the attitudes and behaviors that undergird the services and assistance we provide. First, we need to balance our use of international student enrollment as an answer to offset budget shortfalls created by decreased state funding with a desire to provide the best match in educational experiences for the international students studying in the United States. In the face of continued problems despite solutions to improve the experience for international students over the past 60 years, it would appear that the academic will may not be there. One can surmise then, that the academy is pleased to use these students to subsidize their budgets.

To this end, I recommend the publishing of an annual World Fact Book of Higher Education Systems to assist U.S. higher education personnel in the recruiting and admitting of international students. This resource could include background information on the cultures and higher education systems of countries that either send the largest number of students to study in the United States or countries that send the largest number of students to a specific institution. It could also include data on the retention and attrition rates of students by country. I suggest a combining of the layout of two publications as models for this Handbook: Understanding Your International Students (Flaitz, 2003) and the CIA World Fact Book. Understanding Your International Students contains information regarding the educational, cultural, and linguistic backgrounds of international students from 16 countries. The CIA World Fact Book contains factual information about people and their resources according to the country in which they live. This proposed handbook would aid U.S. higher education and student affairs personnel in
providing better matches between international students, their academic interests, the
delivery of services, and the students’ cultural norms.

Second, we need to acknowledge the difference in the value and importance of
religion in the lives of some of our international students. Many of them come from
countries where Christianity is not the predominant religion. As higher education and
student affairs practitioners, we can not allow religious intolerance and prejudice to
prevent us from recognizing different religious holidays and traditions. When possible,
we need to provide proper places of worship on campus or collaborate with religious
communities at large to assist in meeting the religious needs of our international students.
The findings from this study indicate the importance of religiosity to the academic
experiences of international students. In fact, international graduate students who
actively practiced their religion reported greater academic behavioral confidence.

The example that follows helps us to understand the growing importance of
meeting the religious needs of our international student population. Saudi Arabia, a
primarily Muslim country, is now among the top 20 countries of origin for international
students studying in the United States (Open Doors Report, 2009). Perhaps universities
with the largest populations of Muslim students may need to re-think not only their
master class schedules (to accommodate Muslim students’ day of worship), but they may
need to consider providing places of prayer for Muslim students whose religious practices
include praying five times a day. Finally, as far as the observance of non-Christian
holidays is concerned, once a critical mass of international students of the Muslim faith
populate a campus, administrators may need to consider whether they will observe traditional Islamic holidays as part of the university’s calendar.

Third, in developing workshops to address the cross-cultural and cultural transition issues of international students, higher education and student affairs personnel need to be aware of the differences between the guest students’ culture and the host country’s culture. Furthermore, they need to develop strategies for addressing these differences in a way that does not force the guest students to assimilate. That is, higher education and student affairs personnel need to find a way for international students to successfully navigate the new culture and academic setting while maintaining their cultural identity.

Using Hofstede’s (2001) Theory of Cultural Dimensions could inform the strategy for developing more effective workshops. Most of the students who were interviewed for this study were from countries that Hofstede ranked as being primarily collectivistic in nature. When these students come to the United States, they are thrust into the culture of the country that Hofstede classified as being the most individualistic in nature. So, they are met with cultural expectations that are in many ways antithetical to what they have become accustomed. Most of the personal challenges noted by the international students in this study related to time management, cross-cultural communication issues, and technology use. According to Hofstede (2001), there are differences in the importance of relationships versus task completion, the importance and use of time, and with whom problems are shared and how advice is solicited in a collectivistic culture. Accordingly,
any workshop designed to address these international students’ needs must consider these cultural differences.

Fourth, the global education community has an obligation to work together to prepare international students to study in the United States. This responsibility rests with international educators, embassy personnel, international student service personnel, university faculty, staff, and administration. As part of this effort, certain stakeholders in this cross-cultural educational process need to be held more accountable in providing more effective pre-departure and post-arrival orientation programs. For example, there needs to be more U.S. involvement in pre-departure orientation programs, either sponsored by U.S. embassies or their designees. Perhaps mandatory pre-departure programming could be held in U.S. embassies after international students receive their 1-20s from U.S. institutions but before they are granted their F-1 and J-1 visa by the embassy.

In addition to pre-departure orientation programs, there is a need for post-arrival orientation programs as well. These workshops should focus on cultural differences and how to address them, along with a battery of how-to’s: how to rent an apartment, how to open a bank account, and so forth. Additionally, based on the findings of this study, international students could also benefit from information on how the U.S. higher education system works on both the macro and micro levels. That is, from a macro-perspective, post-secondary institutions have different classifications and each category of institution has different features and benefits depending upon the category and the rank within the category. From a micro-perspective, international students need to understand
differences in program offerings, academic etiquette both inside and outside the classroom, among peers and between international students and their professors.

Interview data from this study provides examples of issues on both the macro and micro level that could have been addressed prior to the international graduate students’ arrival to this country, highlighting the need for pre-departure workshops. For example, Unjali, who enrolled in a university that emphasized research activity, was disappointed with her institution choice. She wanted to attend a university that emphasized teaching more than research activity. She did not learn about the different classifications of institutions in the United States until after her arrival here. She said if she had known that her university and her department were so research-focused, she would have made a different selection.

Workshops on the micro level could include information on the behavioral expectations and nuances of how to succeed as a graduate student. This could include information on competitiveness, academic misconduct, writing a scholarly paper, the importance of classroom discussions and the required reading that usually precedes this activity, student/professor relationships, and so forth. Case in point, international graduate student interviewees Talat and Swaminath mentioned taking workshops specifically designed to improve their oral and written communication skills. These students attended the same institution but were in different areas of study. These workshops were sponsored by their institution’s office of international student and scholar services. The oral communication skills workshop focused on preparing international graduate students to speak, teach, and present in front of a primarily
American audience. The written communication skills workshop focused on writing in an American context for academic assignments as well as submissions to professional journals. As a result, both students explained that they felt better prepared to matriculate in a U.S. graduate school setting.

**Recommendations for Future Research**

This study was designed to determine which background characteristics and academic factors are associated with the academic behavioral confidence of international graduate students in Ohio’s 13 public institutions. Based on the findings of this study, there are several suggestions for future research:

1. This study could be replicated with the inclusion of the following background characteristics: parental occupation, parental level of education, and family income, to determine if these background characteristics are associated with academic behavioral confidence in international graduate students.

2. This study could be replicated with the inclusion of the following academic factors: TOEFL scores, GPAs earned in bachelor’s programs, GPAs earned in master’s programs, and GPAs earned in doctoral program.

3. Future research could explore the religious practices of international graduate students and identify which practices are associated with reports of greater academic behavioral confidence.

4. There is a need to conduct a study to evaluate the association of skin color, racism, and neo-racism (which Lee, 2006, ¶3, defined as “beyond traditional racism, neo-racism justifies discrimination on the basis of cultural difference


or national origin rather than by physical characteristics alone and appeals to
‘natural’ tendencies to preserve group cultural identity—in this case the
dominant group”) with academic behavioral confidence and international
graduate students.

5. There is a need for an experimental study to attempt to identify the best
practices in pre-departure programs and orientation programs by using control
and experimental groups and to determine the association of these programs
with international graduate students’ academic behavioral confidence.

6. This study could be replicated using a mixed methods design; it was primarily
quantitative in nature but included interviews to provide narrative to
complement the survey findings. However, in studying international graduate
students in the United States, it is important to understand their experiences
both from a qualitative and quantitative perspective. That is, the research data
are complemented the qualitative responses, which capture the students’
experiences in their own voices. Thus, findings from this study indicate that
perhaps a mixed methodology is a more effective approach for research in this
area. More information could be uncovered, richer details could be provided,
and greater opportunities for additional research could be discovered as a
result.

7. This study could be replicated using a larger sample population, using focus
groups, and/or using a sample population of international graduate students
from private institutions.
A Final Word

If the current reported growth of international students studying in the United States continues, there will be more than one million students from other countries enrolled in America’s colleges and universities in less than five years (Open Doors Report, 2009). Many of these students come to this country not fully understanding the challenges that await them. Yet, they are able to overcome these challenges and complete the degrees they came to obtain. This study has focused on academic behavioral confidence and identified some of the background characteristics and academic factors that are associated with these students’ positive academic success.

While results from empirical studies like this one provide educators and student affairs personnel with a budding understanding of the cross-cultural issues that impact international students who study in the United States, a chasm of negative attitudes and inappropriate behaviors still stand between these students and those of us who study and work in America’s higher education settings. This situation is reflected in the results from empirical studies of the last 60 years that continue to highlight the problems experienced by our visiting students, while effective, lasting solutions to these problems continue to elude us.

What I believe undergirds and fuels this ineffectiveness is an attitude of cultural superiority, borne out of the days of America’s former glory as the undisputed Super Power of the free world. This attitude has resulted in a stronghold that grips the hearts and minds of many higher education and student affairs personnel, researchers, administrators, as well as students, preventing all of us from viewing the international
student experience from a perspective that will enable us to effectively bridge the cultural gaps that stand between us.

We do not need another empirical study informing us of about what we already know and have known for years regarding the challenges of the international student experience in the United States. What we need are empirical data and workshops that will begin to help us deprogram ourselves, re-educate ourselves about the importance of learning from other cultures, and enable us to become the caring, sensitive, and empowering higher educational professionals and students we have the potential to be.

We need to move beyond seeing ourselves as citizens of the quintessential host country, which we seem to believe gives us license to minimize, marginalize, ignore, and belittle the international students studying in the United States. This is not acceptable. What is missing is our understanding that the presence of international students on our campuses and in our classrooms provides us with an opportunity to learn.

Until we work to overcome our prejudice and inter-cultural ignorance; until we accept that there are countries that do things just as well or better than we do; and until we give ourselves permission to be vulnerable by admitting we do not have all the answers and only our way is the right way, we will fool ourselves into thinking that we will continue to attract international students simply because the United States has the most international students studying in its institutions of higher education currently. How many horror stories will it take, regarding the experiences of international graduate students’ time spent studying in the United States, before our ability to attract, recruit, enroll, and retain this important student group is negatively impacted? What has been
firmly established by this study and countless others is that international graduate students will continue to show us through their academic behavioral confidence, coupled with their resolve, resilience, and tenacity, that despite the obstacles they face in U.S. higher education settings, they can and will continue to achieve.
APPENDICES
APPENDIX A

PERMISSION TO USE THE ACADEMIC BEHAVIOURAL CONFIDENCE
SCALE (ABC)
Appendix A

Permission To Use The Academic Behavioural Confidence Scale (ABC)

Paul Sander, PhD
Centre for Psychology
University of Wales Institute
Cardiff, Wales

Wendie Willis
725 Sapp Road #304
Ravenna, Oh 44266
August 24, 2009

Dear Wendie:

I just received your letter dated August 24, 2009. With this acknowledgment, I do hereby grant you permission to use the Academic Behavioural Confidence scale (ABC). You may adjust the instrument consistent with your research design, if necessary.

As you know, this instrument has been used in higher education settings in several European countries, primarily with undergraduate students. Your desire to expand my work and that of my colleague Lalage Sanders by using this instrument with international students who have chosen to study on the graduate level in the United States is exciting. I trust you will send me a copy of your results. All the best as you continue to work toward the completion of this research and toward the completion of your doctorate.

Sincerely,

Paul Sander
Principal Lecturer, Psychology
University of Wales
APPENDIX B

CONSENT FORM FOR F-1 AND J-1 GRADUATE STUDENTS
Appendix B

Consent Form For F-1 And J-1 Graduate Students

Factors that Predict Self-Efficacy in International Graduate Students
Dear F-1 and J-1 Graduate Students: The purpose of this study is to explore the self-efficacy of international graduate students in several research universities in the Midwest region of the United States. Self-efficacy is a person’s belief in his/her ability to complete specific tasks. In this study we are examining self-efficacy as it relates to pursuing a graduate degree in a U.S. graduate school. We would appreciate your help with this project. This study has been approved by Kent State University’s Institutional Review Board (IRB) as well as your institution’s IRB.

Will you share your experiences by taking an on-line survey?
If you agree to participate, you will be asked to answer some questions about what skills graduate students need in your home country to succeed in graduate school, to answer some questions about how confident you feel about using the skills you need to succeed in graduate school in the United States, and to answer some questions about you. An on-line survey has been created to gather this information, which should take you between 10-12 minutes to complete.

May I interview you?
Additionally, as part of this study, you can volunteer for a one-hour personal interview that will be audio taped to discuss your experiences in U.S. university classrooms. A follow-up telephone interview (one-hour maximum) may also be scheduled to clarify what you have said in the interview if necessary. Please note: You can take the survey only without agreeing to be interviewed.

Your identity will be protected.
The on-line survey is confidential; you will not be identifiable by name. Only the dissertation committee and I will have access to the survey data. The information gathered on the survey will be stored on a secure server. Only I will know your identity should you decide to interview and the audio tapes of the interview will be destroyed after the information on them has been transcribed. I am also interested in using the data and my subsequent findings from this study for publication in scholarly journals and for professional conference presentations here in the United States and abroad.

Taking part in this study is entirely up to you. Refusal to participate will not involve a penalty or loss of benefits. Your participation will have no impact on your relationship with your professors, your grades, and/or your class standing. You may withdraw from this study at any time.

What other questions and/or concerns do you have?
Please feel free to contact me at wwillis@kent.edu or 330-671-6768, or my advisor, Dr. Mark Kretovics at mkreto1@kent.edu or 330-672-0642 should you have questions or any concerns about this study. If you have questions about Kent State University's rules for research, please call Dr. John West, Vice President of Research, Division of Research and Graduate Studies (Tel. 330.672.2704). I thank you in advance for your cooperation.

Sincerely,

W. A. Willis
Doctoral Candidate
Kent State University

I understand that by going to the URL below I am agreeing to participate in this study.

http://CTLSilhouette.wsu.edu/surveys/ZS78889
APPENDIX C

MODIFIED ACADEMIC BEHAVIORAL CONFIDENCE SURVEY
Appendix C

Modified Academic Behavioral Confidence Survey

International Students' Self-Efficacy

* This study has been approved by Kent State’s Institutional Review Board and your institution.* This survey should take 10-12 minutes to complete. *It is important that you answer all questions as honestly and completely as you can. There are no right or wrong answers. Thank you for your help with this survey. Please submit this survey electronically by Monday, June 16, 2008, at 11:59 pm. Copyright © 2008 Wendie Willis. All rights reserved.

Academic Experiences Outside of the U.S.

Listed below are skills needed to complete a graduate degree (Master’s, Doctoral) in a U.S. graduate school. How often were these experiences required by college graduate students pursuing a degree in your home country?

<table>
<thead>
<tr>
<th>Experience</th>
<th>In all classes</th>
<th>In most classes</th>
<th>In half the classes</th>
<th>In a few classes</th>
<th>In no classes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Attending class sessions regularly</td>
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<tr>
<td>2. Preparing for a midterm and final examination only</td>
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<td>3. Working in student groups</td>
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<td>4. Participating in class discussions</td>
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<td>5. Asking questions in class when something is not understood</td>
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<tr>
<td>6. Taking good class notes</td>
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<td>7. Managing time efficiently</td>
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<td>8. Creating Power Point presentations</td>
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<td>9. Meeting with professors to discuss academic concerns</td>
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<td>10. Asking for help from professors when needed</td>
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<td>11. Completing course assignments with the help of friends and classmates</td>
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<td>12. Presenting information in front of the class</td>
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<td>13. Conducting research on the Internet</td>
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<tr>
<td>14. Finding books and other information in the library</td>
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<td>15. Typing research papers</td>
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<td>16. Writing papers using the APA, Chicago, or MLA style</td>
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<td>No.</td>
<td>Skill Description</td>
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<td>17.</td>
<td>Keeping up with the required readings</td>
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<td>18.</td>
<td>Completing and turning in course assignments on time</td>
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<td>19.</td>
<td>Completing course assignments without needing help from others</td>
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<td>20.</td>
<td>Understanding the rules about how to earn my degree</td>
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<td>21.</td>
<td>Scheduling classes</td>
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<td>22.</td>
<td>Understanding assigned readings</td>
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<td>23.</td>
<td>Managing both school and work</td>
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<td>24.</td>
<td>Getting help and information at school</td>
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<td>25.</td>
<td>Having enough time to study</td>
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<td>26.</td>
<td>Communicating effectively in English when I speak</td>
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<td>27.</td>
<td>Communicating effectively in English when I write</td>
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<td>28.</td>
<td>Assuming a leadership position when working with a group of students on a class assignment</td>
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</table>

**Academic Experiences in the U.S.**

Listed below are skills needed to complete a graduate degree (Master’s, Doctoral) in a U.S. graduate school. How confident do you feel doing these things now that you are studying in the U.S.?

Please click the number that best represents your present level of confidence (from 5 = very confident to 1 = no confidence):

- Extremely confident
- Highly confident
- Moderately confident
- Little confidence
- No confidence

<table>
<thead>
<tr>
<th>No.</th>
<th>Skill Description</th>
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<tbody>
<tr>
<td>29.</td>
<td>Attending class sessions regularly</td>
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<td>30.</td>
<td>Preparing for a midterm and final examination</td>
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<td>31.</td>
<td>Working in student groups</td>
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<td>32.</td>
<td>Participating in class discussions</td>
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<td>33.</td>
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<td>35.</td>
<td>Managing time efficiently</td>
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<td>36.</td>
<td>Creating Power Point presentations</td>
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<td>37.</td>
<td>Meeting with professors to discuss academic concerns</td>
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<td>38.</td>
<td>Asking for help from professors when needed</td>
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<td>39.</td>
<td>Completing course assignments with the help of friends or classmates</td>
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<td>40.</td>
<td>Making presentations in front of the class</td>
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<td>41.</td>
<td>Conducting research on the Internet</td>
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<td>42.</td>
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<td>Typing research papers</td>
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<td>44.</td>
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<td>49.</td>
<td>Scheduling classes</td>
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<td>50.</td>
<td>Understanding assigned readings</td>
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<td>51.</td>
<td>Managing both school and work</td>
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<td>52.</td>
<td>Getting help and information at school</td>
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<td>53.</td>
<td>Having enough time to study</td>
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<td>54.</td>
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<td>55.</td>
<td>Communicating in English effectively when I write</td>
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<tr>
<td>56.</td>
<td>Assuming a leadership position when working with a group of students on a class assignment</td>
</tr>
</tbody>
</table>

57. Gender
   ☐ Male
   ☐ Female

58. Marital Status
59. What was your age as of April 1, 2008?
   - 18-22
   - 23-30
   - 31-40
   - 41-50
   - 51 and older

60. Religious Affiliation
   - Buddhist
   - Christian
   - Confucian
   - Hindu
   - Jewish
   - Muslim
   - None
   - Other

61. Religious Activity
   - Active/Practicing
   - Not Active/Not Practicing

62. In what region is your country located?
   - Asia
63. In what type of degree program are you currently enrolled?
   - Masters
   - Doctorate
   - Professional (JD, MD)
   - ESL/ELI Certificate

64. Did any of your friends or relatives earn a graduate degree in the United States before you came here to study? (do not include degrees earned on-line) Please check ALL that apply
   - Parent
   - Sister/brother
   - Other relative
   - Husband/wife
   - Child
   - Friend

65. What is the name of your home country?

66. In what country did you complete the equivalent of a Bachelor's degree?
67. In what country did you complete the equivalent of a Master's degree? (Leave blank if you are still working on this degree).

68. What month and year did you begin studying for your current degree in the United States?

69. If you are willing to participate in a follow-up interview, please type in your FIRST name ONLY, primary email address, and telephone number where a message can be left for you.
APPENDIX D

QUALITATIVE INTERVIEWEE SCREENING FORM
Appendix D

Qualitative Interviewee Screening Form

Dear International Graduate Student,

I thank you for volunteering to be interviewed for my study. I will start the interviews the week of June 2, 2008. I must interview a broad base of international students, but I can’t interview all 8,000 who are studying in Ohio. As a result, I am asking you to complete the form below and send it back to me. This is a pre-screening device I have created to help me narrow the number of interviewees. Once I receive and process your information, I will call you so we can talk about the possibility of you being selected for a one-hour, in person, interview.***

Please answer the following questions:

____ YES  ____ NO   I am married.

____ YES  ____ NO   I had a relative who earned a graduate degree in the United States before I came here to study.

____ YES  ____ NO   I am working on my doctorate degree.

____ YES  ____ NO   I am working on a degree in Science, Technology, Engineering or Math.

____ YES  ____ NO   I was enrolled in classes sometime during 2007 and 2008.

____ YES  ____ NO   I am actively practicing my religion.

____ YES  ____ NO   I will be 30 years old or older by August 1, 2008.

____ YES  ____ NO   I am female.

____ YES  ____ NO   My home country is on the continent of Africa, in the Middle East or Gulf regions of the world.

____ YES  ____ NO   I have earned at least one of my college degrees outside of my home country.

____ YES  ____ NO   I will be within a 50 mile radius (25 kilometers) of Cleveland, Ohio, this summer (June through September 1, 2008).

Primary Email-address: _____________________________________________________

Telephone Number (with voice mail): ________________________________

***Even if I don’t meet your criteria, I want to be interviewed. I have some important information I want to share about my graduate school, classroom experiences in the United States that I think would be helpful for your study.

If you have any questions, please feel free to call me at 330-671-6768 or e-mail me at wwillis@kent.edu

Thanks So Much,

Wendie Willis
APPENDIX E

INTERNATIONAL GRADUATE STUDENT INTERVIEW—DAY ONE QUESTIONS
Appendix E

International Graduate Student Interview—Day One Questions

Date/Time of Interview:

Pseudonym:

1. How did you make your decision to study in the U.S.?
2. How did you make your decision to study at your specific school?
3. What is your major area of study and what degree are you pursuing?
4. When did you first enroll in classes in a U.S. graduate school? Have there been any semesters when you were not in school? If, so why not?
5. What other degrees have you earned in the United States, not including your current degree?
6. (1) Please review the list of skills needed to succeed in a U.S. graduate school. Based on your graduate education in your home country are there any skills you would add to this list that aren’t present and/or any skills you would delete because they are not necessary to succeed in a graduate program in your home country?
7. (2) If you were to prioritize these skills as they relate to graduate education in your home country which skills would you rank as the top five skills needed to succeed in graduate education in your country and which skills would you rank as the bottom five skills needed to succeed in graduate education in your country?
8. (3) If you were to prioritize these skills as they relate to your major area of study here in the United States, which skills would you rank as the top five skills needed to successfully complete your academic program?
9. (4) Of the skills you needed for your major, which ones were you confident doing before arriving in the United States to study? Which of these skills proved the most challenging to learn?
10. (5) How confident do you feel doing those skills that were necessary to succeed in a U.S. graduate school but not in graduate education in your own country? How were you able to gain confidence in doing these skills?
11. (12) Did you have a relative who earned a college degree in the U.S. before you came here to study? If so who was it?
12. (13) What impact did having a relative who earned a degree in the United States have on your decision to study here? What impact has knowing that your relative successfully studied here had on your confidence in your ability to complete graduate school?

Additional Questions
1. What role does your religion play in your academic pursuits?
2. What role does your being female play in your academic pursuits?
3. What role does your being married play in your academic pursuits?
4. What impact does your age play in your academic pursuits?
5. What impact has earning one of your academic degrees in the United States, had on your current academic pursuits?
Appendix F

AUDIO CONSENT FORM

I agree to audio taping at ____________________________
on ____________________________

____________________________________________________

Signature ____________________________ Date

I have been told that I have the right to hear the audio tapes/digital recording and read the transcript before they are used. I have decided that I:

____ want to hear the tapes/digital recording  ____ do not want to hear the tapes/digital recording

____ want to see the transcripts of my interview  ____ do not want to see the transcripts

W. A. Willis may / may not use the audio tapes/digital recording made of me. The original tapes/digital recording or copies may be used for: (Check all that apply)

____ this research project  ____ future research projects

____ professional conferences/meetings  ____ publication purposes

____________________________________________________

Signature ____________________________ Date

Address (including permanent e-mail and a voice mail contact number)

____________________________________________________
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