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# International Students' Satisfaction with Educational Service Augmenters and Their Adjustment to the U.S. Higher Education Institutions

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**International Students' Satisfaction with Educational Service Augmenters and Their  
Adjustment to the U.S. Higher Education Institutions**

by

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### **Abstract**

The study aims to investigate the relationship between international students' satisfaction with educational service augmenters and their academic, social, and personal-emotional adjustment to U.S. institutions. Furthermore, this study compared different influences on international students' adjustment, with a focus on students' satisfaction with educational service augmenters as well as the traditional predictors (i.e., English fluency, friendships with American peers, and institutional attitude towards the international student population). The researcher sampled participants from institutions across the United States by sending an email invitation and survey link to complete the International Students' Satisfaction and Adjustment Instrument. Hierarchical Multiple Regression analyses were utilized to examine the relationship among these variables. Implementation and potential limitations of this study were discussed.

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## CHAPTER 1

In the education market, students are viewed as customers who expect high-quality services and outcomes, while educational institutions are business owners selling the core product: education (Elsharnouby, 2016; Paswan & Ganesh, 2009). However, it is hard for consumers to assess service quality before purchases and consumption (Elsharnouby, 2016; Paswan & Ganesh, 2009). Customers have trouble evaluating the quality of educational services, even during service consumption (Paswan & Ganesh, 2009). Parasuraman (1998) emphasized the quality of interaction between sellers and consumers and the importance of customer service in enhancing customer satisfaction. In the context of higher education, as long as the education market focuses on education services, institutions should note that the market is “increasingly augmenting its core offerings with supplementary services” (Parasuraman, 1998, p. 310). Therefore, it is likely for customers to rely on service augmentation elements that are more visible (Parasuraman, 1998; Paswan & Ganesh, 2007; Paswan & Ganesh, 2009). “These service argumentation elements help students form expectations about core service” (Elsharnouby, 2016, p. 680).

The quality of the experiences and other measures, such as others’ recommendations or brand reputation are indicators of service quality for consumers’ evaluations (Elsharnouby, 2016; Paswan *et al.*, 2007). In the services context, “service augmentation is likely to enhance customer satisfaction to higher levels as customers might not expect some augmentation elements” (Elsharnouby, 2016, p. 682). Similarly, in the higher education setting, it is difficult for a student to evaluate the educational services of a university before enrollment. Thus, augmentation features, such as the university facilities, location, alumni connections, and recommendations from others may become the indicators for students’ evaluations (Elsharnouby, 2016). Educational service augmenters are supplementary factors “outside of the domain of the core content of education that

might emerge as crucial for determining students' satisfaction" (Elsharnouby, 2016, p. 681; Paswan & Ganesh, 2009). Universities increasingly depend on service augmentation elements. For example, educational service augmenters such as campus life, academic and social support, and financial supply services enhance the experiences of students and add extra value to the core service: education (Paswan & Ganesh, 2009). These service augmenters are important to campus life and may guide universities toward success in the education market (Pawan & Ganesh, 2009; Zhai, 2002).

The international student population is one which universities must focus. The perceptions and behaviors of these customers are of great importance. Research shows that when international students come to study in the U.S., they experience many significant problems adjusting to campus life (Yeh & Inose, 2003). Education institutions need "to provide special services to help the population adjust to the host culture and solve various problems" (Zhai, 2002, p. 2). Paswan and Ganesh (2009) also argue that institutional supplemental services are "especially crucial to most international students" (Paswan & Ganesh, 2009, p. 68). Furthermore, current marketing and higher education literature remain far apart in terms of different perspectives on service experience (Elsharnouby, 2016). Marketing service literature explains customer service generally; higher education literature, especially that in the international education field, tends to rely more on academic and learning aspects of education or specifically focuses on international students' overall experience (Elsharnouby, 2016; Ng & Forbes, 2009). The proposed study will attempt to bridge the gap between marketing service and higher education literature by investigating the relationship between international students' satisfaction with educational service augmentation and their adjustment to U.S. institutions.

### **1.1 Theoretical Formulations**

### **1.1.1 International Students in U.S. Higher Education Institutions**

The trend of international students' enrollment in U.S. higher education institutions has been a growth market (Bourke, 2000; Paswan & Ganesh, 2009). International students' enrollment in U.S. universities in 2015-2016 showed an increase of 16 times from 2004-2014 (IIE, 2016). Many institutions have seen both undergraduate and graduate international student enrollment numbers double. Meanwhile, the concept of internationalization of higher education has shifted from an institutional interest to a very core institutional value (Brandenburg & Dewit, 2015). The market for international students has seen an increase in competition between colleges and universities. Moreover, it is well known that international students contribute to U.S. higher education institutions in terms of enriched cultural awareness and experience, enhanced academic quality and diversity, and financial support (Paswan & Ganesh, 2009). U.S. institutions must realize the importance of this population, understand what determines international students' satisfaction, and learn how to help these students better adjust to U.S. institutions (Yeh & Inose, 2003).

In an increasingly globalized world, institutions have emphasized the value of campus internationalization and many American higher education institutions have made a commitment to increasing their international capacity and enhancing the quality of the international student experience on campus (Lee & Rice, 2007). Institutional efforts to increase international student enrollment bring new perspectives to classroom conversations and create a greater cultural learning environment (Glass, Buus & Braskamp, 2013; Lee & Rice, 2007). In turn, international students gain perspective on U.S. ideals, such as freedom of speech, both inside and outside the classroom (Glass, Buus & Braskamp, 2013). The exchange of academic, social, and cultural ideas seems mutually beneficial; however, the question remains as to whether those exchanges are

actually happening. Will American and international students integrate well with each other in the process? Furthermore, higher education institutions must ask themselves, what kind of environment do they present to these students? What role is the institution playing in the adjustment and integration of international students both academically and socially?

International students attending U.S. institutions encounter many problems in adjusting to the new cultural and social environment (Al-Shardeh & Goe, 1998). Unfamiliarity with American customs and values causes international students to feel stress in interacting with American peers effectively (Al-Shardeh & Goe, 1998). Many international students live in a separate world than that of domestic students (Glass, Buus & Braskamp, 2013). Some literature has shown that international students tend to experience more psychological issues than domestic students (Leong & Chou, 1996; Mori, 2000; Yakunina, Weigold, Weigold, Hercegovac, & Elsayed, 2013; Yeh & Inose, 2003). Many international students have reported “a variety of mental health and personal concerns including language barriers, academic difficulties, financial difficulties, interpersonal problems with American students...” (Yeh & Inose, 2003, p. 16). Furthermore, reports of racism and harassment against international students are increasing; discrimination and unfair treatment (Lee & Rice, 2007) and lack of meaningful interaction and friendships with faculty and American peers are all on the rise among international students in the U.S. (Lee, 2013; William & Johnson, 2010).

### **1.1.2 Traditional Predictors of International Student Adjustment**

#### ***Language fluency***

In particular, language difficulties appear to be one of the most challenging and problematic aspects of academic learning and social integration for the majority of international students (Mori, 2000; Sawir, Marginson, Forbes-Mewett, Nyland, & Ramia, 2012; Yeh & Inose,

2003). Difficulties in listening and oral communication, inadequate vocabulary, and lack of knowledge of western cultural references cause international students to lose self-confidence (Sawir et al, 2012; Yakunina et al, 2013). International students with language barriers not only struggle to achieve academic success, but also avoid social interaction with American peers (Yeh & Inose, 2003). Linguistic challenges create many barriers, which affect international students' academic, social, and even psychological adjustment (Yakunina et al, 2013; Yeh & Inose, 2003).

### *Friendship with American Peers*

In addition to language barriers, one of the major challenges that most U.S. higher education institutions encounter is how to integrate international students with domestic students. Multiple studies have highlighted that developing friendships with U.S. students may lead to international students achieving higher grades and retention rates, as well as higher satisfaction with their academic and social experiences on campus (William & Johnson, 2010; Westwood & Barker, 1990). Conversely, the lack of friendships with American students contributes to acculturative stress and feelings of anxiety and depression in international students (William & Johnson, 2010; Chen, 1999). International students desire more contact, friendships, and interaction with host nationals (Hay & Lin, 1994; Hendrickson, Rosen, & Aune, 2011) and become discouraged "when their expectations of having local friendship were not met" (Hendrickson, Rosen, & Aune, 2011, p. 283; Klineberg & Hull, 1979).

According to Cross's study (1995), students from "collectivistic cultural backgrounds may prioritize close relationships and may feel confused when interacting with American students who tend to emphasize aspects of individualism, such as independence, assertiveness, and self-reliance" (Cross, 1995; Yeh & Inose, 2003, p. 16). Many international students may feel discouraged regarding their interpersonal connections with U.S. peers. Although close host national

friendships may provide better adjustment, cross-cultural differences in social interaction may also prevent international students from close social ties with American society (Zhai, 2002). There is a strong sense in the international education field that whatever interactions may be happening naturally between international and domestic student are not enough (Redden, 2014).

### *Institutional attitudes towards the international population*

Research clearly indicates that the climate and attitudes of the host nation are important “as they provide a context, either favorable or not, in which acculturation processes play out and relations are developed” (William & Johnson, 2010, p. 42). For international students, the context of acculturation indicate not only American customs, but academic and college cultural settings. Learning in an inclusive campus environment that is accessible to international students is beneficial to a positive study abroad experience in the U.S. (Glass, Buus & Braskamp, 2013).

#### **1.1.3 Institutional support as a buffered effect**

Multiple studies have indicated that a lack of institutional social support may have a significant negative impact on international students’ psychological well-being (Sümer, Poyrazli, & Grahame, 2008; Yeh & Inose, 2003). Research in this area has shown that international students tend to feel difficulties in replacing the social network that they had in their home country (Sümer, Poyrazli, & Grahame, 2008). They may feel disappointed and dissatisfied with the new social network in the U.S. as well (Sümer, Poyrazli, & Grahame, 2008). The stressful life that international students often suffer may lead to increased hopelessness, and “individuals with poor support may be more sensitive to life stress and, therefore, experience higher levels of distress” (Rudd, 1990; Sümer, Poyrazli, & Grahame, 2008, p. 430). A high-quality social support system has a buffering effect to international students’ psychological stress (Mallinckrodt & Leong, 1992; Yeh & Inose, 2003); in particular, international students with greater social support had easier and

better adjustment processes and experienced lower levels of adjustment stress (Mallinckrodt & Leong, 1992; Sümer, Poyrazli, & Grahame, 2008). Mallinckrodt and Leong (1992) summarized that social support may reduce international students' adjustment stress. Support from one's academic program in particular is beneficial to international students' academic and social adjustment (Mallinckrodt & Leong, 1992; Yeh & Inose, 2003).

## **1.2 Purpose of the Study**

The purpose of the study is to investigate the relationship between international students' satisfaction with educational service augmenters and their academic, social, and personal-emotional adjustment to U.S. institutions. The research compares different influences on international students' adjustment, with a focus on students' satisfaction with educational service augmenters as well as the traditional predictors, including English fluency, friendships with American peers, and institutional attitude towards the international student population. According to services marketing literature and discussions about higher education institutional supplementary services (Mallinckrodt & Leong, 1992; Pawan & Ganesh, 2009; Pawan & Ganesh, 2005; Paswan, Spears, & Ganesh, 2007; Urban & Palmer, 2016; Yeh & Inose, 2003), this study focuses on five major educational service augmenters: academic support services, faculty engagement and support services, social interaction support services, campus life services, and campus climate.

Much prior research focused on the levels of international students' satisfaction and expectations when they transitioned into U.S. universities (Elliott & Shin, 2010; Hendrickson, Rosen, & Aune, 2010; Mark, Bodycott, & Ramburuth, 2015; Rienties, Beausaert, Grohnert, Niemantsverdriet, & Kommers, 2012); other studies addressed international students' acculturative stress and difficulties in adjustment (Al-Sharideh & Goe, 1998; Urban & Palmer, 2016; Zhai, 2002). Prior to the study, little research has been found that raised questions regarding

the improvement of international student satisfaction as a result of the addition of educational service augmenters; a. that the adjustment process for international students is related to language proficiency; b. that friendship and social support from within the host nation is important; and c. that the extent to which institutional attitudes engage the international student population has an impact.

The results of this study not only have direct implications in the international higher education market, but also contribute to the knowledge of international students' challenging experiences during their studies in the U.S. Higher educational institutions must pay more attention to service augmenters, as they are especially crucial for international students. This study contributes theoretically by filling the research gap on customer service experience in the higher education domain.

### **1.3 Research Questions**

Q1. To what extent does international students' satisfaction with educational service augmenters affect their adjustment (academic, social, and personal-emotional adjustment) to U.S. institutions?

Q2. To what extent do the traditional predictors (English fluency, friendships with American peers, and institutional attitude towards international population) affect international students' academic, social, and personal-emotional adjustment to U.S. institutions?

Q3. To what extent is there a difference in predicting international students' adjustment to U.S. institutions, between students' satisfaction with educational service augmenters and the traditional predictors?

Q4. What are the relationships among these variables for subgroups of international students at different levels of study?

Q4.1 What are the relationships among these variables for international undergraduate students?

Q4.2 What are the relationships among these variables for international graduate students?

#### **1.4 Overview of Methodology**

This study employed a quantitative research methodology with correlational design and survey method. The researcher targeted all international students who currently study in the U.S. as participants. The research questions were measured by using a newly developed survey, the International Student Satisfaction and Adjustment Survey. The survey consists of 37 items; issues regarding student satisfaction with educational service augmenters. This assessment is divided into five sections. These include: academic support services, faculty engagement and support services, social interaction support services, campus life services, and campus climate. Traditional predictors include: language fluency, friendships with American peers, and institutional attitude towards the international student population. Student adjustment was examined within three sections: academic adjustment, social adjustment, and personal-emotional adjustment. Before implementing the measurement in this study, a pilot instrument was conducted in one of the universities selected for the sample in order to ensure consistency and clarity. After data collection, reliability tests were run on all scales in order to check the internal reliability of the instrument. Hierarchical multiple regression analyses were used to analyze the survey data.

## **CHAPTER 2**

The study investigates the role of international students' satisfaction with educational service augmenters in adjusting to U.S. universities and indicates the influence of traditional predictors on international student adjustment. The following section presents the study constructs and the development of these fields of research.

## **2.1 Service Augmentation in Higher Education**

Service industries play an increasingly important role in the economy of many fields (Abdullah, 2006). Education has been classified as a marketable service (Russell, 2005). Universities have realized that higher education institutions are business entities (Hartman & Schmidt, 1995). Many researchers view students as consumers of educational services rather than products in the higher education market (Hartman & Schmidt, 1995; Goralski & Tootoonchi, 2015; Paswan & Ganesh, 2009), an interpretation which requires a complete understanding of the consumers. Educational products or outcomes need to be targeted effectively to the designated market, and educational institutions need to develop a significant image to create or maintain a competitive advantage in an increasingly competitive international market (Parameswaran & Glowacka, 1995; Russell, 2005).

Unlike products, services tend to “be high on experience quality dimensions” (Paswan, Spears, & Ganesh, 2007, p. 76). Education service is one of the most intangible exchange settings (Boulding, Kalra, Staelin & Zeithaml, 1993). Based on these discussions in the fields of services marketing and higher education, many researchers have argued that consumers usually have difficulty in assessing the core service quality before purchase and consumption (Paswan, Spears & Ganesh, 2007; Elsharnouby, 2015). In fact, even after consumers purchase and consume the services, it is difficult for them to assess the quality of core services (Elsharnouby, 2015; Paswan, Ganesh, 2009; Paswan, Spears & Ganesh, 2007). Therefore, consumers prefer to rely on service augmentation elements to determine whether they are satisfied with the delivered services. All this suggests that service augmenters make the core services more visible and the experience plays a crucial role in helping consumers evaluate the quality of service (Paswan, Spears & Ganesh, 2007; Elsharnouby, 2015).

In the service context, “to protect the core products, marketers are advised to augment them with services or other differentiators that create a moat of protection from competitors” (Dhar, Menon & Maach, 2004). Service augmenters have a strong impact on the pre-purchase and post-consumption evaluation of core service quality (Paswan, Spears & Ganesh, 2007). In the higher education context, the notion of augmented products or services may simply add extra value to the core services and enhance the international students’ learning experiences (Paswan, Ganesh, 2009).

## **2.2 International Students’ Satisfaction with Educational Service Augmenters**

In the context of higher education, student satisfaction is defined as “a short-term attitude resulting from an evaluation of a student's educational experience” (Elliot & Healy, 2001, p. 2). According to the literature, studies in student satisfaction have mainly focused on service quality attributes (Elsharnouby, 2015; Parahoo, Harvey & Tamin, 2013). As Parahoo, Harvey, and Tamin (2013) stated, the concept of student experience related “not only to interactions with faculty, courses, and overall learning experiences, but also to other aspects that fall within the domain of student life such as administrative service, staff, physical characteristics of academic facilities, social environment, and advising support” (Parahoo, Harvey & Tamin, 2013, p 137-138). Higher-quality service attributes may result in a better student experience, which in turn would generate increased satisfaction (Elsharnouby, 2015). Based on these discussions, services in the higher education setting are classified as core level service and augmented level services (Elsharnouby, 2015). The core level service is education itself, such as teaching quality, faculty expertise and knowledge, and administrative staff reliability (Cleme, Ozanne & Tram, 2001). Augmented level services include physical environment quality, learning environment, social factors, and campus climate (Cleme, Ozanne & Tram, 2001; Elsharnouby, 2015).

Existing studies have noted that consumers with different cultures and nationalities have varied expectations and perceptions of the delivered services (Franke, Hofstede, & Bond, 1991; Paswan & Ganesh, 2005). Bitner, Brown, and Meuter (2000) indicated in their study that “an effective way to satisfy customers during service encounters is to provide them with pleasing experiences they do not expect” (Bitner, Brown, & Meuter, 2000, p. 146). Some studies argue that students may be not able to determine what they actually need in their education, especially for the international student population; therefore, institutions do not necessarily augment supplementary services. However, if institutions develop and augment these supplementary services to suit the needs of international students, they will not just satisfy their needs; they may even delight them (Paswan & Ganesh, 2009).

### **2.2.1 Academic support services**

For most international students, entering a U.S. college or university can be an overwhelming life transition. The research has noted that the stress that international students experience tends to center on academic situations (Zhai, 2002). International students found that academic demands were heavy and their academic experiences were extremely stressful (Rienties, Beausaert & Grohner, 2012; Zhai, 2002). Based on the intellectual and professional roles that international students play in U.S. higher education, researchers have argued that it is necessary to develop an increased understanding of international students’ academic experiences (Curtin, Stewart & Ostrove, 2013). Due to international students’ unique college experiences, they may have specific academic support needs (Curtin *et al.*, 2013). For example, according to Zhai’s study (2002), international students recommended that colleges and universities provide orientation programs for international students addressing academic and cultural differences, which were identified as two of the most important adjustment issues. Zhai further indicated that “a well-

organized orientation can also help international students become aware of aspects of university life and then make better adjustments” (Zhai, 2002, p. 14). Other studies emphasized the importance of counseling services and faculty support on international student satisfaction and adjustment (Curtin *et al*, 2013; Trice & Yoo, 2007). Trice and Yoo (2007) revealed in their study that the more satisfied international students were with the support they received from academic departments and the institutions, the higher they valued their higher education experience. In summary, academic support plays a key role in the experiences of international students as they navigate their way through university life.

### **2.2.2 Faculty engagement and support services**

Faculty support is one of the major academic support services. It is well-known that faculty influence student outcomes both positively and negatively, and shape future generations through teaching and mentoring (Lamport, 1993). Interaction with faculty, whether in the classroom or during office hours, is one of the key experiences associated with college student development (Kim & Sax, 2009). Positive and close interactions between students and faculty members predicates students’ favorable educational experiences and their future academic and personal development (Glass, Gesing, Hales, & Cong, 2017; Kim & Sax, 2009; Pascarella & Terenzini, 2005). According to the literature, statistically significant positive relations exist between student-faculty interactions and student satisfaction with college, academic achievement, future career plans, etc. (Pascarella & Terenzini, 2005). Particularly, the amount and quality of this relationship positively affects students college outcomes and future development (Kim & Sax, 2009; Pascarella & Terenzini, 2005). Research indicates that “more contact between students and faculty, both inside and outside the classroom, enhances college students’ development and learning outcomes” (Kim & Sax, 2009, p. 438).

Multiple studies emphasized the importance of advisor support in students' college experiences, especially in the case of graduate students. Good advisors are accessible and guide students through the program in a timely manner (Curtin, Stewart & Ostrove, 2013; Glass, Gesing, Hales, & Cong, 2017; Lovitts, 2001). Research consistently reveals that the student-advisor relationship positively affects student college outcomes (Curtin, Stewart & Ostrove, 2013). According to the literature, students who received better support from their advisor tended to report greater satisfaction with their sense of connection and networking within their department (Curtin et al., 2013; Glass et al., 2017). Academic advisors play a crucial role in helping students feel a sense of belongingness and connect with the academic department (Lovitts, 2001). Many students referred to their advisors as "both encouraging their interest in pursuing an academic career as well as providing valuable feedback that helped students' development as academics" (Curtin et al., 2013, p. 112).

Research indicates that when international students adjust to life in the U.S., the most significant challenge is making the adjustment to the U.S. academic climate (Curtin *et al.*, 2013). Some of these challenges were related to English language barriers, but most were related to different and unfamiliar academic structures (Curtin et al., 2013; Zhai, 2004). International students view their advisors and professors as potential sources of information and support to help them graduate from the program (Curtin et al., 2013).

"The strongest predictor of satisfaction was the helpful attitude of the professors" (Lampert, 1993, p. 4). Faculty support is considered key to international students' academic success and well-being in the institutions (Ku, Lahman, Yeh & Cheng, 2008). According to Zhai's study (2004), faculty and academic advisor support was one of the top three sources of support that international students valued most. Many studies encourage faculty to interact with international

students more, which not only enriches both parties' international experiences, but which also provides faculty with a better understanding of the difficulty international students experience when living in the U.S. (Curtin et al., 2013; Ku, Lahman, Yeh & Cheng, 2008).

### **2.2.3 Social interaction support services**

Social support has been defined as the “perception or experience that one is cared for, esteemed, and part of a mutually supportive social network” (Taylor, 2011, p. 189). Research consistently revealed social support as an important tool for helping students to handle stress (Faleel, Tam, Lee, Har & Foo, 2012; Tomkins, Brecht & Tucker, 2016). Social support is a stress buffer that has a significantly positive association with lower levels of psychological distress (Mossakowski & Zhang, 2014). Multiple studies have confirmed that students who perceived more support reported lower stress levels (Clark, Murdock, & Koetting, 2009; Faleel, Tam, Lee, Har & Foo, 2012; Tomkins, Brecht & Tucker, 2016).

While studying abroad can be beneficial to students, the experience of significant levels of challenge and stress during international students' education in the U.S. can have a negative impact in many areas of their university lives (Mossakowski & Zhang, 2014; Tomkins, Brecht & Tucker, 2016). International students experience more uncomfortable adjustments to college life than American students, due to the difficulties in adjusting to a new academic cultural environment (Faleel, Tam, Lee, Har & Foo, 2012). “Cultural perspectives suggest that many historically underrepresented students encounter challenges when they get to college that make it difficult for them to take advantage of their school's resources for learning and personal development” (Kuh, Kinzie, Buckley, Bridges & Hayek, 2006, p. 14). Research indicates that “feeling supported in a difficult situation, such as adjusting to a new culture, can encourage people to overcome the overwhelming nature of the change and face the stress positively” (Rundles, 2012, p. 23). The

effectiveness of social support appears to be essential in such stressful situations as studying abroad (Mossakowski & Zhang, 2014; Rundles, 2012). Support may come from various avenues, such as school, academic program, peer groups, mentors, and social groups (Rundles, 2012). The number and quality of supportive relationships positively impact an individual's level of adjustment stress, and social support and social connections are crucial to ensuring that international students succeed academically and socially (Urban & Palmer, 2016; Yeh & Inose, 2003).

#### **2.2.4 Campus life**

Campus life augmenters offer elements such as the effectiveness of administrative office services, adequacy of instructional support resources, the feeling of comfort and safety, the delivery of financial aid and scholarship information, and the quality of maintenance services (Paswan et al, 2007; Paswan & Ganesh, 2009). These basic services associated with the delivery of the core product can also truly enhance its delivery in an effective and efficient manner (Eiglier & Langeard, 1977; Paswan & Ganesh, 2009). For example, finances are critical to the quality of an academic program for most international students, since large numbers of international students come to the U.S. with assistantships, scholarships, and other funding. Visa and immigration services are even more important in order to ensure that all international students study and work legally. Maintenance services may not be directly involved in academic and social life; however, they are needed for “maintaining the exchange relationship in the context of international student-university interaction” (Paswan & Ganesh, 2009).

#### **2.2.5 Campus climate**

The existing literature suggests that learning in an inclusive campus environment that is accessible to both domestic and international students is beneficial to fostering positive college

experiences and future development (Glass, Buss & Braskamp, 2013). A welcoming and inclusive community environment is one of the key factors that increases international students' sense of belongingness and reduces acculturative stress (Sumer et al., 2008). Belongingness is one of the most frequently cited factors for college students' academic success (Hausmann, Schofield, & Woods, 2007). Students' academic and social interactions contribute to the sense of belonging in their college lives (Glass & Westmont, 2014). For most international students, a strong sense of belonging and identification with the campus community provides a more secure base for them to explore the college experience and cultural community (Glass & Westmont, 2014; Kashima & Loh, 2006). The degree to which students felt that they belonged in school positively affected their academic experience and satisfaction (Curtain et al., 2013).

Brand loyalty is another construct to which an inclusive campus climate contributes. Research has argued that international students who are more satisfied with their educational services and experiences are more likely to become advocates for the institution (Paswan & Ganesh, 2009). It is important for international students to live and study on a campus with a positive climate, which not only provides them with pleasing college experiences, but which is also positively associated with international student satisfaction and adjustment (Paswan & Ganesh, 2009; Paswan, Spears, & Ganesh, 2007). In summary, in the new context of international higher education, educational institutions cannot only focus on students' academic needs, but they must also understand the relationship among education service augmenters that affects international students' satisfaction and adjustment (Sherry, Thomas, & Chui, 2010; Yeh & Inose, 2003).

## **2.3 Traditional Predictors of International Student Adjustment**

### **2.3.1 Language fluency**

Of all the academic and social challenges that international students face, learning difficulties, differences in learning style, social difficulties, academics, and conversational English are among their top challenges (Sawir, 2005). International students often feel lonely in their new environment. The feeling of loneliness not only derives from cultural shock and the initial lack of friendships and social networks, but also from the unfamiliar cultural and linguistic environment (Sherry, Thomas, & Chui, 2010). It is well known that international students often lack confidence with English and have an incomplete understanding of course content. Lack of fluency in English is the major unsolved problem facing the international population during their studies in the U.S. (Robertson, Line, Jone, & Thomas, 2000).

The existing literature has shown that lives of international students outside their home countries and cultures are communication-based experiences (Antwi & Ziyati, 1993). Language remains a most popular index of cross-cultural adaptation and a stronger predictor of adjustment than other aspects of acculturation (Gomez, Urzua & Glass, 2014; Kang, 2006). Gallagher (2012) emphasized the particularly important role of second language proficiency in the acculturation process, in that “the ability of communicating in a second language effectively is essential to “successful interfacing with the host culture” (Gallagher, 2012, p. 54). Through a review of the literature of the international student adjustment process in the U.S., the researcher found that there was a positive relationship between second language proficiency and sociocultural adaptation; and that English fluency was a significant variable affecting students’ acculturative stress, academic adjustment, and personal-emotional adjustment (Dao, Lee, & Chang, 2007; De Araujo, 2011; Gallagher, 2012; Gomez *et al.*, 2014). Findings in this topic are very consistent with those from

other studies, most of which show that English language competency is an ongoing concern for all international students. Higher levels of language proficiency result in less adjustment stress and higher overall satisfaction, and “mastery of the English language appears to be an important component” (De Araujo, 2011, p. 4) and is a predictor of the acculturation process (Dao *et al.*, 2007; Gallagher, 2012; Poyrazli & Grahame, 2007).

### **2.3.2 Friendships with American peers**

Numerous studies have shown that the establishment of strong ties with American peers was the most important factor influencing the personal adjustment of international students (Al-Sharideh & Goe, 1998; Gomez, Urzua & Glass, 2014). A strong social network; for example, friendships with host students, provides a sense of base and motivation for international students to explore an unfamiliar cultural environment (Glass, et al, 2013). Research indicated that “even ‘weak ties’ with American students contributed to an international student's sense of social connectedness and well-being” (Gomez et al, 2014, p. 11). Gomez, Urzua, and Glass’ (2014) study found that “intercultural friendship formation was affected by cultural differences and language difficulties, these ‘weak ties’ often functioned as a source of practical information and may have provided a mechanism for initiating cross-cultural relationships” (Gomez et al, 2014, p. 11). Therefore, the addition of Americans to international students’ personal social network is likely to facilitate their overall adjustment (Al-Sharideh & Goe, 1998; De Araujo, 2011; Yeh & Inose, 2003).

Upon arrival in a new country, individual reaction to the host country and culture may vary. Some students may become very involved in the host country's culture, while others may feel negative and unwelcomed (Poyrazli & Grahame, 2007). Literature also indicated that international students’ interaction with U.S. students varied by countries of origin. Establishing

social connections with American students occurred naturally for some students more than others (Trice, 2004). International students from Western Europe who communicate well in English typically have more positive social contacts with Americans (De Araujo, 2011; Poyrazli & Grahame, 2007). Those international students who share few cultural similarities with Americans have more difficulty establishing friendships with them. “Asian, African, and South American students encountered more difficulties in adjusting to campus life and establishing relationships with host nationals than did students from Europe (Trice, 2004, p. 673).

Years of studies have proven that frequency of interaction with American peers is strongly related to international students’ overall college adjustment to the American higher education experience (Al-Sharideh & Goe, 1998; De Araujo, 2011; Trice, 2004; Yeh & Inose, 2003; De Araujo, 2011; Gomez et al, 2014). International students who spent more of their leisure time with Americans were better adapted than those students who preferred to stay with co-nationals (Trice, 2004).

### **2.3.3 Institutional attitude towards the international population**

Research conducted on college students’ experiences and sense of belonging suggested that there is a strong positive relationship between students’ academic and social integration into the institution and their overall satisfaction with the institution (De Araujo, 2011; Stebleton, Soria, & Huesman, 2009). Having a positive and supportive campus climate is one of the most significant predictors in international students’ college experiences (Stebleton, Soria, & Huesman, 2009). More recent studies have demonstrated the strong effects of institutional social support on facilitating adaptation and have illustrated how social networks are important to the adjustment process for international students (Gomez et al, 2014; Smith & Khawaja, 2011). Studies in the field of international student adjustment have demonstrated the practical implications of creating

a welcoming and friendly campus environment, which may include orientations that provide practical information about the university and local community; informational workshops that help international students prepare for class and invite them to join various co-curricular activities with domestic students; and programs that are “designed to facilitate international students’ acculturation, understandably often focusing on the experiences of participating in a new culture (Dao, Lee & Chang, 2007; Gomez et al, 2014, p. 21; Yeh & Inose, 2003).

Colleges and universities spend time and money on investing in the international education market and recruiting international students. American higher education greatly benefits not only culturally but also financially from the presence of the international population (Urban & Palmer, 2016). Studies have suggested that the efforts of creating and developing a diverse campus should be matched by “more earnest and concentrated efforts to strengthen institutional capacities to better serve the large international student population” (Glass et al., 2013, p. 9). A richer and more diverse environment, along with other types of intercultural activities and providing international students with the services they need can foster more meaningful interaction between these students and faculty, and help them build the knowledge, skills, and attitudes they need to advance academically and prepare successfully for their future careers.

#### **2.4 International Students’ Adjustment to U.S. Higher Educational Institutions**

While many educators can agree on the problems international students encounter during their studies in U.S. colleges and universities, they hold different opinions regarding the origins of these problems (Church, 1982; Sam, 2001). Some research notes that the problems international students face are similar to those of domestic students (Sam, 2001; Urban & Palmer, 2016; Yeh & Inose, 2003), and that “international students are actually more of ‘students’ than ‘foreigners’ in their mode of adjustment” (Sam, 2001, p. 317); others consider that these issues and problems are

unique to international students. It is a fact that international students in U.S. colleges and universities face multiple challenges and experience a variety of adjustment concerns (Abe, Talbot, & Geelhoed, 1998; Gomez, Urzua, & Glass, 2014). Included among these challenges are academic issues such as adjusting to a second (or third, etc.) languages and new educational systems; social issues such as understanding and adjusting to new social networks; and personal-emotional issues such as gaining a sense of belongingness to a new institution (Abe, Talbot, & Geelhoed, 1998; Terrazas- Carrillo, 2014). International students reported significantly lower social adjustment and institutional attachment than American students, and non-Western international students had significantly lower academic and social adjustment as compared with their peers from Western European countries (Abe, Talbot, & Geelhoed, 1998; Kaczmarek, Matlock, Merta, Ames, & Ross, 1994; Gomez, Urzua, & Glass, 2014). Especially when encountering certain problems, most international students preferred to keep their problems to themselves or ask friends for advice because they did not think the college service staff were knowledgeable about their concerns (Zhai, 2002).

The existing literature consistently suggests that there is a significant relationship between international students' social interaction and adjustment. Additionally, more leisure time with American peers was significantly correlated with international students' adaptation (Abe, Talbot, & Geelhoed, 1998; Gomez, Urzua, & Glass, 2014; Kaczmarek, Matlock, Merta, Ames, & Ross, 1994). Other studies have highlighted that Asian students in particular may face more difficulties adjusting to campus life than international students from other geographical regions (Abe, Talbot, & Geelhoed, 1998; Andrade, 2006). "Adjustment is a dynamic and interactive process that takes place between the person and the environment, and is directed towards an achievement of the fit between the two (Janjua, Malik, & Rahman, 2011, p. 1360; Anderson, 1994). In the process of

adjusting to a new environment and learning a new language, in order to maximize students' learning, it is not only important for researchers to pay attention to the effect of the environment on international students' adjustment, but also for universities and faculty to become more informed and sensitive to international students' adjustment issues (Gomez, Urzua, & Glass, 2014; Janjua, Malik, & Rahman, 2011; Kaczmarek, Matlock, Merta, Ames, & Ross, 1994).

#### **2.4.1 Academic adjustment**

Academic adjustment refers to the degree of a student's success in coping with various educational demands such as motivation, application, performance and satisfaction with the academic environment (Baker and Siryk, 1999). It is a process involving psychological and behavioral change as individuals try hard to regulate themselves to achieve balance in their new academic environment and to meet the new learning requirements of a university (Quan, Zhen, & Yao, 2014, p. 970; Feng & Li, 2002). Academic adjustment difficulties may cause a series of problems, for example, poor social functioning, anxiety, and low self-esteem, which may significantly negatively affect students' academic performance and their college experience (Quan, Zhen, & Yao, 2014; Rienties, Beusaert, & Grohnert, 2011).

Language proficiency is considered to be one of the greatest academic issues impacting international students' academic adjustment (Andrade, 2006; Feng & Li, 2002; Janjua, Malik, & Rahman, 2011). Difficulty in understanding lectures and lack of confidence in a second language often inhibits international students from engaging in classroom discussion (Janjua, Malik, & Rahman, 2011; Zhai, 2002). Similarly, some professors perceive that international students' main difficulty is English language proficiency, "which sometimes required professors' assistance and negatively affected course performance" (Andrade, 2006, p. 137). Unfamiliarity with U.S. teaching styles and the educational system is another challenge hindering smooth academic

adjustment for international students (Andrade, 2006; Janjua, Malik, & Rahman, 2011). In addition, faculty generally did not understand or recognize the emotional and psychological problems international students experience, which are potentially detrimental to learning; rather, professors tended to feel students did not take responsibility for their own learning (Andrade, 2006; Quan, Zhen, & Yao, 2014). On the other hand, international students reported that some professors are difficult to communicate with and offer less learning support (Curtin *et al*, 2013).

In summary, language- and communication- related problems were considered to be two of the toughest challenges for international students during their adjustment period (Zhai, 2004). If institutional, departmental, and individual faculty draw attention to and provide enough support services for international students' academic adjustment, international students will not only contribute an international perspective and enhance each department's academic reputation, but will also contribute ideas based on work experience and prepare domestic students for future encounters with diversity (Andrade, 2006; Feng & Li, 2002; Janjua, Malik, & Rahman, 2011; Zhai, 2004).

#### **2.4.2 Social adjustment**

Social adjustment refers to how well students deal with interpersonal-societal demands, such as making friends, taking part in social activities, or being able to work in groups (Baker & Siryk, 1999). It is obvious that international students experience greater difficulty in social adjustment than domestic students; they tend to feel more loneliness and homesickness (Rajapaksa & Dundes, 2002; Rienties *et al*, 2012; Zhai, 2002). It is not surprising that many researchers have found a correlation between the number of good friends an international student has and general better social adjustment to living in the U.S. (Andrade, 2006; Rajapaksa & Dundes, 2002). Interpersonal relationships with host nationals is the key to promoting satisfaction while

living abroad (Andrade, 2006; Rajapaksa & Dundes, 2002; Rienties *et al*, 2012; Zhai, 2002). However, although many international students are willing to develop deep and meaningful friendships with their American peers, American students tend to show a lack of interest in making international friends (Rajapaksa & Dundes, 2002; William & Johnson, 2010; Zhai, 2002). Studies show that students who entered college with high levels of xenophobia became much less xenophobic when they had social contact with foreign-born students (Redden, 2014). Ironically, U.S. students rate their campus climate as supportive of cultural diversity and internationalization while they admit rare interactions with people from different cultural background (Glass et al, 2013; Glass & Westmont-Campbell, 2013). Whatever interactions may be happening naturally between international students and domestic students are not enough, argue international education researchers (Rajapaksa & Dundes, 2002; Redden, 2014; William & Johnson, 2010; Zhai, 2002). As Lee (2010) suggested, “higher education institutions can internationalize by educating their own domestic students...” (p. 5); college and universities need to do a much better job of bringing domestic and international students together in an intentional way.

Compared with American students, international students not only experience less social support, but also less engagement in educational and social activities (Zhao, Kuh, & Carini, 2005). Studies suggest that international students who rate having more interactions with faculty, domestic students, or other international students in general gain greater personal and social development (Andrade, 2006; Zhao, Kuh, & Carini, 2005). In addition, international students who were less engaged in active learning and diversity-related activities were less satisfied with their college experiences and the overall campus environment (Andrade, 2006; Rajapaksa & Dundes, 2002; Zhao, Kuh, & Carini, 2005).

### **2.4.3 Personal-emotional adjustment**

Personal-emotional adjustment indicates the level of psychological and physical distress while adapting to the local academic way of life (Baker & Siryk, 1999). In addition to the academic and cultural challenges, international students also experience homesickness, isolation, difficulty reaching out to American peers, and racial, ethnic, and religious discrimination (Yakunina, Weigold, Weigold, Hercegovac, & Elsayed, 2011). In particular, many international students who come from collectivistic, non-Western societies may experience more conflicts around cultural norms and struggle to adjust to U.S. campuses (Yakunina, Weigold, Weigold, Hercegovac, & Elsayed, 2012). One of the crucial aspects of the psychological health of an individual is self-esteem (Al-Sharideh & Goe, 1998). Negative or low self-esteem has been related to feelings of anxiety, depression, and behavioral problems, including failure in school (Al-Sharideh & Goe, 1998; Yakunina, Weigold, Weigold, Hercegovac, & Elsayed, 2012). Loss of social status in required interactions with new people has the potential of disturbing the stability of an individual's self-esteem (Al-Sharideh & Goe, 1998). Researcher concluded that international students who "have adjusted to life in the American university would be those who have been able to maintain or achieve high self-esteem within this context" (Al-Sharideh & Goe, 1998, p. 702), which aligns with Baker and Siryk's concept of personal-emotional adjustment to college (1984). The social environment provided by an American university is highly related to the psychological health of international students (Al-Sharideh & Goe, 1998). Previous research has indicated that the adjustment to American colleges by international students is related to their integration into the social life of the institution (Mamiseishvili, 2012; Yakunina, Weigold, Weigold, Hercegovac, & Elsayed, 2011; Yakunina, Weigold, Weigold, Hercegovac, & Elsayed, 2012). International students are also encouraged to develop a sense of resilience and maintain an

optimistic attitude to face the cultural and interpersonal challenges (Yakunina, Weigold, Weigold, Hercegovac, & Elsayed, 2012).

Although many international students are able to adjust well in American universities, a significant number of them also experience serious adjustment difficulties during their study abroad (Yakunina, Weigold, Weigold, Hercegovac, & Elsayed, 2011). International student adjustment may be affected by many factors; establishing social relationships with others is one of the important strategies used in the adjustment process (Gomez, Urzua, & Glass, 2014; Janjua, Malik, & Rahman, 2011). The effects of support services on international student adjustment not only encourage students to maintain an attitude of multicultural openness and experience fewer cultural conflicts and academic difficulties, but also, from the institutional perspective, building and maintaining a high-quality relationship with the current international population helps institutions to develop more effective recruitment policies and marketing strategies (Chen, 2015; Yakunina, Weigold, Weigold, Hercegovac, & Elsayed, 2011).

### **Summary**

This chapter began with a review of literature on international students' satisfaction and adjustment to U.S. colleges and universities. Special attention was given to existing studies regarding students' satisfaction of educational service augmenters and other factors that affect international students' adjustment process to life studying in the U.S. This study conducted a holistic examination of satisfaction and adjustment that will incorporate each of the above mentioned dimensions. The findings of the research are largely inconclusive. Thus, additional research is needed to add to this body of knowledge and to provide insight to institutional leaders about service marketing in higher education systems. The methodology for the study is presented in Chapter 3.

### CHAPTER 3

The proposed research methodology is outlined in this chapter. This chapter provides an overview of the research design, research questions and hypotheses, targeted participants, description of instrumentation, and proposed statistical procedures. It is also focused on the proposed steps for the validation of a new instrument called the International Students' Satisfaction and Adjustment Survey.

This study aims to investigate the relationship between international students' satisfaction with educational service augmenters and students' academic, social, and personal-emotional adjustment to U.S. institutions. Furthermore, the proposed research compared the different influences on international students' adjustment between satisfaction with educational service augmenters and the traditional predictors, including English fluency, friendships with American peers, and institutional attitude towards the international population. No established framework or classification scheme exists for higher education augmentation services (Elsharnouby, 2016; Paswan, Spears & Ganesh, 2005). A few studies have identified some elements of augmentation services relevant to the field of higher education, e.g. Cater & Yeo, (2015), Elsharnouby (2016), Paswan & Ganesh (2007), Paswan, Spears & Ganesh (2005). Based on these studies, service augmenters in the context of higher education have been classified as academic support services, faculty engagement and support services, social interaction support services, campus life services, and campus climate. The study serves the unique purpose of understanding international students' satisfaction and experiences in the context of service marketing. The implications from this study can be used to better serve the needs of international students. For higher educational institutions, an implication is to have awareness of service augmenters' needs and challenges, as well as to

identify appropriate strategies through which to assist international students in adjusting to an unfamiliar cultural environment.

### **3.1 Conceptual Framework and Hypotheses**

Based on the previous literature and the findings of previous research, it is hypothesized that:

#### **Research Question 1**

To what extent does international students' satisfaction with educational service augmenters affect their adjustment (academic, social, and personal-emotional adjustment) to U.S. institutions?

#### **Hypothesis 1**

There is no statistically significant relationship between international students' satisfaction with educational service augmenters and their adjustment to U.S. institutions.

#### **Research Question 2**

To what extent do the traditional predictors (English fluency, friendships with American peers, and institutional attitudes towards the international population) affect international students' academic, social, and personal-emotional adjustment to U.S. higher institutions?

#### **Hypothesis 2**

There is no statistically significant relationship between international students' perceptions of traditional predictors and their adjustment to U.S. institutions.

#### **Research Question 3**

To what extent is there a difference in predicting international students' adjustment to U.S. institutions, between students' satisfaction with educational service augmenters and the traditional predictors?

**Hypothesis 3**

There is no statistically significant difference in predicting international students' adjustment between satisfaction with educational service augmenters and the traditional predictors.

**Research Question 4**

What are the relationships among these variables for subgroups of international students in different levels of study?

Q4.1 What are the relationships among these variables for international undergraduate students?

Q4.2 What are the relationships among these variables for international graduate students?

**3.2 Design**

This quantitative study used a correlational design with survey method to answer each of the research questions. A correlational design is the most appropriate method to determine the relationships among variables in this study. This design assists in data collection and provides numeric description of trends, perspectives or opinions of the population under study (Creswell, 2014). This approach is consistent with previous international student satisfaction and adjustment research. The instrument in this study was assessed for validity and reliability with international students, and it was administered online to capture a representative sample.

The dependent variables were international student academic, social, and personal-emotional adjustment. The independent variables, satisfaction with educational service augmenters include academic support service augmenters, faculty engagement, social service augmenters, campus life augmenters, and campus climate; the independent variables, traditional predictors, include English fluency, friendships with American peers, and institutional attitudes towards the international population.

### **3.3 Targeted Participants**

The context of this study is a higher education service marketed to all international students, both undergraduate and graduate, who are currently enrolled in U.S higher education institutions. The study aims to collect participant data that varies by geographical location, length of study in the U.S., gender, type of institution, and level of perceived English proficiency.

According to IIE data, there are a total of 974,926 international students currently studying in the U.S. Specifically, 33.8% of the population are undergraduate students who plan to receive a Bachelor's degree; 33.5% are graduate students who plan to receive either a Master's or Doctoral degree. Additionally, it should be noted that the top three places of origin in the U.S. are China (31%), India (14%), and South Korea (7%) (IIE, 2016).

### **3.4 Data Collection**

A questionnaire, the International Students' Satisfaction and Adjustment Survey (see Appendix A), was developed following an extensive review of the literature and used in this study. The respondents were guided through the survey questions, which also addresses demographic information.

In order to reach out to the target respondents in different geographical areas in the U.S., an online mode of data collection has been applied in this study. The researcher has reached out to NAFSA professionals by sending out invitation letters and the survey link. The survey link has also been posted on social media pages affiliated with international student affairs to gather more participants from various geographical locations.

These actions contributed to the diversity of the sample and external generalizability of the findings, as the sample came from multiple higher education institutions in several geographical

areas across the country and from different cultural groups. In total, there are 251 international students from different geographical locations who participated in this study.

### **3.5 Measurement**

In order to test the hypotheses, a newly-developed, Likert Scale questionnaire, International Students' Satisfaction and Adjustment (see Appendix A), has been employed in this study as the main instrument of data collection. It extends previous research by surveying international students' college satisfaction and adjustment. The measure also assessed perceptions of traditional predictors and their impact on international students' adjustment to school. The measurement scales are designed to measure international students' satisfaction with educational service augmenters that are provided by their university and their adjustment to school by using a five-point scale (1 for Strongly Disagree to 5 for Strongly Agree). A reliability test was conducted later after the procedure of data collection, in order to verify the reliability of the questionnaire.

#### **Instrument**

The International Student Satisfaction and Adjustment Survey consists of 37 items divided into five sections: satisfaction with educational service augmenters items, traditional predictors items, adjustment items, and demographic items. Each section is discussed further below.

#### ***Demographic items***

The survey consists of five demographic items examining basic demographic qualities related to the respondent's gender and nationality. In addition, the demographic questions also gather specific information on the participant's length of stay in the U.S., level of study, and institution.

#### ***Satisfaction with educational service augmenters***

International student satisfaction with educational service augmenters consists of 23 total items. This assessment is divided into five sections. These include: academic support services, faculty engagement and support services, social interaction support services, campus life services, and campus climate. All questions require participants to respond on a five point Likert Scale from 1- Strongly Disagree to 5- Strongly Agree. A Likert Scale was used as it has been shown to create adequate variance necessary for examining relationships among items and to establishing internal consistency using coefficient alpha reliability estimates (Lissitz & Green, 1975).

### ***Traditional predictors***

The existing literature has shown that international student adjustment to American colleges and universities is highly impacted by students' English fluency and peer support in an unfamiliar social environment (Andrade, 2006; Feng & Li, 2002; Janjua, Malik, & Rahman, 2011; Zhai, 2002). Many studies also emphasized the importance of international students' friendships with American peers and the institutional supports for easing their acculturation process (Andrade, 2006; Rajapaksa & Dundes, 2002; Rienties et al., 2012; Zhai, 2002). The traditional predictors section is divided into three parts with nine items on a five-point Likert Scale: English fluency, friendships with American peers, and institutional attitudes toward the international population.

### ***International student adjustment***

The existing literature and surveys have suggested that international students' adjustment may be categorized into three subscales: academic adjustment, social adjustment, and personal-emotional adjustment (Baker & Siryk, 1999; Rienties, et al., 2011). In keeping with the literature, this survey includes 14 items on a five-point Likert Scale.

**Table 1 Measures: Questionnaires, Item numbers, and Item example**

Scale and Variable	N items	Exemplary item	Research Question
<b><i>Independent Variable- Satisfaction with Educational Service Augmenters</i></b>			
Academic support services	3	I am satisfied with my academic situation at college.	1; 3
Faculty engagement and support services	4	I am satisfied with my professors I have now in my courses.	1; 3
Social interaction support services	3	There are a sufficient number of social activities on campus for students.	1; 3
Campus life services	4	The student center is a comfortable place for students to spend their leisure time.	1; 3
Campus climate	4	Students are made to feel welcome on this campus.	1; 3
<b><i>Independent Variable- The Traditional Predictors</i></b>			
English fluency	1	I believe that my knowledge of English allows me to cope with most situations where I have to use that language.	2; 3
Friendship with American peers	2	I have close friendships with American peers.	2; 3
Institutional attitude	1	My institution values the international student population very much.	2; 3
<b><i>Dependent Variable</i></b>			
Academic Adjustment	4	I feel that I fit in well as part of my academic program.	1;2;3
Social Adjustment	3	I feel that I have enough social skills to adjust well in the college.	1;2;3
Personal-emotional Adjustment	3	I am pleased about my decision to attend this college.	1;2;3
<b><i>Demographic Information</i></b>			

Gender	1	Please identify your gender.	
Countries of Origin	1	Where are you from?	
Years in the U.S.	1	How many years have you lived in the U.S.	
Level of Study	1	Your level of study.	
Institution	1	Which college or university are you attending?	

### **Pilot Instrument**

Upon receiving approval from the Institutional Review Board, a pilot instrument has been conducted in one of the universities selected for the sample prior to implementing the instrument in this study. There were 32 international students representative of the target group who tested the instrument. Considering that most of the target sample uses English as a second language, this procedure helped the researcher to clarify any confusion in the survey and the length of time participants require on average to complete it. According to the pilot study feedback, the survey has been modified from the original version 54 items to the current version 37 items. In order to check the reliability of the survey, reliability tests were run on all scales after data collection to determine whether each item is appropriate for measure the target variable. For each scale, the value of Cronbach's Alpha is set higher than 0.7.

### **3.6 Data Analysis**

This step addresses the hypothesis testing of the conceptual framework. The data was scanned for missing responses that have about 5% missing data were deleted. Descriptive statistics were computed to check the normality of the item distribution. Based on the descriptive statistics, valid responses were identified. Histograms and box plots were viewed to identify outliers in the data distribution. Items with a skewness and kurtosis of less than an absolute value of one can be considered normally distributed for statistical analyses (Field, 2013).

Regarding research question 1, the independent variables were international students' satisfaction with service augmenters: academic support services, faculty engagement and support services, social interaction support services, campus life services, and campus climate. The dependent variables were international students' academic, social, and personal-emotional adjustment.

Regarding research question 2, the independent variables were international students' perceptions of traditional predictors: English fluency, friendship with American peers, and institutional attitudes towards international population; the dependent variables were international students' academic, social, and personal-emotional adjustment.

Regarding research question 3, the independent variables were both satisfaction with educational service augmenters and perceptions of traditional predictors; the dependent variables were international students' academic, social, and personal-emotional adjustment.

In order to answer research questions 1, 2, and 3, three Hierarchical Multiple Regression analyses were conducted to investigate the relationship among these variables. The traditional predictors identified as significantly related to students' adjustment were entered into model 1, followed by satisfaction with educational service augmenters, which were entered into model 2. This analytic strategy was employed to determine whether international students' satisfaction with educational service augmenters accounts for significant variance in students' adjustment to U.S. institutions beyond the traditional predictors and relevant demographic factors. Regarding research question 3, the difference in predicting students' adjustment between these two variables was analyzed through this process.

Regarding research question 4, the same model of Hierarchical Multiple Regression analyses was conducted on undergraduate students and graduate students in the sample in order to determine the difference of this relationship between different levels of study.

## Chapter 4

The purpose of study was to investigate the relationship between international students' satisfaction with educational service augmenters and their academic, social, and personal-emotional adjustment to U.S. institutions; furthermore, the proposed research compared different influences on international students' adjustment, with a focus on students' satisfaction with educational service augmenters as well as the traditional predictors, including English fluency, friendships with American peers, and institutional attitude towards the international student population. The hierarchical multiple regression analyses were conducted to determine if such relationships exist. This chapter presents descriptive statistics and the results of each analysis.

### 4.1 Pilot Study

The newly developed survey, International Student Satisfaction and Adjustment as the main instrument of data collection, was applied in this study. A pilot study was conducted in one university prior to implementing the instrument in this study in order to confirm the reliability of all scales. There were 32 international students participated the pilot study. The reliability tests were run on all scales after data collection. For all scales, the values of Cronbach's Alpha are higher than 0.7. The results of reliability tests of each scale show in Table 2.

**Table 2 International Student Satisfaction and Adjustment Survey Scale Reliability**

Scale	Example Question	N items	Cronbach's alpha N = 32	Cronbach's alpha N = 251
All scales		37	.98	.96
<i>Sub-scale- International Student Satisfaction with Educational Augmenters</i>				
Academic support service	I am satisfied with the academic support provided by my program of study.	3	.92	.85
Faculty engagement and support services	I am satisfied with most professors I have in my courses.	4	.76	.77
Social interaction support services	I am satisfied with the social activities available on campus for international students.	3	.90	.88
Campus life	I am satisfied with how this college/university welcomes international students.	4	.80	.76
Campus climate	I am satisfied with the commitment to diversity and inclusion on this campus.	4	.90	.89
<i>Sub-scale- International Student Adjustment</i>				
Academic adjustment	I feel that I have clear academic goals at this college/university.	4	.86	.83
Social adjustment	I meet as many people, and make as many friends, as I would like in this college/university.	3	.80	.82
Personal-emotional adjustment	I feel that I am adjusting well to this college/university.	3	.89	.85
<i>Sub-scale- Traditional Predictors</i>				
Friendships with American Peers	I am satisfied with my friendships with American peers	2	.86	.87

## 4.2 Descriptive Statistics

An online mode of data collection has applied in this study. The survey was emailed out to a random sample of international students through the International Student Office at each institution and NAFSA. There were total of 251 international students who participated in this study, including 5% missing data. Among the participating students, 41.8% were female students and 48.2% were male students. A detailed description of survey students' demographic information is presented in Table 3.

**Table 3 Demographic Information of International Student Participants**

		Frequency	Percentage
Gender	Female	105	41.8%
	Male	121	48.2%
	Self-Defined	1	0.4%
	Missing Data	24	9.6%
Level of Study	Undergraduate	89	35.5%
	Master	63	25.1%
	Ph.D.	74	29.5%
	Others	14	5.6%
	Missing Data		4.4%
Years in the U.S.	Less than 1 Year	71	28.3%
	1-3 Years	111	44.2%
	4-6 Years	46	18.3%
	6-8 Years	7	2.8%
	More than 8 Years	6	2.4%
	Missing Data	10	4%
Top 3 Leading Country	China	50	30%
	India	36	14.4%
	Iran	13	5.2%

***N* = 251**

Due to the fact that a newly developed survey was applied in this study, before implementing the data analysis, exploratory factor analyses (EFA) - principal axis factoring with oblimin rotation- were conducted on the scales to check the variability of the survey. EFA results suggested three factors of educational service augmenters and two factors of international students' adjustment. Therefore, five educational service augmenters have been dropped to three: academic and faculty support service augmenters, social interaction support service augmenters, and campus support service augmenters; three international students' adjustment have been dropped to two: academic and personal adjustment, social adjustment. The results of EFA and reliability test have shown below.

**Table 4 Factor Analysis of Pattern Matrix of Satisfaction with Educational Service Augmenters**

Question	Factor		
	1	2	3
Q16	.90		
Q15	.87		
Q13	.63		
Q14	.59		
Q17	.51		
Q12	.37		
Q2		.92	
Q1		.86	
Q4		.71	
Q5		.60	
Q6		.50	
Q3		.39	
Q8			.91
Q10			.80
Q9			.71

**Table 5 Factor Analysis of Pattern Matrix of International Students' Adjustment**

Question	Factor	
	1	2
Q19	.89	
Q21	.86	
Q20	.65	
Q27	.64	
Q23		.92
Q24		.70
Q22		.50

**Table 6a International Student Satisfaction and Adjustment Survey Scale Reliability**

Scale	Example Question	N items	Cronbach's alpha N = 251
All scales		31	.96
Academic and Faculty support service	I am satisfied with the academic support provided by my program of study.	6	.87
Social interaction support services	I am satisfied with the social activities available on campus for international students.	3	.88
Campus support service	I am satisfied with how this college/university welcomes international students.	6	.87
Academic and personal adjustment	I feel that I have clear academic goals at this college/university.	4	.86
Social adjustment	I meet as many people, and make as many friends, as I would like in this college/university.	3	.79
Friendships with American Peers	I am satisfied with my friendships with American peers	2	.87

**Table 6b International Student Satisfaction and Adjustment Survey Scale Description**

	<i>M</i>	<i>SD</i>	<i>Skewness</i>	<i>Kurtosis</i>
Academic and Faculty support service	4.03	.82	-1.21	1.14
Social interaction support services	3.62	1.02	-.53	-.42
Campus support service	4.02	.83	-1.24	1.61
Academic and personal adjustment	4.11	.85	-1.12	1.31
Social adjustment	3.70	1.02	-.69	-.18
Language Proficiency	4.21	.88	-1.11	1.18
Friendships with American Peers	3.50	1.12	-.48	-.62
Institutional Attitude	3.89	1.12	-.93	.09

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*N* = 251

**Table 7 International Student Satisfaction and Adjustment Survey Scale Correlation**

	Academic Service Support	Social Support Service	Campus Life Service	Traditional Predictors	Academic	Social
Academic and Faculty Service Support Augmenters		.51***	.65**	.41**	.78**	.52**
Social Support Service Augmenters	.51**		.65**	.49**	.49**	.52**
Campus Support Service Augmenters	.65**	.65**		.54**	.65**	.57**
Traditional Predictors	.41**	.50**	.54**		.54**	.60**
Academic and Personal Adjustment	.78**	.49**	.65**	.60**		.61**
Social Adjustment	.52**	.52**	.57**	.60**	.61**	

***N = 251; \*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$***

### 4.3 Analysis of Research Question 1, 2 & 3

Q1. To what extent does international students' satisfaction with educational service augmenters affect their adjustment (academic, social, and personal-emotional adjustment) to U.S. institutions?

H1<sub>o</sub>. There is no statistically significant relationship between international students' satisfaction with educational service augmenters and their adjustment to U.S. institutions.

Q2. To what extent do the traditional predictors (English fluency, friendships with American peers, and institutional attitude towards international population) affect international students' academic, social, and personal-emotional adjustment to U.S. higher institutions?

H2<sub>o</sub>. There is no statistically significant relationship between the traditional predictors

International students who report higher levels of English proficiency and perceive that their institution treats international students with a positive attitude will report greater academic adjustment.

Q3. To what extent is there a difference in predicting international students' adjustment to U.S. institutions, between students' satisfaction with educational service augmenters and the traditional predictors?

H3<sub>o</sub>. There is no statistically significant difference in predicting international students' adjustment between satisfaction with educational service augmenters and the traditional predictors.

#### 4.3.1 Predictors of International Students' Academic and Personal Adjustment

The first hierarchical multiple regression analysis was conducted to determine if international students' satisfaction with educational service augmenters predicts their academic adjustment to U.S. institutions after controlling the traditional predictors. In model 1, a regression of the three traditional predictors on academic adjustment explained a significant 30% of the variance in international students' academic adjustment;  $F(3, 240) = 34.80$ ,  $MSE = 17.6$ ,  $p < .001$ .

Adding educational service augmenters in the second step of the hierarchical regression analysis led a significant change in  $R^2$  ( $\Delta R^2 = .39, p < .001$ ). Thus, including academic service augmenters in the second step explained an additional 39% of variance in international students' academic and personal adjustment.

In the final model, after accounting for traditional predictors, academic and faculty service augmenters ( $\beta = .60, p < .001$ ) and campus support service augmenters ( $\beta = .21, p < .01$ ) were significant predictors of international students' academic adjustment. Specifically, every SD increase in academic and faculty support service augmenters led to a .60 SD increase in international students' academic and personal adjustment; every SD increase in campus support service augmenters led to a .21 SD increase in international students' academic and personal adjustment. Furthermore, social support service augmenters ( $\beta = -.05, p = .34$ ) was not significant predictors of international students' academic and personal adjustment. Additionally, institutional attitude was not a significant predictor of academic and personal adjustment after accounting service augmenters in the regression model. A detailed regression analysis results is presented in Table 8.

**Table 8 Predictors of International Students' Academic and Personal Adjustment**

Variable	<i>b</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i>
<i>Model 1- Traditional Predictors</i>					
Language Proficiency	.16	.06	.16	2.77	.01**
Friendships	.18	.05	.24	3.58	.00***
Institutional Attitude	.23	.05	.30	4.88	.00***
<i>Model 2- Traditional Predictors &amp; Educational Service Augmenters</i>					
Language Proficiency	.12	.04	.13	3.11	.00**
Friendships	.09	.03	.12	2.58	.01*
Institutional Attitude	.02	.04	.03	.57	.57
Academic and Faculty Support Service Augmenters	.63	.05	.60	12.45	.00***
Social Support Service Augmenters	-.03	.04	-.04	-.84	.40
Campus Support Service Augmenters	.22	.06	.21	3.42	.02*

$N = 251$ ; \*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$

### 4.3.2 Predictors of International Students' Social Adjustment

The second hierarchical multiple regression analysis was conducted to determine if international students' satisfaction with educational service augmenters predicts their social adjustment to U.S. institutions after controlling the traditional predictors. In model 1, a regression of the three traditional predictors on social adjustment explained a significant 41.5% of the variance in international students' social adjustment;  $F(3, 240) = 34.48$ ,  $MS = 34.48$ ,  $p < .001$ . Adding educational service augmenters in the second step of the hierarchical regression analysis led to a significant change in  $R^2$  ( $\Delta R^2 = .13$ ,  $p < .001$ ). Thus, including educational service augmenters in the second step explained an additional 13% of variance in international students' social adjustment.

In the final model, after accounting for traditional predictors, academic and faculty support service augmenters ( $\beta = .21$ ,  $p < .001$ ), social service support augmenters ( $\beta = .13$ ,  $p < .05$ ) and campus support service augmenters ( $\beta = .19$ ,  $p < .05$ ) were significant predictors of international students' social adjustment. Specially, every SD increase in academic and faculty support service augmenters led to a .21 increase in social adjustment; every SD increase in social service support augmenters led to a .13 increase in social adjustment; every SD increase in campus support service augmenters led to a .19 increase in international students' social adjustment. Additionally, language proficiency and institutional attitude were not predictors of social adjustment as well after accounting service augmenters into the model. A detailed regression analysis results is presented in Table 9

**Table 9 Predictors of International Students' Social Adjustment**

Variable	<i>b</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i>
<i>Model 1- Traditional Predictors</i>					
Language Proficiency	-.07	.06	-.07	-1.3	.21
Friendships with American Peers	.511	.06	.56	9.28	.00***
Institutional Attitude	.16	.05	.17	2.94	.00**
<i>Model 2- Traditional Predictors &amp; Educational Service Augmenters</i>					
Language Proficiency	-.07	.06	-.06	-1.23	.20
Friendships	.43	.05	.47	8.43	.00***
Institutional Attitude	-.06	.06	-.07	-1.02	.31
Academic and Faculty Support Service Augmenters	.27	.07	.21	3.62	.00***
Social Support Service Augmenters	.13	.06	.13	2.10	.04*
Campus Support Service Augmenters	.24	.09	.19	2.59	.01**

*N* = 251; \*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$

Research Question 1, in summary, two hierarchical multiple regression analyses verified that there were significant relationships among international students' adjustment and satisfaction with educational service augmenters, although not each educational service augmenters was a significant predictor to international students' academic and personal adjustment and social adjustment. Accordingly, the null hypothesis is rejected.

In summary, Research Question 2, two hierarchical multiple regression analyses verified that there were significant relationships among international students' adjustment and the traditional predictors. Certainly, the traditional predictors was a significant predictor to each adjustment. Accordingly, the null hypothesis is rejected.

In summary, Research Question 3, two hierarchical multiple regression analyses verified that there were significant differences in predicting international students' adjustment after adding educational service augmenters into the model. However, the model was only significant due to the effect of both traditional predictors and educational service augmenters, but not the educational service augmenters alone. Accordingly, the null hypothesis is rejected.

#### 4.4 Analysis of Research Question 4

Q4: What are the relationships among these variables for subgroups of international students in different levels of study?

##### 4.4.1 Undergraduate students

###### *Predictors of international undergraduate students' Academic and Personal Adjustment*

The first hierarchical multiple regression analysis was conducted to determine if international undergraduate students' satisfaction with educational service augmenters predicts their academic and personal adjustment to U.S. institutions after controlling for the traditional predictors. In Model 1, a regression of traditional predictors on academic and personal adjustment explained a significant 52.9% of the variance in international students' academic and personal adjustment;  $F(3, 88) = 31.89, MSE = 11.50, p < .001$ . Adding educational service augmenters in the second step of the hierarchical regression analysis led to a significant change in  $R^2$  ( $\Delta R^2 = .21, p < .001$ ). Thus, including educational service augmenters in the second step explained an additional 21% of variance in international students' academic and personal adjustment.

In the final model, after accounting for traditional predictors, academic and faculty support service augmenters ( $\beta = .40, p < .00$ ) and campus support service augmenters ( $\beta = .29, p < .05$ ) were significant predictors of international undergraduate students' academic and personal adjustment. Specifically, every SD increase in academic and faculty support service augmenters led to a .40 SD increase in international students' academic adjustment; every SD increase in campus support service augmenters led to a .29 SD increase in international students' academic adjustment. Furthermore, social support service augmenters ( $\beta = -.77, p = .44$ ) was not significant predictors of international undergraduate students' academic and personal adjustment. Additionally, language proficiency and institutional attitude were significant predictors of

academic adjustment after accounting for service augmenters in the model. A detailed regression analysis results is presented in Table 10.

**Table 10 Predictors of Undergraduate Students' Academic and Personal Adjustment**

Variable	<i>b</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i>
<i>Model 1 - Traditional Predictors</i>					
Language Proficiency	.13	.08	.14	1.71	.09
Friendships with American Peers	.18	.07	.24	2.56	.01*
Institutional Attitude	.38	.07	.51	5.87	.00***
<i>Model 2- Traditional Predictors &amp; Educational Service Augmenters</i>					
Language Proficiency	.10	.06	.11	1.57	.12
Friendships	.12	.06	.17	2.28	.03*
Institutional Attitude	.14	.07	.18	1.97	.05
Academic and Faculty Support Service Augmenters	.41	.09	.40	4.81	.00***
Social Support Service Augmenters	-.06	.07	-.06	-.80	.44
Campus Support Service Augmenters	.27	.10	.29	2.60	.01*

*N* = 251; \*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$

*Predictors of international undergraduate students' social adjustment*

The second hierarchical multiple regression analysis was conducted to determine if international undergraduate students' satisfaction with educational service augmenters predicts their social adjustment to U.S. institutions after controlling for the traditional predictors. In Model 1, a regression of traditional predictors on social adjustment explained a significant 49% of the variance in international students' social adjustment;  $F(3, 88) = 27.52$ ,  $MS = 12.07$ ,  $p < .001$ . Adding educational service augmenters in the second step of the hierarchical regression analysis led to a significant change in  $R^2$  ( $\Delta R^2 = .11$ ,  $p < .001$ ). Thus, including educational service augmenters in the second step explained an additional 11% of variance in international undergraduate students' social adjustment.

In the final model, after accounting for traditional predictors, academic and faculty support service augmenters ( $\beta = .17$ ,  $p < .05$ ) was significant predictors of international students' social adjustment. Specially, every SD increase in academic and faculty support service augmenters led

to a .17 increase in social adjustment. Furthermore, social support service augmenters ( $\beta = -.02, p = .82$ ) and campus support service augmenters ( $\beta = .26, p = .07$ ) were not significant predictors of international undergraduate students' social adjustment. In addition, after accounting service augmenters into the model, friendships with American peers was the only significant predictor of social adjustment. A detailed regression analysis results is presented in Table 11.

**Table 11 Predictors of International Undergraduate Students' Social Adjustment**

Variable	<i>b</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i>
<i>Model 1 - Traditional Predictors</i>					
Language Proficiency	.08	.09	.08	.91	.37
Friendships with American Peers	.43	.08	.54	5.52	.00***
Institutional Attitudes	.16	.08	.20	2.23	.03*
<i>Model 2- Traditional Predictors &amp; Educational Service Augmenters</i>					
Language Proficiency	.06	.08	.06	.75	.46
Friendships	.38	.07	.48	5.29	.00***
Institutional Attitude	-.05	.10	-.06	-.58	.58
Academic and Faculty Support Service Augmenters	.27	.11	.25	2.40	.02*
Social Support Service Augmenters	-.02	.10	-.02	-.23	.82
Campus Support Service Augmenters	.26	.13	.26	1.87	.07

*N* = 251; \*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$

#### 4.4.2 Graduate students

##### *Predictors of international graduate students' Academic and Personal adjustment*

The first hierarchical multiple regression analysis was conducted to determine if international graduate students' satisfaction with educational service augmenters predicts their academic and personal adjustment to U.S. institutions after controlling for the traditional predictors. In Model 1, a regression of traditional predictors on academic adjustment explained a significant 21% of the variance in international students' academic adjustment;  $F(3, 134) = 11.59$ ,  $MSE = 6.42, p < .001$ . Adding educational service augmenters in the second step of the hierarchical regression analysis led to a significant change in  $R^2$  ( $\Delta R^2 = .48, p < .001$ ). Thus, including

academic service augmenters in the second step explained an additional 48% of variance in international students' academic adjustment.

In the final model, after accounting for traditional predictors, academic and faculty support service augmenters ( $\beta = .70, p < .001$ ) was a significant predictor of international graduate students' academic adjustment. Specifically, every SD increase in academic and faculty support service augmenters led to a .70 SD increase in international students' academic and personal adjustment. Furthermore, social support service augmenters ( $\beta = -.05, p = .49$ ) and campus support service augmenters ( $\beta = .12, p = .12$ ) were not significant predictors of international graduate students' academic and personal adjustment. Additionally, institutional attitude was not significant predictors of graduate students' academic adjustment. A detailed regression analysis results is presented in Table 12.

**Table 12 Predictors of International Graduate Students' Academic and Personal Adjustment**

Variable	<i>b</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i>
<i>Model 1 - Traditional Predictors</i>					
Language Proficiency	.21	.09	.18	2.20	.03*
Friendships with American Peers	.20	.07	.26	2.76	.01**
Institutional Attitude	.12	.07	.16	1.75	.08
<i>Model 2- Traditional Predictors &amp; Educational Service Augmenters</i>					
Language Proficiency	.18	.06	.16	3.01	.00**
Friendships	.01	.06	.10	1.66	.10
Institutional Attitude	-.01	.05	-.02	-.26	.80
Academic and Faculty Support Service Augmenters	.74	.07	.70	11.26	.00***
Social Support Service Augmenters	-.04	.06	-.05	-.70	.49
Campus Climate Augmenters	.14	.09	.12	1.57	.12

*N* = 251; \*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$

*Predictors of international graduate students' social adjustment*

The second hierarchical multiple regression analysis was conducted to determine if international graduate students' satisfaction with educational service augmenters predicts their social adjustment to U.S. institutions after controlling for the traditional predictors. In Model 1, a regression of traditional predictors on social adjustment explained a significant 40.8% of the variance in international students' social adjustment;  $F(3,134) = 30.09$ ,  $MS = 20.82$ ,  $p < .001$ . Adding educational service augmenters in the second step of the hierarchical regression analysis led a significant change in  $R^2$  ( $\Delta R^2 = .14$ ,  $p < .001$ ). Thus, including educational service augmenters in the second step explained an additional 14% of variance in international graduate students' social adjustment.

In the final model, after accounting for traditional predictors, academic and faculty support service augmenters ( $\beta = .23$ ,  $p < .05$ ), social support service augmenters ( $\beta = .18$ ,  $p < .03$ ), and campus support service augmenters ( $\beta = .34$ ,  $p < .05$ ) were significant predictors of international students' social adjustment. Specially, every SD increase in academic and faculty support service augmenters led to a .23 increase in social adjustment; every SD increase in social support service augmenters led to a .18 increase in social adjustment; every SD increase in campus support service augmenters led to a .34 increase in international graduate students' social adjustment. In addition, after accounting service augmenters into the model, Language Proficiency and Friendships with American peers was a significant predictor of social adjustment. Detailed regression analysis results are presented in Table 13

**Table 13 Predictors of International Graduate Students' Social Adjustment**

Variable	<i>b</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i>
<i>Model 1 - Traditional Predictors</i>					
Language Proficiency	-.25	.11	-.17	-2.42	.02*
Friendships with American Peers	.56	.08	.57	7.01	.00***
Institutional Attitude	.18	.08	.18	2.31	.02*
<i>Model 2- Traditional Predictors &amp; Educational Service Augmenters</i>					
Language Proficiency	-.21	.10	-.14	-2.19	.03*
Friendships	.43	.09	.44	5.86	.00***
Institutional Attitude	-.03	.08	-.03	-.40	.69
Academic and Faculty Support Service Augmenters	.23	.10	.17	2.24	.03*
Social Support Service Augmenters	.18	.08	.18	2.21	.03*
Campus Support Service Augmenters	.34	.14	.22	2.37	.01*

*N* = 251; \*\*\* *p* < .001, \*\* *p* < .01, \* *p* < .05

In summary, Research Question 4, the additional three hierarchical multiple regression analyses verified there were significant differences in predicting international students' adjustment between undergraduate and graduate students. Accordingly, the null hypothesis is rejected.

#### 4.5 Summary

This chapter presented the results of the quantitative study methods used to determine the relationship between international students' satisfaction with educational service augmenters, the traditional predictors, and their academic and personal adjustment and social adjustment to U.S. institutions. This chapter included the demographic analysis of the survey participants, the hierarchical multiple regression analyses of all research questions. The next chapter will focus on the implications and recommendations based on these findings.

**Table 14 Predictors of International Students' Adjustment Summary Table**

			Academic and Personal Adjustment	Social Adjustment
International Students	Predictors	Model 1	Traditional Predictors	Friendships; Institutional Attitude
		Model 2	English Proficiency; Friendships; Academic and Faculty Support Service; Campus Support Service	Friendships; Academic and Faculty Support Service; Social Support Service; Campus Support Service
Undergraduate	Predictors	Model 1	Friendships; Institutional Attitude	Friendships; Institutional Attitude
		Model 2	Friendships; Academic and Faculty Support Service; Campus Support Service	Friendships; Academic and Faculty Support Service
Graduate	Predictors	Model 1	English Proficiency; Friendships	Traditional Predictors
		Model 2	English Proficiency; Academic and Faculty Support Service	English Proficiency; Friendships; Academic and Faculty Support Service; Social Support Service; Campus Support Service

## Chapter 5

The purpose of the study was to investigate the relationship between international students' satisfaction with educational service augmenters and their adjustment to U.S. institutions. Further, the research also compared different influences on international students' adjustment, with a focus on students' satisfaction with educational service augmenters as well as the traditional predictors, including English fluency, friendships with American peers, and institutional attitude towards the international student population. The study focused on international student satisfaction and adjustment as it correlates with the educational services of their institutions. This chapter will include a summary of the study, conclusions based on the findings, and recommendations for further research.

### 5.1 Summary of Study

Educational service is critical to international students' satisfaction and adjustment in a higher education setting (Elsharnouby, 2016). It is important to understand the relationship between international students' satisfaction with educational service augmenters and their adjustment to U.S. institutions. This study examined international students' satisfaction with educational service augmenters and the traditional predictors as predictors of their academic, social, and personal-emotional adjustment for a sample of 251 international students attending universities in the U.S. The following research questions have been examined:

1. To what extent does international students' satisfaction with educational service augmenters affect their adjustment (academic and persona adjustment, social adjustment) to U.S. institutions?
2. To what extent do the traditional predictors (English fluency, friendships with American peers, and institutional attitude towards international population) affect international

students' academic and personal adjustment and social adjustment to U.S. higher institutions?

3. To what extent is there a difference in predicting international students' adjustment to U.S. institutions, between students' satisfaction with educational service augmenters and the traditional predictors?
4. What are relationships among these variables for subgroups of international students in different levels of study?

4.1 What are the relationships among these variables for international undergraduate students?

4.2 What are the relationships among these variables for international graduate students?

This quantitative research study was conducted by a series of hierarchical regression analyses. The results revealed that all educational service augmenters and traditional predictors have affected international students' adjustment at different levels.

The traditional predictors significantly predicted all types of adjustment for both undergraduate and graduate international students. International students' academic and personal adjustment was predicted by academic and faculty support service augmenters and campus support service augmenters.

Social adjustment was impacted by all three educational service augmenters, as well as for graduate students. Academic and faculty support service augmenters is the only predictor of undergraduate students' social adjustment.

## 5.2 Discussion of the Results

### 5.2.1 Traditional Predictors

The findings of this study support previous research that the traditional predictors have boosted international students' adjustment to U.S. institutions (De Araugo, 2011; Gomez et al., 2014; Robertson, et al., 2010; Sawir, et al., 2005; Sherry, et al., 2010; Trice, 2004; Yeh & Inose, 2003). In all regression analysis of this study, the three traditional predictors were significant predictors of international students' adjustment both before and after factoring educational service augmenters into the analyses. Importantly, the results indicated that friendships with American peers effectively predicted international students' academic and personal adjustment, and social adjustment regardless of degree level.

English proficiency significantly predicted international students' academic and personal adjustment. For graduate students, it significantly contributed to both types of adjustment. However, for undergraduate students, it was not a significant predictor. Previous studies support the finding that language difficulties isolate international students from both the campus community and the broader local community off-campus (Sawir, et al., 2005; Trice, 2003). This study further confirmed the literature that English proficiency is a crucial factor in international students' university adjustment and social interactions. Students who exhibited an "inability to speak the host language fluently becoming socially involved in the host society" (Hayes & Lin, 1994, p. 8).

Multiple studies argued that self-confidence in using the second language is an important predictor of acculturative outcomes (Macintyre, Noels, & Clement, 1996; Yang, Noels, & Saumure, 2005; Yeh & Inose, 2003). Yang, Noels, and Saumure (2005) emphasized that communicative competence, integration with host-country nationals, and self-confidence in using the second

language has a cyclical effect, which furthers language development and tends to increase prospects of academic success (Sawir, et al., 2005; Yang, et al., 2005). Their study also noted that “communicative competence in the host language directly promotes better well-being, perhaps because the language provides a vehicle of self-expression and identity negotiation” and “given that comfort using the language of the host society facilitates the fulfillment of everyday needs, self-confidence was associated with better ability to carry out everyday tasks” (Yang et al., 2005, p. 501-502).

Lack of language proficiency is associated not only with psychological adjustment difficulty, but also with sociocultural difficulty (Macintyre, Noels, & Clement, 1996; Yang, Noels, & Saumure, 2005). The present study’s results align with this finding regarding the impact of English proficiency on international undergraduate students. International students who used the communication styles that matched those of the host society were likely to have a smoother transition process and better sociocultural adjustment than those who did not (Oguri & Gudykunst, 2002). Other studies also identified the importance of second language proficiency within the acculturation process. Strong language skills correlated with high academic and social achievement (Andrade, 2016; Yeh & Inose, 2003). This path suggests that while English proficiency is not a guarantee of academic success and adjustment, it does directly impact well-being of international students.

International students in this study place great emphasis on the relationship between friendships with American peers and their own cultural adjustment. Among all the regression analysis, friendships with American peers was consistently a significant predictor for the adjustment of both undergraduate and graduate students, before and after adding educational service augmenters into the model. The finding from the present study further supports the results

of other research that although the majority of international students' friendships were with co-nationals, students desired more interactions with host nationals (Hendrickson, et al., 2011). Multiple studies confirmed that international students who have closer relationships and more contact with host nationals were more likely to adjust better to life overseas, experience fewer social difficulties, develop improved communicative competence, and perceive the host culture more positively (Hendrickson, et al., 2011; Maundeni, 2001). For example, Zimmerman (1995) stated that "the most important factor in international students' adjustment to American culture was frequency of interaction with American students" (Zimmerman, 1995, p. 329).

International students who had more social contact with local people during their study abroad tended to report increased satisfaction in general with their academic experience and overall adjustment (Sam, 2001). However, despite the importance of having host national friends for international students' college adjustment, international students reported this to be the most difficult category of friendship to establish (Kim, 2001; Maundeni, 2001; Sam, 2001; Zimmerman, 1995). Previous studies (Henderson *et al*, 2011; Maundeni, 2001; Sam, 2001) support the finding of the present study, which shows the existing positive relationship between communicative competence in the host language and integration with host country nationals, and that, in many cases, "linguistic knowledge inhibits individuals from getting to know each other" (Hendrickson et al., 2011, p. 283).

Many international students report perceived discrimination (De Araujo, 2011; Gomez et al., 2014; Hendrickson et al., 2011) and find individuals in the host nation to hold racial or ethnic prejudices (Gomez et al., 2014; Hendrickson et al., 2011). On the other hand, international students showed sensitivity to the host country's attitudes towards them and their country (Sam, 2001), which makes them more vulnerable to discrimination, and in particular to ethnic and racial

discrimination (Gomez et al., 2014; Hendrickson et al., 2011; Sam, 2001). Although the existing literature on international students' friendship networks and the present study consistently found that "host national friendship formation is integral to the adjustment process," and "the number, variety, and depth of social interaction with host nationals may be the most important variables related to adjustment of international students" (Hendrickson et al., 2011, p. 283), this formation of friendships with host nationals have been more difficult to establish because of those inherent reasons working against it (Sam, 2001).

Another interesting finding in this study is the degree to which international students valued the relationships between the institutional attitude towards the international population and their adjustment to the institution. Before adding educational service augmenters in the model, institutional attitudes was a significant predictor of international students' adjustment. After including service augmenters in the model, institutional attitudes was not a predictor of international students' adjustment, for either undergraduate or graduate students. This finding is not surprising, given that the mere presence of educational service augmenters on a college campus shows a welcoming and supportive campus climate to the international student population. Before including service augmenters in the analyses, a positive institutional attitude towards the international population related to improved international student adjustment. According to the literature, it is hard to define "positive attitude," however, the literature does indicate that establishing both academic and social support services tends to create a diverse and supportive campus, which in turn has been positively associated with international students' college adjustment and experience (De Araujo, 2011; Stebleton et al., 2009).

Several studies examining international students' college adjustment in different countries have demonstrated that "professors in a variety of disciplines have identified international student

needs and designed appropriate support” (Andrade, 2016, p. 147). English language courses, tutoring, and programs monitoring international students’ performance have been successful in providing international students with academic support (Hendrickson et al., 2011; Stebleton et al., 2009). In summary, the three traditional predictors do affect international students’ adjustment and achievement in U.S. institutions, but the results vary.

### **5.2.2 Educational Service Augmenters**

According to the regression analysis in the previous chapter, adding educational service augmenters explained an additional 39% of variance in international students’ academic and personal adjustment; 41.5% of variance in social adjustment. For international undergraduate students, it explained 52.9% of variance in academic and personal adjustment; 11% of the variance in social adjustment. For international graduate students, it explained 48% of the variance in academic and personal adjustment; 40.8% of the variance in social adjustment. In summary, educational service augmenters had a stronger impact on academic and personal adjustment than on social adjustment. Compared with undergraduate students, service augmenters had a more significant impact on international graduate students. Especially, academic and faculty support service augmenters was the only significant predictor for all adjustment for both undergraduate and graduate students.

This finding supported previous studies indicating the existence of significant relationships between the amount of time students spend interacting with faculty and a variety of educational and personal outcomes, including academic skill development, academic and social integration, satisfaction, and social self-confidence (Glass, et al., 2017; Sax, Bryant, & Harper, 2005; Smart, Feldman, & Ethington, 2000). Faculty members engage students’ interest in pursuing an academic degree and by providing valuable feedback that helps students develop as academics (Curtin et al.,

2013). Although the results of past research suggest that the quantity of student-faculty interaction may not solely account for the benefits that students incur from these interactions, higher education faculty, indeed, have “a critical role in designing and delivering learning opportunities. As the institutional agents who instruct, advise, and mentor students in classes and courses, academic programs, and co-curricular activities, faculty members are a dominant force in shaping students’ learning experience and learning outcomes. Student engagement begins with faculty engagement” (Chen, Lattuca, & Hamilton, 2008, p. 341).

Much previous research studied international students’ interactions with their advisors and professors, however, little literature specifically identified the outcomes of these interactions. The current study found that graduate students rely on their advisors and professors on skill development in research and professional-related academic activities. The finding of academic support and faculty impact in this study not only filled the literature gap that supports the positive impact of faculty support services on international students’ college adjustment, but it also indicated the importance of faculty support values is similar for both undergraduate and graduate international students.

International students in this sample appeared to feel that educational service augmenters had less impact on their social adjustment, especially for undergraduate students. It may be because international students attach more importance to academic- and professionally-related experiences, and therefore they feel they fit in well in the academic environment despite the difficulties in social integration. However, these findings should not discount the impact of support services and their relation to international students’ adjustment and achievement (Curtin et al., 2013). The results also confirmed that social interaction service augmenters were a significant predictor to both undergraduate and graduate students’ social adjustment.

The research reviewed in the previous sections identifies issues affecting international students' adjustment. The results of the regression analysis of the relationship among all variables illustrate the importance of both traditional predictors and educational service augmenters in positively affecting international students' academic and personal adjustment, and social adjustment. The data also showed that these relationships were different for undergraduate and graduate students. Friendships with American peers and academic and faculty support service augmenters, were the two variables that most affect international students' adjustment. Additionally, rather than considering whether the traditional predictors or the educational service augmenters is the better predictor, the present study indicates that the two characteristics are complementary yet distinct predictors of international students' adjustment.

### **5.3 Limitations**

As with any research study, this study has some limitations. First, data in this study was collected using an online survey through non-probability sampling. An online survey may generate less than adequate sample sizes and unrepresentative samples. Second, although this study seeks to maximize participation of international students in American higher education institutions, the sampling frame consists exclusively of international students attending select institutions in the U.S. International students at other institutions may face factors that are unique to those locations. Finally, this study employed self-reported scores of international students regarding their satisfaction and adjustment, measured by a newly developed survey which focuses on satisfaction within specific performance areas. Students' expectations are not investigated related to one another.

## **5.4 Implications**

### **5.4.1 Implications for the Future Study**

The present study indicates that there are relationships between the satisfactions of educational service augmenters and international students' adjustment to U.S. institutions. Using the current research design longitudinally and with the international population study in various locations would not only pave the way for causal predictions but would also inform the understanding of how educational service augmenters evolve over time with distinct groups.

The study design was based on various theory principles and findings indicated that importance of educational service augmenters on international students' adjustment. One way to look at this relationship in terms of individuals from different cultural backgrounds. An interview section may also be applied to the design along with the online survey as the major instruments in this study. A combination of quantitative and qualitative data will provide a deeper understanding of the research problem, while off-setting the weaknesses inherent to using each approach by itself.

### **5.4.2 Practical Implications**

Universities can employ various ways to serve the international population and engage them in developing a positive college experience while they study in the U.S. This section provides significant insight into international students' challenges and successes at U.S. higher education institutions.

First, each academic department and program should focus more intensively on facilitating positive faculty-student relationships. The more international students are satisfied with faculty support and perceive themselves as fitting in with their department and programs, the more they consider themselves well-adjusted to their college life. Students who feel a greater sense of belongingness to their department and programs are less likely to leave the academy (Curtin et al.,

2013). Facilitating more positive and satisfied relationships between faculty and students can foster international students' adjustment and academic success across multiple domains (Curtin et al., 2013). One key future direction is to understand what constitutes international students' perceptions and satisfaction of positive faculty-student relationships and how institutions and departments can foster these connections.

Second, the evidence from the current study strongly suggests that universities might consider placing more emphasis on international students' satisfaction regarding interactions with their American peers. One effective way to create formal and informal interactions between international and domestic students is via a Peer Mentoring Program. Academic achievement and social adjustment are higher among peer-mentored international students than among non-peer-mentored international students (Westwood & Barker, 1990; Abe, Talbot, & Geelhoed, 1998). The purpose of peer-mentoring is to assist domestic students in understanding internationalization and to enrich their college experience by interacting with multiple cultural groups (O'Brien, Llamas & Stevens, 2012).

Third, intercultural training and extracurricular activities initiated and supported by educational institutions to encourage intercultural connections outside of the academy have been found "to precipitate positive consequences for both international and domestic students (Ward, Masgoret, & Gezentsvey, 2009). Peer-mentoring programs, as mentioned above, are the best known of these. Such programs also require sustained institutional support and systematic evaluation. These activities provide an excellent means of enhancing intercultural connection and integration, and link to more positive attitudes of American students towards international students.

Forth, international students may need different types and levels of support depending on their level of study. Universities can help the international population by providing an

international student information and service center with advisers and counselors who can help students with common questions about cultural differences, academic issues, and social life. An international student information and service center can also be helpful in organizing social events, collaborating with international student organizations, and meeting with other international students and domestic students. Such a service center not only enriches international students' campus life and initiates intercultural training and extracurricular activities, but also shows students that universities are taking steps to make their institutions a welcoming place. Universities must realize that international students' success and satisfaction are not only indicated by quantitative data such as GPA and retention rates, but also by interacting with diverse others, participating in campus activities, and through college learning and social experiences.

### **5.5 Conclusion**

The results indicated that all five service augmenters have the potential to enhance international students' college adjustment. Insights gained from college adjustment experiences with international students in U.S. institutions have broader implications for intercultural education. Most U.S. universities have a great need to increase international student enrollment. In order to attract and retain international students on campus, universities should focus on international students' needs and successes in their college experiences. Higher education professionals need to be aware of the challenges and problems many international students face and struggle in adjusting their life in the U.S., and of the ways that universities can help them adjust better. Universities that wish to satisfy their international population need to augment their support services to encourage positive interactions between international students and domestic students.

Helping international students adjust well and be successful requires colleges and universities to be proactive in demonstrating their commitment and belief in the contributions of

international students by offering appropriate programming and services. The U.S. institutions that host international students should consider the challenges and adjustment issues raised in this study in order to enhance the mutually rewarding field of international education.

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### Appendix A: International Students' Satisfaction and Adjustment Survey

Dear International Student:

Please take about 5 minutes to share your opinions and involvement in campus life to this survey. Your responses are anonymous and extremely confidential. Your participation is voluntary.

Once you complete this questionnaire, you will be given a special link where you can register for a chance to win 1 of 20 \$10 Amazon gift cards.

If you have any questions, please contact Summer Cong at [ccong005@odu.edu](mailto:ccong005@odu.edu) who is responsible for administering this questionnaire.

1. I am satisfied with the academic support provided by my program of study.

Strongly disagree    Somewhat disagree    Neither agree nor disagree    Somewhat agree    Strongly agree

2. I am satisfied with the academic support provided by my academic department.

Strongly disagree    Somewhat disagree    Neither agree nor disagree    Somewhat agree    Strongly agree

3. I am satisfied with the access and resource provided by this college/university that help me reaching my goals.

Strongly disagree    Somewhat disagree    Neither agree nor disagree    Somewhat agree    Strongly agree

4. I am satisfied with my academic advisor's support towards reaching my goals.

Strongly disagree    Somewhat disagree    Neither agree nor disagree    Somewhat agree    Strongly agree

5. I am satisfied with most professors I have in my courses.

Strongly disagree    Somewhat disagree    Neither agree nor disagree    Somewhat agree    Strongly agree

6. I am satisfied with professors' availability after class and during office hours.

Strongly disagree    Somewhat disagree    Neither agree nor disagree    Somewhat agree    Strongly agree

7. I am satisfied with how faculty values student differences as they teach a course.

Strongly disagree    Somewhat disagree    Neither agree nor disagree    Somewhat agree    Strongly agree

8. I am satisfied with the social activities available on campus for international students.

Strongly disagree    Somewhat disagree    Neither agree nor disagree    Somewhat agree    Strongly agree

9. I am satisfied with the support and guidance provided by this college/university that help my involvement in social activities and student organizations.

Strongly disagree    Somewhat disagree    Neither agree nor disagree    Somewhat agree    Strongly agree

10. I am satisfied with the availability of social network for international students at this college/university.

Strongly disagree    Somewhat disagree    Neither agree nor disagree    Somewhat agree    Strongly agree

11. I am satisfied that students are informed of recent news and policy in a timely fashion by this college/university.

Strongly disagree    Somewhat disagree    Neither agree nor disagree    Somewhat agree    Strongly agree

12. I am satisfied with the Campus Immigration Office services if I ever need them.

Strongly disagree    Somewhat disagree    Neither agree nor disagree    Somewhat agree    Strongly agree

13. I am satisfied with how this college/university welcomes international students.

Strongly disagree    Somewhat disagree    Neither agree nor disagree    Somewhat agree    Strongly agree

14. I am satisfied with the campus environment and infrastructure.

Strongly disagree    Somewhat disagree    Neither agree nor disagree    Somewhat agree    Strongly agree

15. I am satisfied with freedom of expression on campus.

Strongly disagree    Somewhat disagree    Neither agree nor disagree    Somewhat agree    Strongly agree

16. I am satisfied with the commitment to diversity and inclusion on this campus.

Strongly disagree    Somewhat disagree    Neither agree nor disagree    Somewhat agree    Strongly agree

17. I am satisfied with how my college/university shows concern for students as individuals.

Strongly disagree    Somewhat disagree    Neither agree nor disagree    Somewhat agree    Strongly agree

18. I am satisfied with my experiences as a student on this campus.

Strongly disagree    Somewhat disagree    Neither agree nor disagree    Somewhat agree    Strongly agree

19. I feel that I have clear academic goals at this college/university.

Strongly disagree    Somewhat disagree    Neither agree nor disagree    Somewhat agree    Strongly agree

20. I feel that I am enjoying most of my courses.

Strongly disagree    Somewhat disagree    Neither agree nor disagree    Somewhat agree    Strongly agree

21. I feel that I fit in my academic program.

Strongly disagree    Somewhat disagree    Neither agree nor disagree    Somewhat agree    Strongly agree

22. I feel that I fit in with my classmates.

Strongly disagree    Somewhat disagree    Neither agree nor disagree    Somewhat agree    Strongly agree

23. I meet as many people, and make as many friends, as I would like in this college/university.

Strongly disagree    Somewhat disagree    Neither agree nor disagree    Somewhat agree    Strongly agree

24. I have close friends at this college/university.

Strongly disagree    Somewhat disagree    Neither agree nor disagree    Somewhat agree    Strongly agree

25. I feel that I belong to this college/university.

Strongly disagree    Somewhat disagree    Neither agree nor disagree    Somewhat agree    Strongly agree

26. I feel that I am adjusting well to this college/university.

Strongly disagree    Somewhat disagree    Neither agree nor disagree    Somewhat agree    Strongly agree

27. I am pleased with my decision to attend this college/university.

Strongly disagree    Somewhat disagree    Neither agree nor disagree    Somewhat agree    Strongly agree

28. I feel that I am capable of dealing with future challenges at this college/university.

Strongly disagree    Somewhat disagree    Neither agree nor disagree    Somewhat agree    Strongly agree

29. I feel that I can easily become friends with American peers.

Strongly disagree    Somewhat disagree    Neither agree nor disagree    Somewhat agree    Strongly agree

30. I am satisfied with my friendships with American peers.

Strongly disagree    Somewhat disagree    Neither agree nor disagree    Somewhat agree    Strongly agree

31. My college/university values the international student population very much.

Strongly disagree    Somewhat disagree    Neither agree nor disagree    Somewhat agree    Strongly agree

32. How do you evaluate your English proficiency?

Beginner      Early Intermediate      Intermediate      Early Advanced      Advanced

33. Please identify your gender.

Male      Female      Self-defined

34. What country are you from?

35. How many years have you lived in the U.S.

Less than 1 year      1-3 years      4-6 years      6-8 years      More than 8 years

36. Your level of study.

Undergraduate      Master      Ph.D

37. Which university you are attending?

## Resume

### Cong (Summer) Cong

Mobile: (513)-593-1352  
Email: ccong005@odu.edu

**Resume Objective:** Experienced and accomplished international educator with over three years of experiences and proven leadership looking to leverage extensive background in student service, international programming, project management and assessment into an entry-level position in the field of international education.

**Qualification:** Well experienced and trained in conducting research, data analysis, program accreditation reports, and operating program assessment software; Years of leadership experience in international programming, student services and advising; Organizational and public speaking skills; Gained ODU institute teaching certificate.

#### Education

**Ph.D.**, Higher Education August, 2017  
Old Dominion University, Norfolk, VA

*Dissertation:* International Student Satisfaction with Educational Service Augmenters and their Adjustment to U.S. Institutions.

*Dissertation Committee Chair:* **Dr. Christopher R. Glass**

**M.Ed.**, Educational Psychology 2013  
Miami University, Oxford, OH

*Thesis:* An Experimental Research on the Effect of Progressive Muscle Relaxation Training Technique on Chinese Students Studying in the U.S.

**B.S.**, Marketing, *Minor:* Korean 2011  
**2+2 Program:** Woosuk University, Korea & Shandong Normal University, China

#### International Student Service and International Program Development

**International Program Coordinator Intern**—Office of International Services, U of Alabama in Huntsville **Present**

- Enrich international student experience in UAH through coordinating various social activities and events.
- Gain feedback and suggestions through international advisory board.
- Streamline and improve international student enrollment experience.
- Communicate via social media with prospective international students and increase conversion rate.

**Vice President/ Member**- International Student Advisory Board (ISAB), ODU 2014-Spring, 2017

- Worked closely with international students, international student organizations, faculty, and administrators to coordinate international focused programming and assure the efficacy and efficiency of programs and to gain feedback.
- Advised international students to help their adjustment to U.S. institutions.
- Trained student volunteers in multiple programs including Orientation, Arrival Assistance, and Welcome reception.
- Performed international program evaluation, research trends, best practice, and advancement in international programming, including research practice in international student mentorship program, international student market and alumni networks, analytics skills in program assessment.
- Assisted with international student organizations on various international programs and activities to increase visibility of the international student community on the campus.
- Updated and Maintained ISAB website and other social media pages; redesigned and facilitated the production of ISAB brochures.

**Program Coordinator** - Norfolk Sister Cities Association, Norfolk, VA Fall, 2015

- Created and managed cultural related programs in Norfolk K-12 schools, including India and China cultural workshops within budget.
- Collaborated with other Norfolk sister cities to promote global awareness and knowledge of two K-12 schools in Norfolk community.

## Cong (Summer) Cong

Mobile: (513)-593-1352

Email: [ccong005@odu.edu](mailto:ccong005@odu.edu)

**Program Coordinator** - Office of Intercultural Relations, ODU

Summer, 2015

- Implemented the development and administration of programs and services supporting the sociocultural development of international students, such as Arrival Assistance program, Orientation and Transition Support for incoming international students.
- Managed programs to facilitate learning and engagement between domestic and international students, such as peer mentorship program.
- Served as a liaison between the Office of Intercultural Relations, student organizations, international students, faculty, administrators, and community groups.
- Promoted and supported the international student community at ODU by working daily with international student organizations and individual students.

### Administration and Project Management Experience

**Graduate Assistant**- Dean's Office, Darden College of Education, ODU

2015- August, 2017

- Assisted Associate Dean on all matters pertaining to the development and administration of academic programs and services that support the development of Darden College of Education.
- Assisted students, prospective students, and visitor, including answering and referring inquiries.
- Coordinated research and analyses on all matters pertaining to continued improvement in providing quality education, includes creating course matrix for more than five academic programs.
- Worked effectively with the academic dean, department chair, and faculty to assess academic programs, assisted in writing the SCHEV (State Council of Higher Education for Virginia) Report.
- Conducted research and wrote on the book chapter regarding Culturally Relevant Pedagogy.
- Operated analytical skills and assessment software (LiveText) in various programs assessment.

**Graduate Assistant**- Department of Educational Foundation & Leadership, ODU

2014-2015

- TA for two doctoral level statistic classes (ANOVA & Regression); assisted instructor in organizing class materials and grade homework.
- Developed class materials and assisted faculty with teaching and course administration as well as provided instruction to graduate students enrolled in statistic classes.
- Assisted in research and conducted data analysis of educational research topics, including college students' motivation study and long-distance research.
- Collaborated with multiple researchers to update confidential research data and files.

### Study Abroad Coordination Experience

**Study Abroad Coordinator**- School of Business, Miami University

Spring- Summer, 2012 & 2013

- Served as an information resource to provide knowledge and advice to students regarding the faculty-led study abroad class to China.
- Developed class materials and assisted faculty with teaching and course administration as well as provided instruction to students enrolled in study- abroad class.
- Co-planned and assisted with administration functions of the study-abroad class to China.
- Organized and managed two Chinese cultural related programs (Global Café in China; Chinese Food Night) to recruit students to attract prospective students.
- Designed brochures for the U.S. - China study abroad class.

### Publication

Glass, C. R., Gesing, P., Hales, A., & Cong, C. (2017). Faculty as bridges to co-curricular engagement and community for first-generation international students. *Journal of Studies in Higher Education*.

Glass, C. R., Kociolek, E., Wongtrirat, M. R., Lynch, R. J., & Cong, M. S. (2015). Uneven Experiences: The Impact of Student-Faculty Interactions on International Students' Sense of Belonging. *Journal of International Students*, 5(4), 353-367.

**Cong (Summer) Cong**

Mobile: (513)-593-1352

Email: ccong005@odu.edu

**Conference**

- **ASHE** (Association for the Study for Higher Education) **Conference**, Columbus, OH 11/2016  
*Summer Cong*, Yuanyuan Yue, & Angela Hales. “**The Influence of Personal Safety, Neo-racism, and Attachment on International Students’ Educational Satisfaction.**”
- **NAFSA**: Association of Professional Educator National Conference, Denver, CO 05/2016  
Angela Hales, *Summer Cong*, Peggy Gesing, & Chris Glass. “**Supporting First-Generation Chinese College Student Engagement and Support.**”
- **NAFSA**: Association of Professional Educators Region VIII Conference, Williamsburg, VA 11/2014  
*Summer Cong* as a member of International Student Group. “**The Jury Has Spoken: International Student Perspectives on Campus Engagement Initiatives.**”

**Study Abroad**

- Old Dominion University, **Spain & Portugal** March, 2015
- Interviewed local and international students, faculty, staff, and education leaders to gather information regarding Spain and Portugal’s higher education systems and their goals of increasing internationalization efforts.
- Woosuk University, **Korea** 2009-2011
- Studied Marketing and Korean in a four-year, public institution in Korea.
  - Elected as the leader of Chinese Student Association, assisted instructors to monitor and support students’ academic success and daily life.

**Skills**

*Language Skills*: Mandarin Chinese (Native Speaker), English (Professional Working Proficiency, Advanced Cultural Competency), Korean (Proficiency, Advanced Cultural Competency)

*Technology Skills*: Google Docs, Microsoft Office Software, Social Media, SPSS

**Honors and Awards**

- Six **Certificates of Contribution** in Promoting Internationalization and Inclusiveness, ODU 2014-2017
- Institute Certificate** of Graduate Teacher Assistant Instructor, ODU 08/2014
- Graduate Certificate** of Quantitative Data Analysis in Education & Social Science, MU 07/2011