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# Predictors of International Students' Socio-Cultural Adjustment

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PREDICTORS OF INTERNATIONAL STUDENTS' SOCIO-CULTURAL ADJUSTMENT

by

Chang, Wen-hsin,

A Dissertation Submitted in  
Partial fulfillment of the  
Requirements for the Degree of

Doctor of Philosophy  
in Educational Psychology

at

The University of Wisconsin-Milwaukee

August 2016

## ABSTRACT

### PREDICTORS OF INTERNATIONAL STUDENTS' SOCIO-CULTURAL ADJUSTMENT

by

Wen-hsin Chang

The University of Wisconsin-Milwaukee, 2016  
Under the Supervision of Profession Nadya Fouad

International students' well-being and their adjustment have gained interest from researchers in different areas, including educational psychology, social psychology and counseling psychology. By using the social cognitive model, this study focused on finding the relationships among English fluency, social self-efficacy, cultural values, perceived social support, perceived discrimination and conflict handling styles and how they affect international students' sociocultural adjustment. A hierarchical regression model found that international students with high social self-efficacy have less socio-cultural adaptation difficulties when they perceived low discrimination. However, when these students perceived high discrimination, they experienced higher socio-cultural adaptation difficulties. International students who valued openness to change reported lower socio-cultural adaptation difficulties. While international students' English fluency in writing and speaking influenced their social self-efficacy, English fluency as a whole did not influence socio-cultural adaptation after factors such as perceived discrimination, social support, social self-efficacy and values were controlled. Finally, international students using dominate conflict handling style and international students using avoidance conflict handling style showed differences in their conservation value, but different conflict handling styles did not influence

the relationship between English fluency and social self-efficacy. Implications are discussed. Limitations of the study and suggestions for future studies are provided.

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## Chapter I

### INTRODUCTION

New technologies such as the Internet and free social networking software have made communication and interaction between countries easier. Friedman (2006) argued that globalization will increase people's opportunities to work with other individuals coming from various cultural backgrounds, religions, educational backgrounds, and languages. Since the younger generation is facing this challenge, it is critical to equip them with the ability to interact with people from different cultures. However, the number of international students attending higher education institutions in the United States was decreased from 2002 to 2004 (Institute of International Education, 2014). With the increasing enrollment of international students after 2005, the cultural diversity in higher education in the United States is also enhanced. Even though the total number of international students slightly decreased during the year 2002-2004, international students still represent 3.5 percent of the total higher education populations in America (IIE, 2011). According to the "Open Doors Report" released by the Institute of International Education (2014), international student enrollment at both colleges and universities in the United States has increased by 8% over the prior academic year. This brings the total number of international students in America to 886,052 (Institute of International Education; IIE, 2014). In other words, international students represent 4% of the total higher education population in the United States (IIE, 2014). The top five places of origin are China (31%), India (11.6%), South Korea (7.7%), Saudi Arabia (6.1%) and Canada (3.2%) (IIE, 2014). The top three fields of study of international students are Business and management (21.2%), Engineering (19.2%) and Math and Computer Science (10.3%) (IIE, 2014).

Not only have the international students enhanced campus diversity by presenting different perspectives in classroom discussions, but they have also provided opportunities for American students and educators to become more multiculturally sensitive (Lee & Rice, 2007). They offer an international dimension and perspective to the student body and make the campus become internationalized (Anayah, 2012). Because of cultural globalization, being able to work with people from another culture is a critical transferable skill. International students provide chances for domestic students to interact with people from another country and learn perspectives beyond country boundaries. This diverse experience can have a positive impact on domestic students' personal development, vocational preparation, intellectual development and diversity competence (Luo & Jamieson-Drake, 2013). It has also been documented that domestic students who have more frequent interaction with diverse peers would have greater openness to diversity and willing to challenge their own beliefs (Luo & Jamieson-Drake, 2013).

Other than adding social and cultural diversity to higher education in the hosting country, past research indicated that a country's economy can also be promoted by having internationalized higher education (Zheng, 2014). Countries are competing to attract more international students because this population can ease financial pressure on the host country government through tuition and living expenses (Andrade & Evans, 2009; Zheng, 2014; Zhang & Goodson, 2011). For example, the Association of International Educators estimated that international students and their family members have contributed approximately 26.8 billion U.S. dollars to America's economy during the 2013-2014 academic year; they also supported 340,008 jobs in the United States (IIE, 2014). California alone profited almost 407 million dollars from foreign students and their families during the 2013-2014 academic year (NAFSA, 2014). The Department of Foreign Affairs and International Trade in Canada also pointed out that long-term international students contributed \$4.2 billion to the Canadian economy in their

2012 annual report. Furthermore, it has been argued that the host country's trade position and the current account of its balance of payments could be improved by having international students studying in their country (Zheng, 2014).

Even though international students account for slightly over 4 percent in the United States higher education (IIE, 2014), they have “always remained one of the most quiet, invisible, underserved groups on the U.S. campus” (Mori, 2000, p. 143). Given that retention has been one of the most popular researched topics in higher education, it is surprising that retention statistics are not readily available for international students (Andrade & Evans, 2009). National Collegiate Athletic Association (NCAA) and Consortium for Student Retention Data Exchange (CSRDE) were the two agencies that tracked nonresident aliens' persistence and graduation rates (Andrade & Evans, 2009). The first-year persistence rate for international students was 80.2% from 2006 to 2007 academic year, which was close to domestic students' retention rate (80.1%) (Hayes, 2007); however, little is known about contributors to international students' success and retention.

### *Problem Statement*

It has been found that the risk factors related to domestic students' retention could also affect the international student population (Andrade & Evans, 2009). However, “unlike native students, international students need to develop bicultural competence, or second-culture acquisition, as they maintain their own values while adjusting to the practical, interpersonal, and emotional challenges encountered in the host countries” (Wei, Heppner, Mallen, Ku, Liao, & Wu, 2007, p. 590). Furthermore, the adjustment issues international students encounter are often distinct from their country of origins (Andrade & Evans, 2009). The factors that influence international students' retention rates could be classified into academic, social and personal categories (Andrade & Evans, 2009). Based on Seidman's (2005) retention formula, retention

is equal to early identification plus early, intensive and continuous intervention. Being able to identify students' needs and at-risk potential as early as possible is a critical factor in retention studies (Andrade & Evans, 2009). Knowing the issues and challenges that international students may face is the first step for related agencies to develop intervention that correspond directly to international students' need for support (Andrade & Evans, 2009).

There have been studies focused on different factors that impact international students' adjustment in the United States. However, little is known about the direct, indirect and moderate relationship between perceived English fluency, perceived social support, cultural values, styles of handling intercultural conflict, perceived discrimination and how those factors influenced international students' sociocultural adjustment level. Past research has concluded that there are several possible acculturative stressors that international students encounter, including language barrier, educational stressors, sociocultural stressors, discrimination and practical or lifestyle acculturative stressors (Smith & Khawaja, 2011). Among these stressors, one's social network, which has been examined and discussed in several articles, is identified as a critical factor in international students' acculturation process and as a source of self-efficacy (Araujo, 2011).

Establishing a new social network after arriving the host country is very important for international students. Strong social support may help international students enhance their self-efficacy in adjusting to the host country. Some research suggests that international students' stress levels would be reduced if they have strong familial and graduate social support (Araujo, 2011). On the other hand, Yen and Inose (2003) pointed out that the separation from important others who have endorsed international students' sense of self in the past can cause significant distress for them, and that international students' sense of self might be shaken as a result. In addition, language barriers, cultural norms and the nature of friendships in the hosting country



may all keep international students from establishing a strong social network (Smith & Khawaja, 2011).

When international students build up their social network, three categories of friendship will develop: (1) co-national network, (2) network with host nationals and (3) multi-national network (Hendrickson, Rosen and Aune, 2011). It has been argued that these groups provide different types of supports to international students (Hendrickson, Rosen and Aune, 2011). Given the benefit that international student can have from making friends with domestic students and local people, there are some challenges they face, such as language and cultural differences (Smith & Khawaja, 2011).

It needs to be noted, however, that not every international student faces the same amount of challenge in building social support. International students from Asia are more likely to perceive difficulties in making friends than international students from Europe when they study in the United States (Smith & Khawaja, 2011). In addition, language barriers may prevent international students from interacting or making friends with the locals (Smith & Khawaja, 2011), resulting in a sense of insecurity and confusion to students, which explains why language proficiency can greatly affect international students' acculturation process (Liu, 2009). Length of study also plays a role in international students' acculturation process. Lin and Betz (2009) found that Chinese and Taiwanese international students' social self-efficacy increased systematically with years of stay in the United States. It suggests that the experiences of staying in the host country can help international students build up positive social self-efficacy and lower their acculturation stress. Having more local contacts also accelerates and smoothes international students' adjustment (Hendrickson, Rosen & Aune, 2011). Since factors affecting international students' acculturation vary, and since the speed of acculturation

also varies from student to student, how to assist international students in adapting to the host country is an important issue to consider.

Despite the aforementioned psychosocial stress that international students encountered, the challenges they face when having and solving a conflict with other people are not widely examined yet. Shupe (2007) indicated that conflict predicts poor work related and sociocultural adaptation for international students. However, there is also lack of research on the issues of solving intercultural conflict between domestic students and international students. The impact of language proficiency, cultural values and perceived social support on international students' methods of handling interpersonal conflict remains unknown. In addition, more research is needed on how their perceived social support might influence their retention rate and adjustment.

By using social cognitive theory as a framework, this study has two purposes in mind: (1) identifying various factors that influence international students' sociocultural adjustment in the host country; (2) exploring how the interaction between these factors affect international students' sociocultural adjustment levels and their retention in the United States in order to understand what kind of resources would be helpful for counselors working with international students.

In the social cognitive model, language proficiency and country of origin were included as sources of self-efficacy and outcome expectations in this study. The study focused on the role of social self-efficacy plays in international students' socio-cultural adaptation. This study also focused on the interaction between social self-efficacy and perceived social support, and the interaction between perceived discriminations and socio-cultural adaptation. In addition, this study examined the role of conflict handling in international students' socio-cultural

adaptation process (Appendix A). In the end, suggestions will be provided for international student centers to help students have better adjustment in the United States.

### *Research Questions*

The following research questions will be investigated:

1. Does English proficiency in different domains (i.e. listening, reading, writing and speaking) have different degrees of impact on international students' social self-efficacy?
2. Are international students' conflict handling styles influenced by their cultural values?
3. Would conflict handling style influence the relationship between English proficiency and social self-efficacy?
4. How do perceived discrimination and perceived social support moderate the relationship between social-self-efficacy and sociocultural adjustment?

### *Hypotheses:*

The four research questions led to the hypotheses about the relationships between international students' language proficiency, social support, social self-efficacy, discrimination, conflict handling style, cultural value differences and international students' sociocultural adjustment.

The four research questions led to the hypotheses about the relationships between international students' language proficiency, social support, social self-efficacy, discrimination, intercultural conflict, cultural value differences and international students' sociocultural adjustment.

Hypothesis 1: International students who have more confidence in their English speaking and listening skills are more likely to have higher social self-efficacy.

Hypothesis 2: International students with preference in integrative conflict handling style will have higher scores in their openness to change. International students with preference in avoidance style will have higher scores in conservation.

Hypothesis 3: The relationship between language proficiency and self-efficacy varies depending on the differences between the four conflict handling styles.

Hypothesis 4: International students perceived social support will moderate the effect of social self-efficacy on socio-cultural adaptation difficulties.

Hypothesis 5: International students' perceive discrimination will moderate the impact on their sociocultural adjustment in the United States.

#### *Definition of the terms*

1. International Students: International students are individuals who received education from accredited institutions outside of their country of citizenship, usually under special permits or visas (Liu, 2009). In this study, they are students who are studying in the United States with student visas (F1 or M1 visas).
2. English proficiency: In this study, it is defined as the confidence that international students have with their listening, speaking, reading and writing skills when interacting with other people in English.
3. Social self-efficacy: Self-efficacy is defined by Bandura as a person's beliefs in his or her capabilities to successfully perform a specific task (Yusoff, 2012). Social self-efficacy is defined as a person's beliefs in his or her capabilities to successfully perform in a social situation (Lin & Betz, 2009).
4. Cultural values: cultural values represent a society's norms of what is good, right and desirable across situations (Williams, 1970, Schwartz, 1999). In this study, cultural values are defined as "desirable, trans-situational goals, varying in importance, that

serves as guiding principles in people's lives" (Schwartz, 2006, p1). Followed the Schwartz Theory of Basic Values, the ten values are: self-direction, stimulation, hedonism, achievement, power, security, conformity, tradition, benevolence, and universalism (Schwartz, 2012).

5. Perceived social support: Perceived social support is conceptualized as "a function of beliefs about self-worth and the availability and responsiveness to others (Vaingankar, Abdin & Chong, 2012, p.287)." In this study, social support is defined as the "perceived availability of supportive behaviors that serve particular types of functions" (Ong & Ward, 2005, p. 638).
6. Perceived discrimination: The perceived discrimination is defined as the level of discrimination that one experience in the United States.
7. Intercultural conflict: intercultural conflict "encompasses a range of clashes, which occur, in part, because of differences between cultural groups. (Rubinfeld & Chlement, 2012, p.1206)." In this study, intercultural conflict is defined as the conflict between international students and domestic students in the United States.

## Chapter II

### REVIEW OF LITERATURE

#### *Introduction and focus of the topic*

According to Institute of International Education (2014), international students represent 4% of the total higher education population in the United States. About 73% (823,284) of active international students are enrolled in bachelors, masters or doctoral programs (Immigration and Customs Enforcement, ICE, 2014). However, it has been documented that international students experience greater stress and more psychological issues than domestic students (Mori, 2000; Tidwell & Hanassab, 2007). Given the significant number of international students in the United States, it is important for researchers to develop a more complex model of acculturative and adjustment to capture different factors that influence international students' well-being (Wang, Heppner, Fu, Zhao, Li, Chuang, 2012). It is also critical to examine how international students deal with psychological distress and struggles (Wang et al., 2012).

Past research has concluded several factors that have been found to influence international students' adjustment level, such as English proficiency, social support, length of stay in the U.S., coping strategies, perceived discrimination or prejudice, homesickness, self-efficacy, self-esteem, acculturative stress (Araujo, 2011; Barratt & Huba, 1994; Hechanova-Alampay, Beehr, Christiansen, & Van Horn, 2002; Poyrazli, 2003; Wang, 2012; Wei, Ku, Russell, Mallinckrodt & Liao, 2008; Ye, 2006; Ying & Liese, 1994; Zhang & Goodson, 2011). However, only few scholars have discussed the impact of intercultural conflict on international students' adjustment in the United States. The effect of English proficiency, social self-efficacy, cultural values on how international students deal with conflicts needs more exploration. Thus, in order to understand the relationships among language barriers, social self-efficacy, cultural values, intercultural conflict, perceived social support, perceived

discrimination and international students' adjustment in the United States, these concepts are all included in the literature review in this chapter.

The current study proposes to use the social cognitive model to include language proficiency and country of origin as sources of self-efficacy and outcome expectations. The following literature review attempts to discuss the social cognitive model and discusses the benefit and the drawbacks of using this model.

There are two primary categories of research on the different factors that impact international students' adjustment. The first category includes pre-arrival factors, such as English proficiency, cultural values, gender, country of origin, personality, maladaptive perfectionism (Wang et al., 2012). The second is classified as post-arrival factors, including perceived social support, perceived discrimination, length of residency, homesickness, unfamiliar climate (Wang et al., 2012). This chapter will first review the research on international students' adjustments in the United States. It will then review both pre-arrival and post-arrival factors. The literature review will mainly focus on the impact of language proficiency, social support, perceived discrimination, social self-efficacy, intercultural conflict and cultural values on international students' adjustment. This will be followed by the theoretical model that is going to be used in this study.

### *International Students' Adjustment*

Moving to another country and study can often cause stress and identity confusion because it is a process of dealing with different cultures and finding balance between them (Nguyen & Benet-Martinez, 2013). The process of learning and adapting to a new culture is called acculturation (Nguyen & Benet-Martinez, 2013). Berry (2005) defined acculturation as "the dual process of cultural and psychological change that takes place as a result of contact between two or more cultural groups and their individual members"(p.698). However, this process is

often stressful and challenging for many individuals because they may be challenged with new cultural norms and different cultural values (Berry, Kim, Minde & Mok, 1987). As a result, the stressors in this learning and adapting process often impact on people's adjustment in a new country (Smith & Khawaja, 2011).

All individuals who enter a new culture need to deal with the issue of how to acculturate (Berry, 2008). Balancing the original cultural identity they have and becoming involved in other cultural groups is an ongoing task for people who move to a new culture (Berry, 2008). Four strategies can be used to cope with this issue, they are: 1) integration, 2) assimilation, 3) separation/ segregation and 4) marginalization (Berry, 2008). According to Berry (2008), the integration strategy is used to describe individuals who maintain their own cultural values and are also willing to participate in the new culture. The assimilation method is when individuals choose to abandon their original culture value to participate in the new culture. The separation method is used when people chose to maintain their original cultural values and not participate in the new culture. The marginalization method happens when a person chooses not to adhere to either the original or the new culture.

Past research has used Berry's acculturation model widely to investigate individuals' adjustment in a new culture (Ward & Rana-Deuba, 1999; Wei, Heppner, Mallen, Ku, Liao, & Wu., 2007; Ying, 2005). Ward and Rana-Deuba (1999) indicated that individuals who applied the integrated method had better psychological adjustment than individuals who applied other strategies. Even though many studies about international students' adjustment applied Berry's model, there remain a few of issues when using this model. First of all, this model requires researchers to classify individuals into four categories based on their receiving-culture acquisition and heritage culture retention level (Berry, 2008). Past researchers have used different methods to decide the cut point for the high and the low group, yet the cut point



between studies may be different from sample to sample (Schwartz, Unger, Zamboanga & Szapocznik, 2010). This could add more challenges when comparing different studies (Schwartz, et al., 2010). Secondly, there is only a small portion of people using marginalization as a coping strategy and the assessment for this category does not have good reliability and validity (Schwartz et al., 2010). Thirdly, this model characterizes all migrants equally without acknowledging the differences within this population (Schwartz et al., 2010). For example, refugees often experience more discrimination and rejection from the hosting country than immigrants with high social economic status (Steiner, 2009). Given the complexity of the acculturation process (Zhang & Goodson, 2011), more complex models of acculturative adjustment are needed (Wang et al., 2012).

Ward and Kennedy (1992) separated the domains of adjustment into psychological adjustment and sociocultural adjustment. Psychological adjustment is related to psychological well-being such as depressive symptoms, global mood disturbance, physical symptoms and is influenced by personality traits, life changes, and social support (Ward & Kennedy, 1993). Ward and Kennedy (1999) indicated that a stress and coping framework could best explain an individual's psychological adjustment. Zhang and Goodson (2011) consider psychological symptoms, stress, acculturative stress, physical symptoms and satisfaction with life in the United States as factors that can be used to assess psychological adjustment. The sociocultural adjustment, on the other hand, indicates the connection an individual has with the new society (Smith & Khawaja, 2011). It is related to a person's knowledge of different culture, length of residency in the host culture, and the quality and quantity interaction with local people (Ward & Kennedy, 1933). The three most frequently reported predictors for sociocultural adjustment in the literature were language proficiency, social contact with local people and acculturation (Zhang & Goodson, 2011).

Nguyen & Benet-Martinez (2013) conducted a meta-analysis with 83 studies and separated physical symptoms from the domain of psychological adjustment into health-related adjustment. They argued that health-related adjustment includes somatic symptoms, physical activity and eating style (Nguyen & Benet-Martinez, 2013). In this paper Nguyen and Benet-Martinez (2013) indicated that most of the past researchers mainly focused on the relationship between acculturation and psychological or sociocultural adjustment. Using the random-effect approach, the researchers found a significant, strong and positive relationship between biculturalism and adjustment. The researcher also indicated that the flexibility and competencies of an individual may be more sensitive, which could be cultural mediators for intercultural conflicts (Nguyen & Benet-Martinez, 2013). The analyses also found that personality is associated with psychological adjustment and maladjustment (Nguyen & Benet-Martinez, 2013). For example, neuroticism was negatively associated with subjective well-being (Steel, Schmidt, & Shultz, 2008). The majority of the studies that Nguyen and Benet-Martinez (2013) reviewed were based on immigrants' experience. It is not clear whether international students would have the similar result given the length of residency may be significantly shorter than immigrants. Also, for international students who did not plan to stay in the host country, their coping strategies with acculturation stress may be different from immigrants.

Past research has examined factors that influence international students' psychological adjustment in the United States, although most of the studies were based on samples of students or individuals from Asia (Zhang & Goodson, 2011). Stress, social support, English proficiency, length of residency in the United States, acculturation and personality were the most frequently reported factors. For example, Zhang and Goodson (2011<sup>a</sup>) examined whether social interaction and social connectedness with host nations can mediate or moderate the relationship

between acculturation and adjustment. Studying 508 Chinese international students, they found that the relationship between adherence to the host culture and psychosocial adjustment can be partially mediated with the perceived social connectedness that international students have with Americans (Zhang & Goodson, 2011<sup>a</sup>). Social connectedness with local people in the United States was also the factor that accounted for most of the variance for Chinese international students' psychosocial adjustment (Zhang & Goodson, 2011<sup>a</sup>). However, given that this study only recruited Chinese international students as participants, the result cannot be generalized to explain the adjustment for international students from other countries. They also did not study the effect of perceived social support from Chinese international students' home country and the support from other Chinese international students (Zhang & Goodson, 2011<sup>a</sup>). More study is needed in examining how social support from different groups may interact with each other and the impact on students' psychological adjustment.

In terms of sociocultural adjustment, Yusoff (2011) investigated the relationship between social support, self-efficacy and sociocultural adjustment with international undergraduate students population in Malaysia. The researcher used the concept of general self-efficacy in this study. General self-efficacy is the confidence that a person has about their capability of approaching tasks and handling stressful situations (Yusoff, 2012). A total of 185 international undergraduate students from various countries of origin participated in this study. This study found that perceiving social support is positively related with international students' sociocultural adjustment (Yusoff, 2012). Support from significant others also helped international students in Malaysia have better sociocultural adjustment (Yusoff, 2012). General self-efficacy was related with cultural empathy and thus resulted in having better sociocultural adjustment (Yusoff, 2012). This study did not control factors that may contribute to a person's self-efficacy and social connectedness with local people such as language proficiency, length

of stay and their knowledge of the culture in Malaysia before coming in and studying (Yusoff, 2012). However, other researchers have pointed out that the factors listed above could affect international students' social connectedness with local people (Liu, 2009; Araujo, 2011; Smith & Khawaja, 2011).

Smith and Khawaja (2011) reviewed literature related to international students' acculturation experiences and summarized that language, educational stressors, sociocultural stressors, discrimination and practical stressors are possible acculturative stressors that international students encountered during their acculturation process. It appears that past researchers have spent a lot of effort in finding out the stressors in the acculturation process, but have not examined whether a growth-oriented model could decrease their acculturative stress (Yakunina, Weigold, Weigold, Hercegovac, & Elsayed, N,2012). Yakunina et al. (2012) found that international students' personal multicultural strengths could help them reduce the effect of these acculturative stressors and thus have better adjustment outcome. There were 336 international students who participated in this research; 65% of them were from Asia (Yakunina et al., 2012). Yakunina et al. (2012) indicated that for international students who have higher intention to grow and improve themselves across multiple life domains tended to have better adjustment outcome. The researchers argued that it was because personal growth initiative may be a key factor of a healthy, well-adjusted personality, and thus linked with better adjustment and mental health outcomes (Yakunina et al., 2012). This study also found that international students with the ability to thrive under stressful conditions also have better adjustment outcome because this ability can reduce some of the acculturative stress they experienced (Yakunina et al., 2012). This indicated that helping international students cope with stress effectively could help them reduce acculturation stress and adjust better in the host country (Yakunina et al., 2012). Having the ability to appreciate cultural similarities and

differences can also help international students have positive cross-cultural adjustment (Yakunina et al., 2012). Even though Yakunina et al. (2012) has pointed out the strengths that international students have that can help them promote better adjustment outcome cross-culturally, the differences between international students' country of origin was not presented (Yakunina et al., 2012). Furthermore, the surveys were all in English, whether this will cause some sort of misunderstanding is unknown (Yakunina et al., 2012). More research is needed to better understand the protective factors for international students in the acculturation process. It is also critical for researchers to know more about the strengths that international students have and help them apply those abilities in coping with acculturative stress. According to Bandura (2002), self-efficacy beliefs decide individuals' levels of motivation and how they choose to handle challenges. In this study, one of the main focuses in on the impact of international students' confidence of involving in USA culture. This will allow the researcher to examine international students' adjustment in a more positive way.

### *Language Proficiency*

Language is a basic and necessary requirement in daily lives. English proficiency is critical for international students in the United States to interact and communicate with domestic students, other international students, professors and school agencies. It is not surprising that English ability has been indicated as one of the critical factors that impact international students' adaptation in the United States (Zimmermann, 1995). Language has a huge impact on different aspects, including an individual's academic performance, building social support, adjustment to a new environment and so on (Liu, 2009; Araujo, 2011; Smith & Khawaja, 2011). In addition, past research indicates that English proficiency can predict international students' psychological distress, sociocultural adjustment and acculturative stress (Duru & Poyrazli, 2007; Poyrazli, Kavanaugh, Baker & Al-Timimi, 2004; Wang & Mallinckrodt, 2006; Ye, 2005;

Yeh & Inose, 2003). For example, low scores on the TOEFL and low pre-arrival self- assessed English ability were found to be predictors of depression for Taiwanese international graduate students (Ying & Liese, 1990). From the literature review done by Zhang and Goodson (2011), English proficiency is the third most frequently reported predictor of international students' sociocultural adjustment in the United States.

Language barriers may make it harder for international students to understand lectures, participate in class, ask questions or express their ideas precisely, answering essay questions and writing papers (Cadieux & Wehrly, 1986; Parr, Bradley & Bingi, 1992). Language barriers could also force international students to spend much more time on school work and they may find it challenging to fulfill course requirements. Compared with US students, international students run into more difficulties in class such as note taking, answering essay questions because of having lower level English proficiency (Parr et al., 1992). Poyrazli and Kavanaugh (2006) found that English proficiency was related to Asian international students' adjustment strain and their academic achievement. Similarly, Duru and Poyrazli (2007) indicated that English fluency can predict Turkish undergraduate international students' acculturative stress. Many international students with strong academic performance in their home countries might be struggling with courses that are new to them, which may create a discrepancy between their performance and the performance standard they set up for themselves. This phenomenon is defined as maladaptive perfectionism, which has been associated with depression consistently in the past literature (Wei, et al., 2007). Using a qualitative approach, Poyrazi and Grahame also found that language competence was an ongoing concern for international students in 2007 (Araujo, 2011).

In addition, language barriers may prevent international students from interacting or making friends with the locals (Smith & Khawaja, 2011), resulting in a sense of insecurity and

confusion to students, which explains why language proficiency can greatly affect international students' acculturation process (Liu, 2009). It is suggested that the lack of confidence in speaking the host language fluently is one of the primary obstacles for international students to connect with the hosting society (Liu, 2009). Swagler and Ellis (2003) further pointed out that international students' self-perceived language ability, rather than their actual language ability led to their adjustment outcomes (Lin & Betz, 2009). Once an international student cuts back his or her interaction with others, his or her social and language skills might become poorer. This may in turn make them feel insecure and have lower social self-efficacy.

International students from different countries may not experience the same difficulty regarding to language barriers. It has been found that it was easier for Indo-European speakers (ex. French, Portuguese, German, Spanish) to learn English than speakers of Dravidian (ex. Malayalam, Telugu) or Mongolian languages (ex. Oirat, Chahar) (Gunawardena & Wilson, 2012). Sandhu (1994) found that students who come from countries where English is not an official or spoken language reported encountering higher language barriers. Research has also shown that international students from Asia seem to have higher language barriers than international students from Europe (Ye, 2006). However, most of the researchers only pointed out the impact of international students' English proficiency. They did not take into account how English was used in these students' home country when interpreting the result. Given that non-English speakers' cultural and national backgrounds have an effect on their learning outcome, further examination of how English is used and taught in international students' home country may be critical (Gunawardena & Wilson, 2012).

Even though language ability has been the most reported factor for international students' adjustment, past research has not examined the impact of the four language skills—reading, writing, speaking and listening—separately. It is possible that each skill may influence

international students' adjustment in the host country to a different degree (Araujo, 2011). A survey conducted by Purdue University in 2012 shows that writing is the most difficult task for most of international students at Purdue. In addition, the length of time the international students have studied the target language and whether their mother tongue belongs to the same linguistic group as the target language are also factors to be considered. In this study, the researcher will ask international students to self-report their English skills and document their mother language and level of English training to fill up the gap in current literature.

### *Social support*

When people move to a new environment, there are lots of different social and cultural patterns that they need to adapt psychologically and sociologically (Ye, 2005). Stress caused from the transition can negatively impact people's well-being (Ye, 2005). Copeland and Norell (2002) indicated that it is critical to discuss the role of social support on international relocations because it includes the disruption of original social network and the challenge to develop a new one. Research indicates that social support can mediate the association between stress and depression as well as the association between life stress and reaction to stressors for international students (Misra, Crist & Burant, 2003; Yang & Clum, 1994). Social support can have a positive impact on individual's well-being and can also be a resource for individuals who are adjusting to life changes (Mallinckrodt & Leong, 1992). However, many international students experience the need of building new social support systems in the host culture because their friends and family members back home may not be immediately available due to distance and time differences between countries (Chavajay, 2013). Language barriers, cultural norms and the nature of friendships in the hosting country may all keep international students from establishing a strong social network (Smith & Khawaja, 2011). Actually, many international students reported feeling isolated in the US culture (Trice, 2004). A lack of social support can



negatively influence international students' adjustment and intensify their loneliness (Smith & Khawaja, 2011). Gunawardena and Wilson (2012) concluded that social support is directly related to international students' feeling of non-isolated and can decrease their countering stress. It could also improve the international students' retention rates and fulfilling their needs for support in academic and adjustment (Gunawardena & Wilson, 2012). It is clear that establishing a new social network after arriving in the host country is very important for international students.

Social networking, which has been examined and discussed in several articles, is identified as a critical factor in international students' acculturation process (Araujo, 2011). In fact, Zhang and Goodson (2011) concluded that stress and social support are the most frequently reported predictors for psychological symptoms in the past literature. The concept of social support includes emotional support, esteem support, network support, tangible support and informational support (Xu & Burleson, 2001). Strong social support may help international students enhance their self-efficacy in adjusting to the host country. In addition, several studies have indicated that social support can predict international students' psychological adjustment, sociocultural adaptation, acculturation stress and their psychological well-being (Atri, Sharma & Cottrell, 2007; Cemalcilar, Falbo & Stapleton, 2005; Jung, Hecht & Wadsworth, 2007; Lin, Peng, Kim, Kim & LaRose, 2011; Ye, 2006; Yeh & Inose, 2003). Social supports come not only from the hosting country. Past literature has examined the effect of social support from family members and friends in their home country, domestic students, international students from other countries, international students from their home country, advisors, college international students services (Al-Sharideh & Goe, 1998; Cemalcilar et al., 2005; Chen, Mallinckrodt & Mobley, 2002; Lin et al., 2011; Swagler & Ellis, 2003; Ye, 2006; Ying & Liese, 1994, Zimmerman, 1995). The research discussed above indicates that social supports

from different groups of people are all important for international students' adjustment in a different country.

Perceived social support from home can predict international students' psychological adaptation (Cemalcilar et al., 2005). Research has shown that international students' stress levels would be reduced if they have strong familial social support (Araujo, 2011). Yeh and Inose (2003) argued that international students' sense of self might be shaken as a result of separation from important others who have endorsed their sense of self in the past, and that this separation can cause significant distress for them.

When building up their social network, three categories of friendships start to form among international students, which are: (1) co-national network, (2) network with host nationals and (3) multi-national network. Co-national network is a network that builds on people of the same nationality (Hendrickson, Rosen & Aune, 2011). This type of friendship provides international students with an outlet to share their thoughts and emotions in the host country. The second type of network is to build friendships with people from the host country. The last type of network involves friendships with other international students, which enable international students to learn other cultures, have a sense of togetherness, and feel less stress (Hendrickson, Rosen & Aune, 2011).

Atri, Sharma and Cottrell (2007) pointed out that the sense of belonging can predict individuals' psychological well-being. Whether international students choose to maintain old friendships or to build new ones, staying connected with others can help them feel less stressed. It has been shown that support from both domestic students and from students from their own country predicts better acculturative adjustment for Taiwanese international students (Swagler & Ellis, 2003). Other research suggests that social support and socialization with both non-Americans and Americans can predict international students' acculturative stress (Yeh & Inose,

2003). Lin et al. (2011) found that international students' interaction with Americans and friends from their home country by social media were positively related to their social adjustment. International students who have more friends domestically and internationally indicate they feel more satisfied in their lives (Lin et al., 2011). Trice (2004) also found that international students had better cultural adjustment outcome when they have more social interaction with American peers. The highest depression was found for Chinese international students who did not adhere to their home culture and had limited interaction with local people in the United States (Zhang & Goodson, 2011). It has also been documented that interaction with Americans is positively related to international students' sociocultural adjustment (Zhang & Goodson, 2011). In general, international students who are more connected with local people experienced less adjustment issues and culture shock (Gunawardena & Wilson, 2012). Having friendships with international student can also benefit domestic students. Williams and Jonson (2011) did a study on the challenges that international students and domestic students have when trying to build up friendship with each other. They indicated that students with international friendships tend to be more open-minded and have higher levels of intercultural communication apprehension.

Even though building friendships and connecting with local people can benefit both parties, the impact of interpersonal conflict between international students and domestic students on international students' perceived social support has not been studied thoroughly. Zhang and Goodson (2011) found only one article examined the effects of intercultural conflict on international students' sociocultural adaptation in their review of 64 articles. Shupe (2007) pointed out that conflict predicts poor work related and sociocultural adaptation for international students. It is important for researchers to further examine the stress caused by

culture-related or perception-based conflict (Shupe, 2007), and how intercultural conflict may impact international students' adjustment and perceived social support in the United States.

The perceived support from the school agency and the community is also critical for international students' adjustment. A report of climate for diversity at Cornell indicated that international students are more likely to feel "left out" compare with U.S. minority students (2013). In the same survey, it was pointed out that international students feel less connected to campus services when compared with domestic students. About 35% of international students chose to handle the challenges by themselves, and about 20% of them did not know about help from campus resources. Yet the perceived social support from the academic program can predict international students' depression and anxiety level (Mallinckrodt & Leong, 1992). Perceived support from a campus international student office can be a moderator between effect of racism and distress symptoms for Asian international students (Chen, Mallinckrodt & Mobley, 2002). Past research has also shown that interaction with the local community can help international students make a successful transition to the host country (Gunawardena & Wilson, 2012).

Even though there has been some research on social supports regarding the different groups with whom international students interact, whether the support that students obtain from these different groups are the same has not been deeply explored. Ong and Ward (2005) indicated that international students and workers in Singapore tend to seek emotional and psychological support from people from same culture, such as family members and friends living abroad. This research also shows that international students and workers tended to seek support for daily events such as leisure activities and physical assistance from local residents. Chavajay (2013) found that international students perceived greater socioemotional and instrumental support from different groups of people than from the local U.S. people. This may

be caused by cultural differences and language barriers (Chavajay, 2013). The sense of alienation and discrimination that many international students experienced in the hosting country may also make them consciously choose other international people for support (Chavajay, 2013). More research is needed to know how social support provided by different groups such as family members, other international students and local people are supporting different dimensions. Furthermore, past research has not examined the impact of student organization for international students from different countries such as the Taiwanese student association, Chinese student association and so on. The current study will include this factor to examine its impact.

### *Self-efficacy*

Self-efficacy is defined by Bandura as a person's beliefs in his or her capabilities to "mobilize the motivation, cognitive resources, and courses of action needed to successfully execute a specific task within a given context" (Stajkovic & Luthans, 1998, p.63). In addition, it is not a static ability, but "a dynamic set of self-beliefs that are linked to particular performance domains and activities" (Lent, 2013 p. 118). When an individual is making a decision, he/she does not make the decision solely based on the reinforcement received, but also on how well he or she can perform on the assigned task (Stajkovic & Luthans, 1998). For example, students who have lower self-efficacy in math may doubt that they can do well in a science and engineering major and did not choose these type of major as a result.

Self-efficacy can derive from various sources. According to Bandura's social cognitive theory, one's mastery experience is the major source of self-efficacy (Joët, Usher & Bressoux, 2011). That is, an individual's interpretations of his or her performance would greatly influence his or her self-efficacy. In extending Bandura's theory, Lent (2013) suggested that self-efficacy in the career realm is formed and modified primarily by four informational sources, which are

(1) personal performance accomplishments, (2) vicarious learning, (3) social persuasion, and (4) physiological and affective states.

Self-efficacy has three dominions. They are: magnitude of efficacy expectations, strength of efficacy expectations, and generality of self-efficacy (Stajkovic & Luthans,1998). Magnitude of efficacy expectations refers to the person's belief in his/her capability of finishing a task (Stajkovic & Luthans,1998). Strength of efficacy indicates how strong do they believes in the expectations they have about themselves (Stajkovic & Luthans,1998). Generality of self-efficacy refers to how much can this belief in one's ability to apply in other area and tasks (Stajkovic & Luthans,1998). However, most of the research has argued that self-efficacy is domain specific because high self-efficacy in one domain does not guarantee high efficacy in another (Lent, 2013).

The impact of self-efficacy on individuals' work performance has been well documented and is treated as one of the variables in the social cognitive career theory to predict one's career decision (Lent, 2013). Furthermore, research shows that self-efficacy is associated with USAcollege students' adjustment (Brady-Amoon & Fuertes, 2011). Brady-Amoon and Fuertes (2011) did a study with 271 undergraduate college students who majored in liberal arts. Using the college self-efficacy inventory to assess self-efficacy, they found self-efficacy and adjustment were significantly and positively correlated (Brady-Amoon & Fuertes, 2011).

In regard to the role different domains of self-efficacy play in international students' adjustment, it is assumed that self-efficacy is one of the factors that determines students' reactions when confronted with obstacles (Liu, 2009). Research has indicated that high levels of self-efficacy on one's ability and personal competence can reduce the risk of emotional maladjustment (Bandura, 1986). When international students arrive in the U.S., their self-efficacy can be used as a baseline to assess their adjustment and strain (Hechanova-Alampay

et al., 2002). The impact of different domains of self-efficacy on adjustment has been studied in the past literature, including academic self-efficacy (Hechanova-Alampay et al., 2002, Yusoff., 2012), social self-efficacy (Lin & Betz, 2009), work efficacy (Rahman & Rollock, 2004), cross-cultural self-efficacy (Li & Gasser, 2005). All of the research above has indicated a positive relationship between different domain of self-efficacy and international students' adjustment in the hosting country.

Hechanova-Alampay et al. (2002) conducted a longitudinal study among 188 domestic students who relocated to another university for schooling and 106 international students to examine their adjustment strain. This research used a longitudinal design and was conducted over a six-month period. These students were surveyed in every three month and adjustment and strain were assessed consistently. However, only the first survey measured self-efficacy. The third survey added the component of type of social support and cultural novelty. The result showed that international students had lower adjustment levels than their US peers upon entry and three months into the semester (Hechanova-Alampay et al., 2002). This indicated that international students may encounter some sort of difficulties that their American peers did not encounter (Hechanova-Alampay et al., 2002). They also found that for both international students and domestic students, the relationship between self-efficacy and adjustment and strain was strongest upon entry (Hechanova-Alampay et al., 2002). Even though this research compared the effect of self-efficacy on adjustment between international students and domestic students, the researchers did not specify the domain of self-efficacy they examined. Furthermore, it is possible that self-efficacy could change over time by their performance at school, vicarious learning, feedback from other people, and the level of stress they experienced (Lent, 2013). Whether the change of self-efficacy was a factor of individuals' adjustment was not examined in this study.

Some other studies studied how different domains of self-efficacy influenced international students' adjustment in the United States. Past research has indicated that international students with higher academic self-efficacy reported better adjustment and less strain (Yusoff, 2012). For example, Poyrazli, Arbona, Nora, McPherson and Pisecco (2002) found that academic self-efficacy contributed to international students' general adjustment level and that they reported fewer adjustment problems with 122 graduate international students. Ramos-Sánchez and Nichols (2007) examined the role of self-efficacy on college students' academic performance and college adjustment. The instruments they used assessed students' course efficacy, social efficacy, and roommate efficacy. Ramos-Sánchez and Nichols (2007) concluded that students' self-efficacy level in the beginning of the college predicted their adjustment. In this research, the researchers lumped different domains of self-efficacy together and discussed its impact on students' adjustment as a whole concept. It turned out that course efficacy may be a contributor to international students' adjustments in class but not to their psychosocial adjustment. Similarly, social efficacy may impact international students' sense of belongingness in the United States, but not on their academic performance. The impact of domains of self-efficacy may be overlooked in this study.

In another study, a predictive relationship between international students' overall acculturation experience and their career decision-making self-efficacy was found (Liu, 2009). Rahman and Rollock (2004) indicated that South Asian international students' work efficacy and social efficacy are related to their level of depression. However, given that mental distress may also depend on other risk factors such as poor social support or coping strategies, it is unclear whether lack of competencies was the direct cause of depression (Rahman & Rollock, 2004).



In terms of social self-efficacy, Lin and Betz (2009) examined factors related to social self-efficacy and concluded that increasing Chinese and Taiwanese international students' social self-efficacy in English interactions might reduce their acculturation stress. Social self-efficacy is also found in the study to be linked with unconditional self-regard and length of residence in the United States. However, this study only included international students from China and Taiwan where English is not a native language. It remains unclear whether international students from countries where English is an official or commonly-spoken language, such as India and England would have a similar experience.

In some cases, self-efficacy is not directly related to international students' adjustment in the hosting country. There is an indirect effect of cross cultural self-efficacy on Asian international students' sociocultural adjustment in the United States (Li & Gasser, 2005). Li and Gasser (2005) also pointed out that Asian international students' social self-efficacy can be a mediator of the indirect effect that learning goal orientation has on social adjustment. Asian international students' cross cultural self-efficacy and sociocultural adjustment is partially mediated by their interaction with Americans (Li & Gasser, 2005).

As noted above, self-efficacy is domain specific and high self-efficacy in one domain does not guarantee high efficacy in another (Lent, 2013). However, some of the studies did not specify the domains of self-efficacy they investigated. For example, Hechanova-Alampay et al. (2002) found that self-efficacy upon arrival in US can predict international students' adjustment and strain during the transition, but they did not specify the specific area of self-efficacy. The same issue is also found in the research done by Ramos-Sánchez and Nichols in 2010. It appears that most of the research focused on academic self-efficacy (Hechanova-Alampay et al., 2002, Yusoff, 2012), more research on the impact of other areas of self-efficacy (e.g. social self-efficacy, cross-cultural self-efficacy) on international students' adjustment is

needed. Furthermore, most of the research did not specify the area of adjustment on which self-efficacy impacted (Poyrazli et al., 2002; Ramos-Sánchez & Nichols, 2007). Future research will need to be more specific on the domain of both self-efficacy and adjustment.

### *Discrimination*

Facing and dealing with discrimination is a common factor that affects international students' adjustment in a hosting country (Smith & Khawaja, 2011). Discrimination is a "judgment that one has been treated with prejudice because of one's racial and ethnic membership (Duru & Poyrazli, 2011, p.448)". Past research has established a link between discrimination and poor adaptation among international students (Araujo, 2011). Wei et al. (2008) concluded that the impact of perceived discrimination may differ from other negative life events because discrimination could make it harder to assess resources that could decrease the impact of other stressors; discrimination can be perpetrated through both individual and institution and leads to the development of learned helplessness or depression (Wei et al., 2008). For international students specifically, discrimination may destroy their idealized positive views of the hosting country (Wei et al., 2008). Discrimination not only makes international students feel unwelcome and unsafe in the host country, but also increases their acculturative stress. Discrimination may also decrease international students' motivation to interact with local people (Smith & Khawaja, 2011), which turns into an obstacle for them to build up their social support system in the hosting country.

Smith (2011) indicated that nearly one third of international students have experienced racism or discrimination in Canada. Several studies have shown positive relationship between discrimination and depression (e.g. Wei et al., 2008; Wei, Heppner, Ku & Liao, 2010). Discrimination is also positively related with the adjustment difficulties (Duru & Poyrazli, 2011). In addition, students' ethnic background also impacts their experience of discrimination.

Past research indicated that compared to their Asian, Central, South or Latin American and African counterparts, international students from Europe experienced less acculturative stress because they encountered less racism and discrimination (Araujo, 2011; Yeh & Inose, 2003). The same result is also found in Smith and Khawaja's (2011) study on international students from Asia, Africa, India, Latin America and the Middle East. This experience of being discriminated can lead to a feeling of inferiority (Smith & Khawaja, 2011) and negatively influence their self-efficacy in the end.

Duru and Poyrazli (2011) examined the impact of perceived discrimination, social connectedness, social contact patterns and other factors on adjustment difficulties among Turkish international students in the United States. The study indicated that students with higher levels of social connectedness had lower levels of perceived discrimination. Consistent with previous study on Turkish international students, this study found that life difficulties related to academic and homesickness could be influenced by students' perceived discrimination levels. Duru and Poyrazli (2011) also found that adjustment difficulties can be predicted with the lack of social connectedness and perceived discrimination. English proficiency and perceived discrimination are negatively related in this study. However, the participants of this study were all Turkish international students. Whether the result can be generalized to international students from other countries remains unknown. The study also did not specify the area of adjustment they studied, and the area (ex. psychosocial adjustment, academic adjustment) related to discrimination and social connection was unclear (Duru & Poyrazli, 2011).

Wadsworth, Hecht and Jung (2008) found that for international students, perceived discrimination from members of the hosting culture is negatively related to their educational satisfaction. Interestingly, the perceived personal-relational gap was not related to international

students' educational satisfaction. Wadsworth et al. (2008) argued that it might be because international students already assumed that American students could have incorrect representations or stereotypes of them, and thus ignore these factors. In the same study, the perceived personal-enacted gap was the mediator between perceived discrimination and educational satisfaction because perceived discrimination has a stronger effect on perceived personal-enacted gap. Both graduate and undergraduate international students were recruited in this research. They found that the relationship between acculturation level and perceived discrimination was more obvious with undergraduate international students than graduate international students. However, they did not further explain this difference (Wadsworth et al., 2008). Since the length of time needed to get the degree and the course requirements are very different between undergraduate, master and doctoral programs, the experience may be different between undergraduate, master and doctoral international students. Without further investigating the within-group differences in this study we may lose some valuable information.

The majority of the literature on discrimination focuses on racial discrimination; however, discrimination can also take place in other domains (Wei, Wang & Ku, 2012). Language discrimination is defined as "being discriminated against because English is one's second language or one speaks English with an accent" (Wei, Wang & Ku, 2012, p.1). This type of discrimination can happen in a coffee shop, a shopping center, at school or community agency on a daily basis (Wei, Wang & Ku, 2012). For example, requests for a service through telephone may be rejected because of an accent. Other examples that showed language discrimination are: "I tried to order chicken wings and I did not speak clearly...the waitress was not patient...rude...and I felt like I don't belong and now I just want to get back (to my country)" (Swagler & Ellis, 2003, p. 423). "I know the first time I can't understand [because]

my English is not too good. But if I ask questions the professor will say, 'I don't understand' and so that makes me very embarrassed. I don't ask questions anymore. I ask other students—I don't ask the professor—I just talk to other students." (Lee & Rice, 2007, p.397). "Sometimes, people [slant their eyes with their fingers] and make statements like 'ping pong, ding dong' [in an attempt to mock me] because they did not think I speak good English." (Constantine, Okazaki, Gainor & Baden, 2005).

Yoo, Gee, and Takeuchi (2009) investigated the impact of discrimination and health with Asian American immigrants. They found a significant relationship between language discrimination and Asian American immigrants' chronic health conditions (Yoo et al., 2009). The research also showed that the relationship between chronic illness and language discrimination was stronger for those who stayed in the States for more than 10 years than those less than 10 years. Yoo et al. (2009) also argued that language discrimination is distinct from racial discrimination for Asian American immigrants. However, given that the research was done with Asian immigrants only, the result may not be generalized to international students in the United States. Little is known about the impact of language discrimination on this group. More research is needed to further understand the factors that could moderate or mediate the negative impact of language discrimination on individuals' adjustment (Wei, Wang & Ku, 2012).

Coping strategies can also impact the level of perceived discrimination for international students from Asia (Wei et al., 2008). With 354 Asian international students, the researchers found that high levels of suppressive coping were positively related to perceived discrimination and depression symptoms (Wei et al., 2008). This indicates that even though avoiding interpersonal conflict or hostility may be a technique for Asian international students to push away feelings, those emotions are likely to accumulate and reflect on their depressive

symptoms (Wei et al., 2008). However, since this research only studied the effect of coping method on Asian international students, whether international students from Europe, Africa, and Middle East would have the same result remains unknown. Given the impact of discrimination on international students' mental health and adjustment in the United States (Wadsworth et al., 2008; Wei et al., 2008), it is critical for us to know more about the protective factor for international students. Even though research has suggested that international students should take a strengths-based or growth-oriented approach, assuming that international students can rely on their cross cultural competence to reduce acculturative stress, this type of coping strategies has not been examined for its effectiveness in decreasing acculturative stress (Yakunina, et al., 2012). More research is needed to know about the protective factors and risk factors that may influence international students' perceived discrimination level.

#### *Intercultural conflict:*

Past research has mentioned that interaction with domestic students could help international students build the sense of belongingness and have better adjustment in the hosting country (Duru & Poyrazli, 2011). However, for most of the international students, the culture and ways to interact with others are usually different from their home country. These gaps between cultures and values may cause conflict when they are interacting with people from hosting culture.

Intercultural conflict is defined as “the experience of emotional frustration in conjunction with perceived incompatibility of values, norms, face orientations, goals, scarce resources, processes, and/or outcomes between a minimum of two parties from two different cultural communities in an interactive situation (Ting-Tommey & Oetzel, 2001, p.17)”. Studies showed that everyday intercultural conflict often involved cultural ignorance, misunderstanding, or deep-seated hatred and antagonism in history (Ting-Tommey & Oetzel, 2001). For example,

Asian international students who strongly hold the value of humility might not feel comfortable in asserting their needs in the United States. However, this behavior may be interpreted as unassertive and unapproachable by their American peers and professors, which could increase their sense of alienation and despair (Wong, Wang & Maffini, 2014).

There are many reasons that could possibly cause intercultural conflicts (Rubenfeld & Clément, 2012). One can choose to view conflicts from linguistic anthropological perspective, cognitive pragmatic prospective and psychological perspectives to understand different layers of intercultural communication (Knapp & Antos, 2007). From a linguistic point of view, cultural background shaped the metaphors, phrases, or symbols that people use when interacting with other people (Ting-Tommey & Oetzel, 2001). Whorf illustrated how some serious and sometimes fatal misunderstanding could take place because of semantic and grammatical inter-language differences (Gumperz & Cook-Gumperz, 2007). The linguistic symbol of the word “conflict” varies from country to country and shapes the way they handle it (Ting-Tommey & Oetzel, 2001). For example, in Chinese, conflict is perceived as creating chaos and should be solved by discussion, while in United States conflict is considered warlike and violent and will take a lot of hard work and effort to solve it (Ting-Tommey & Oetzel, 2001). Furthermore, many international students may be unaware of the attitudinal tone behind English because English is not the first language for them and thus provoke different evaluative reactions (Ting-Tommey & Oetzel, 2001). Learning the verbal and nonverbal social cues in the hosting country is critical for international students to handle the intercultural conflict effectively (Ting-Tommey & Oetzel, 2001).

From the cognitive point of view, people from different countries often have different cultural background and cultural norms. Research indicated that different cultural orientations are associated with the interpretation people have about a situation and their way of handling

it (Cai & Fink, 2002). It has been shown that the cultural closeness between people is positively associated with their ability to estimate each other's cognitive resources (e.g. contextual assumptions) and thus have higher chance to have an effective communication (Žegarac, 2010). In a situation of communicating with another person from the same culture, the cultural distance is not significant enough to have negative effect on effective communication (Žegarac, 2010). However, in communication between two groups whose cultures are significantly different from each other, more effort and accommodation is needed to have a successful communication (Žegarac, 2010). When a conflict happens, people from different cultures may have different expectations of how the conflict should be handled. For example, the study done by Friedman, Chi and Liu (2006) compared 162 people from Chinese cultures (e.g. China, Hong Kong, Taiwan, Singapore and south East Asia) with 146 Americans for a college in the United States. They found that people from Chinese cultures tend to avoid conflicts because of their expectation that 'direct conflict will hurt the relationship with the other party'. This study pointed out that people from Chinese culture are more sensitive to hierarchy than Americans. As a result, they have higher level of avoidance when handling conflicts. In this study, Friedman, Chi and Liu (2006) also found that the avoidance of conflict may be a result of needing longer time frame to process the events. These differences could increase the misunderstandings between two parties when they are trying to solve the conflict. However, the participants in this research were Chinese and 'overseas Chinese' in Taiwan, Hong Kong, Singapore and south-east Asia. It is possible that these 'overseas Chinese' have adapted their ways of communication with the local culture. Whether 'overseas Chinese' in Europe, Africa or America also have the same result remain unknown.

When examining intercultural conflict from a psychological perspective, there are two major traditions. One is intercultural communication competence and the other is examining



intercultural as intergroup (Brabant, Watson & Gallois, 2007). Both of these two approaches pointed out that in order to have a successful communication cross-culturally, it is critical for an individual to have the ability to understand other people and be understood by them (Gunawardena & Wilson, 2012) and willingness in learning knowledge about the new culture (Brabant, Watson & Gallois, 2007). Furthermore, being aware of the cultural values one holds and has learned from one's culture of origin is as important as being aware of the new cultures' values, norms and behaviors (Brabant, Watson & Gallois, 2007).

All of the three approaches pointed out how an individual's value, norms and behaviors could impact his or her ability to communicate cross-culturally. Because values can be used as an explanatory logic for why people react to a particular conflict in a certain way (Ting-Tomney & Oetzel, 2001), understanding the impact of values on handling conflicts cross-culturally is important. The difference of conflict style between collectivist culture and individualist culture has been examined in the past literature. It is found that East Asians tend to accommodate and minimize hostility when a conflict happens (Lehman, Chiu & Schaller, 2004). On the other hand, European North Americans usually chose to handle conflict in a direct or confrontational way (Lehman et al., 2004). For example, studies showed that people from collectivist cultures are less confrontational than people from individualist cultures (Cai & Fink, 2002). The research done by Friedman, Chi and Liu (2006) presented how underlying values and norms of a culture could frame people's expectations of conflicts differently. The underlying values and norms can also influence how people define the problem of conflict, and the perspective of successful solutions to the conflict (Ting-Tomney & Oetzel, 2001). The response to the dynamic within a conflict may differ from culture to culture. Ting-Tomney Yee-Jung, Shapiro, Garcia, Wright and Oetzel (2000) defined conflict style as "patterned responses to conflict in a variety of situations" (p.48) that is learned during the process of

socialization in an individual's culture. When a conflict happens, people may feel the reality that was formed in their own culture being challenged. It is difficult for most human beings to handle this type of challenge because it may cause a lot of uncertainty and doubt (Marsella, 2005). Hammer (2005) developed an intercultural conflict style instrument which is interculturally grounded to assess how people handle conflicts by using communication behaviors and how people express their feelings toward one another. The model proposed two levels of directedness (directness vs. indirectness) and emotional expressiveness (emotionally expressive vs. emotionally restrained) and identified four intercultural conflict resolution styles, which are: discussion style, engagement style, accommodation style and dynamic style (Hammer, 2005). This model has been tested through the Intercultural Conflict Style (ICS) inventory (Hammer, 2005). With 510 respondents range from high teens to over 60 years old, the different patterns of intercultural conflict were found (Hammer, 2005). Given the huge age range in this study it is hard to tell whether conflict styles were different due to generational differences. Furthermore, most of the respondents (74%) were Americans in United States; whether this model can be applied to other cultures remains unknown.

A meta-analysis done by Holt and DeVore (2005) summarized differences between individualist cultures and collectivist cultures when handling conflicts. The differences are: 1) people from a more individualist culture tend to choose forcing as a conflict style more often than those from collective culture; 2) withdrawing, compromising and problem-solving are the styles that collectivists prefer to use when facing a conflict; 3) females are more likely to use compromising techniques than males in both cultures. However, in the literature, people from Asian countries are often used to represent collectivist cultures and people from United States are often used to represent individualist culture (Cai & Fink, 2002). This may overlook the differences between these Asian countries. For instance, Ting-Toomey, Gao, Trubisky, Yang,

Kim, Lin and Nishida (1991) indicated that participants from China and Taiwan are more avoiding than those from Japan and Korea when handling conflicts. It is critical for researchers to be aware of these differences between different countries when interpreting the results. Furthermore, there is not much research investigating the impact of intercultural conflict on international students' adjustment in a hosting country (Zhang & Goodson, 2011). However, Pierce, Sarason and Sarason (1991) found that with US college students, it was the perception of conflict, but not available support that can predict individuals' loneliness. More research is needed in to find out whether interpersonal conflicts could be a risk factor for international students in their adjustment process.

In regards to the differences of values between culture, Inman, Constantine and Ladany (1999) indicated that cultural value conflicts could create contradictions that result from the gap between the values and behavior expectation from an individuals' culture of origin and the host culture. These quotes can illustrate how the situation was like: "Vietnamese women are probably more submissive [than American women.] This is [a] problem when some Americans think we are like 'doormats' instead of seeing that we are[being true to our cultural upbringing]" (Constantin et al., 2005, p.168). "We Japanese are sometimes competitive with each other, but we do not let on because it could [hurt our relationships with others.] Americans seem more comfortable being [overtly] competitive and it is even valued here" (Constantin et al., 2005). These examples showed that facing and dealing with the differences between country of origin and the United States could make individuals feel disrespected and stressed.

Shupe (2007) conducted a study to investigate the impact of conflict on the individuals involved. This research had two phases, one was qualitative and the other was quantitative. In the first phase, the researcher interviewed 25 international students individually and asked questions about their general impressions of the United States (including culture, university

and their department), daily hassles, and interpersonal conflict related to their work at the university. Shupe (2007) then used a rational-empirical approach to analyze the interview data. Five hundred and thirty international students were contacted and 206 replied to the survey; the response rate was 39%. In the second phase the researcher asked international students' perspective on cultural distance, intercultural work-related conflict, psychological, sociocultural, work-related and health related adaptation (Shupe, 2007). The intercultural conflict scale was developed based on the interviews in Phase One. The result showed that intercultural conflicts contribute to the overall stress level in international students' acculturation process (Shupe, 2007). It also indicated that there is a strong relationship between perceived conflict, living away from family and friends, adjusting to the weather and the life style in the United States. The results suggested that intercultural conflict would directly affect international students' work stress on sociocultural distress and indirectly impact work psychological distress and health conditions (Shupe, 2007). However, this research did not find a relationship between cultural distance and intercultural conflicts, which is not consistent with theoretical and empirical evidence (Shupe, 2007; Žegarac, 2010). The assessment tool that the researcher chose only assessed differences in values and attitude between individualism and collectivism. The choice of measurement tool may be a possible reason why the researcher did not find relationship between cultural distance and intercultural conflict (Shupe, 2007). Furthermore, the intercultural conflict scale developed in this study was based on the interview of 25 participants. The correlation between the factors that this scale measured was only .52 to .53 and the three factors together only accounted for 36% of the variance. A focus group to give feedback on these items and examine the underlying constructs of intercultural conflict may be needed. Also, the researchers did not test the scale they developed with other measures

that assess similar construct such as Cultural Values Conflict Scale developed by Inman et al. (2001).

### *Cultural differences*

It is well documented that culture and psychological process influence each other consistently (Lehman et al., 2004). Large bodies of literature investigated the impact of culture on individuals' emotions, cognitions, and behavior (Brewer & Chen, 2007). In order to study the influence of culture, as noted above, the concept of individualism and collectivism is one of the most commonly used models in research about culture (Brewer & Chen, 2007).

The idea of comparing cultures by the differences between individualism and collectivism is based on the study done by Geert Hofstede (Oyserman, Coon & Kimmelmeier, 2002). Hofstede indicated that individualist societies “emphasize the ‘I’ consciousness, autonomy, emotional independence, individual initiative, right to privacy, pleasure seeking financial security, need for specific friendship, and universalism” (Brewer & Chen, 2007, p.133). On the other hand, a collectivist society would “stress the ‘we’ consciousness, collective identity, emotional dependence, group solidarity, sharing, duties and obligations, need for stable and predetermined friendship group decision, and particularism” (Brewer & Chen, 2007, p.134). This model integrated cultural differences into two general patterns and facilitated other researchers in conducting comparative research (Oyserman et al., 2002). These two categories conveniently led researchers to compare the differences between individualism and collectivism between western countries (e.g. United States) and eastern countries (e.g. China). Specifically, as noted earlier, European Americans are often used as an example for individualism (Oyserman et al., 2002). However, Oyserman et al. (2002) conducted a meta-analysis on collectivism from the 1980s and found that European Americans were not more individualistic than other races in the United States. Furthermore, the result

showed that European Americans were not less collectivistic than Japanese or Koreans (Oyserman et al., 2002). Oyserman also found in the meta-analyses that Americans tend to score higher in individualism and lower in collectivism than people from other countries, but the effect size was small.

On the other hand, even though Asian countries are used to represent collective culture in a lot of literature, Oyserman's meta-analysis showed that only Chinese were more collectivistic and less individualistic than Americans (Oyserman et al., 2002). People from other Asian countries such as Japanese and Koreans were not significantly different from Americans on their level of collectivism (Oyserman et al., 2002). After further examining the scales' content, Brewer and Chen (2007) found that this result varies depending on the specific construct of collectivism. They found that Americans scored higher on items like "belonging to the ingroup" and "seeking others' advice", but scored lower on items like "valuing group harmony" and "valuing hierarchy and group goals" than Japanese participants. As a result, even though Americans may score higher on the collective scale than Koreans and Japanese in one study, the result may be different in another study if a different assessment for collectivism was applied. The constructs of collectivism and individualism were defined in an "overly broad and diffuse way" (Brewer & Chen, 2007, p.134). With the content analysis, Brewer and Chen (2007) found that emotional attachments and a high value of interpersonal relationships within a group seemed to be the characteristic of East Asian collectivists. On the other hand, a sense of belonging and being able to connect with a group can describe American collectivists (Brewer & Chen, 2007).

Since the line between an individualistic culture and a collectivistic culture is not so clear-cut, a measure that can capture different dimensions between the two cultures is needed (Brewer & Chen, 2007). For example, American individualists showed as much ingroup

favoritism as East Asian collectivist (Brewer & Chen, 2007; Oyserman et al., 2002). Thus, maybe ingroup favoritism may not be the best item to capture the differences between collectivism and individualism. It is also important to develop scales for different types of ingroups because people may show different levels of collectivism with different groups (Brewer & Chen, 2007). One should also be careful when interpreting the result of a study. For example, Brewer and Venaik (2011) argued that Hofstede's individualism-collectivism score should be relabeled as "self-orientation vs. work-orientation" (p. 442). In the scale that Hofstede developed, the items that represent the individualism and collectivism poles focused primary on work goals (Brewer & Venaik, 2011). On the individualism pole, the items are more "self-related" work goals, while the items are more "work-related" work goals in the collectivism pole (Brewer & Venaik, 2011). As a result, Hofstede's model may not be the best way to summarize differences between collectivism and individualism in other domains (e.g. interpersonal communication style).

As stated earlier, the difference of conflict style between collectivist cultures and individualist cultures has been examined in the past literature. Past research also indicated that indirect communication style is negatively correlated with individualism and positively associated with collectivism (Oyserman et al., 2002). Goal-oriented communication is positively associated with individualism (Oyserman et al., 2002). However, it needs to be noted that people may behave differently when interacting with different groups of people (Oyserman et al., 2002). It has been pointed out that "personality, power imbalance, socialization of gender roles, the distinction between ingroup and outgroup members and the level of commitment in the relationship" (Xu, 2013, p.381) are all possible factors that influence ways of communication. Given that an individual may show different behaviors that are considered

collective to different groups of people, scales to assess different ingroups were developed, mostly separating the groups into family, relatives and friends (Brewer & Chen, 2007).

Instead of following Hofstede's individualism-collectivism categories, Schwartz proposed ten broad values that underlie different definition of values (Schwartz, 2012). Schwartz assumed that every society has to find solutions to three basic issues. These are "(a) to what extent a person is embedded into a group, (b) how to preserve the social fabric, and (c) how to relate to the natural and social world" (Vauclair, Hanke, Fischer & Fontaine, 2011, p.187). Based on this assumption, he used a bipolar values orientation and argued that culture will influence the pole of orientation that a society emphasizes (Vauclair et al., 2011). Autonomy versus embeddedness are possible solutions to the first issue, hierarchy versus egalitarianism is where the solution lies for the second societal problem, and harmony and mastery are produced by the last societal issue (Vauclair et al., 2011). Emphasis on one pole of the cultural value orientation will de-emphasize its opposite pole (Schwartz, 2012).

With a total of 25,863 respondents from 44 countries around the world, Schwartz's theory of basic values identifies ten values, which are : 1) self-direction, 2) stimulation, 3) hedonism, 4) achievement, 5) power, 6) security, 7) conformity, 8) tradition, 9) Benevolence, and 10) universalism (Schwartz, 1994; Schwartz, 2012). Pursuing certain values always have a consequence of conflict with some values but congruence with others, and could have practical, psychological and social consequences (Schwartz, 2012). Conflicts between being open to change values and conserving old values happen daily for many people (Schwartz, 2012). Many people also experience conflicts between self-transcendence and self-enhancement values (Schwartz, 2012). People's values can affect their adjustment process in a foreign country (Szapocznik, Scopetta, Kurtines & Aranalde, 1978, Kagan & Cohen, 1990). However, the relationship between these ten values and international students' adjustment in the United



States has not yet been investigated. In this study, the researcher plan to investigate how these values would impact international students' style of handling intercultural conflict and thus affect their sociocultural adjustment in the United States.

### *Social Cognitive Theory*

Self-efficacy was discussed earlier. This section will discuss the larger social cognitive framework, of which self-efficacy is a central construct. Social cognitive theory, compared to other theories such as behavioral theory and cognitive theory proposed to explain the process of human development, involved the variants of social context and cognitive in the model, which expands the view of development from behavior learning and modifying to larger picture (Stajkovic & Luthans, 1998). Social cognitive theory uses the concept of direct personal agency, proxy agency and collective agency to describe human development adaptation (Bandura, 2001; Bandura, 2002). The direct personal agency and proxy agency “relies on others to act on one’s behest to secure desired outcomes” (Bandura, 2001, p.1) and collective agency “exercised through socially coordinative and interdependent effort” (p.1).

The direct personal agency is the source of the power for humans to take action and move toward their goals (Bandura, 2001). Individuals’ belief in their ability in achieving the desired result is the foundation of direct human agency (Bandura, 2001). This belief is called self-efficacy and will influence people’s attitude and behavior in handling a situation (Stajkovic & Luthans, 1998).As discussed in previous sections, a person’s perceived self-efficacy could come from different sources, including his/her past performance, learning, feedback from other people and physiological and affective states (Lent, 2013). The other critical factor of human agency is outcome expectation (Bandura, 2001). Outcome expectation refers to “beliefs about the consequences or outcomes of performing particular behaviors” (Lent, 2013, p.118). This

involves physical, social and self-evaluative outcomes (Lent, 2013). Theoretically, outcome expectation and self-efficacy can affect each other (Lent, 2013).

Proxy agency is a socially mediated mode of agency (Bandura, 2001). In circumstances where people have no direct control over the social conditions in their life, they may “seek their well-being, security, and valued outcomes through the exercise of proxy agency” (Bandura, 2001, p.13). Collective agency refers to “people’s shared belief in their collective power to produce desired results” (Bandura, 2001, p.14). Past research found that the stronger the perceived collective efficacy, the stronger the motivation the group has to invest in a project (Bandura, 2001).

Social cognitive model has been applied to different areas, such as individuals’ career decision making (Lent & Brown, 2013), psychological well-being (Lent, 2004), adjustment (Andrykowski & Pavlik, 2011) and life satisfaction (Lent, 2004; Singley, Lent & Sheu, 2010). This model has also been applied to different population, including college students (Lent, Singlwy, Sheu, Schmidt & Schmidt, 2007; Lent, Taveira, Sheu & Singley, 2009), adolescents (Lubans, Okely, Morgan, Cotton, Puglisi & Miller, 2012), and patients (Miller, Gutschall & Lawrence, 2007). As stated previously, the concept of individualism and collectivism is one of the most commonly used models in describing the influence of culture. However, “human behavior is socially situated, richly contextualized and conditionally expressed” (Bandura, 2002, p.276), and assuming all individuals in a cultural group will react the same overlooks the diversity within a culture (Bandura, 2002). Social cognitive theory, on the other hand, takes cultural diversity into account and puts the interaction between personal factors (e.g. Self-efficacy, outcome expectation, personal goal) and contextual factors (e.g. barriers, support) into the model (Bandura, 2002).

Past research tended to hold either a hedonic or eudaimonic position when describing a person's well-being (Lent, 2004). The hedonic position views well-being as happiness or feeling satisfied, and the eudaimonic position sees well-being as having purpose or meaning in life (Lent, 2004). The benefit of using social cognitive model to describe one's well-being is that it integrates "cognitive-person, behavioral, and contextual determinants of domain and life satisfaction" (Singley et al., 2010). It also points out the possibility of having bidirectional paths (Lent, 2004). Since a person's self-efficacy may change based on his/her current psychological states and others' feedback, the process should be bidirectional in nature (Lent, 2004). Using social cognitive model could give a more holistic picture of one's well-being (Brewer & Chen, 2007). Past research found that domain-specific social cognitive variables such as self-efficacy and perceived goal progress could predict individual's satisfaction in particular life domains (Lent, Singley, Sheu, Gainor, Brenner, Treistman & Ades, 2005).

Lent et al.(2005) indicated that self-efficacy and perceptions of environmental supports can positively impact one's life satisfaction directly and indirectly for college students in the United States. In this study, the researchers demonstrate that academic self-efficacy could predict USA college students' academic satisfaction (Lent et al., 2005). However, there may be some other factors contributing to international students' academic satisfaction. For example, as stated above, English proficiency could impact international students' participation in class and thus influence their academic experience (Cadieux & Wehrly, 1986; Parr, Bradley & Bingi, 1992). Social self-efficacy could also impact their relationship with peers and professors and thus influence their academic satisfaction. It is also critical for researchers to know more about how different types of self-efficacy influence individuals' satisfaction in different domains. Lent et al. (2007) further examined the relationship between self-efficacy, outcome expectations, environmental supports, and perceived goal progress to academic

satisfaction. Within these factors, only outcome expectation did not account significant unique variation in both goal progress and academic satisfaction (Lent et al., 2007). The researchers argued that this might be because the measurement for outcome expectation did not represent the result that students expect to obtain (Lent et al., 2007). Different ways have been applied to assess outcome expectations. They include listing values and asking participants to rate the importance of each value to them, presenting some outcome statements and rate the possibility for each statements and the possibility of receiving positive outcomes (Lent & Brown, 2006). In the research conducted by Lent et al. (2007), they suggested future research to use reward attainment or value fulfillment measurements to assess students' outcome expectation on Academic (Lent et al., 2007). They think this method could help researchers to obtain more accurate result on individuals' outcome expectations (Lent et al., 2007).

#### *Summary of Literature Review:*

It can be seen that international students' well-being and their adjustment have gained interest from researchers in different areas, including educational psychology, social psychology and counseling psychology. Factors such as language proficiency, different domains of self-efficacy, perceived social support, perceived discrimination, homesickness, interpersonal problems, academic problems, length of residency have all been indicated as possible predictors of international students' adjustment. However, a critique of this literature concluded that there are more dimensions limitations in the measurement of each construct. For example, language proficiency should be distinguished between speaking, writing, listening and reading abilities. Self-efficacy should not be studied without defining a domain. Perceived social support from different groups of people should be separated to better understand their impact on international students' psychological adjustment and sociocultural adjustment.

Two theories are proposed to describe the acculturation process. Acculturation theory uses four different strategies to describe how individuals from other cultures would cope with mainstream culture. This theory mainly focuses on an individual's psychological well-being. Social cognitive theory combines individual, proxy and collective agency together to predict individuals' satisfaction in their life. Within social cognitive theory, self-efficacy is the critical factor that could explain individuals' perceived acculturation stress and life satisfaction. This model also found the relationship between specific domains of self-efficacy can influence a correspondent satisfaction area.

In terms of research method, most of the researchers did not have more than 100 international students participating in their studies (Zhang & Goodson, 2011), which may impact the generalization of the research. Furthermore, most of the research did not compare international students from different countries/ regions (Zhang & Goodson, 2011). This may limit the understanding of the differences within this population.

By using social cognitive model, this study will focus on finding the relationships between different factors that were found to be influential in international students' adjustment. The variables in this study have been found to have significant impacts on international students' acculturation stress and their adjustment. The variables include: language proficiency, social support, social self-efficacy, discrimination, intercultural conflict and cultural values differences. This study will explore these factors in more detail by investigating the interaction within those factors and how they impact on international students' sociocultural adjustment. The five hypotheses are: (a) International students who have more confidence in their English speaking and listening skills are more likely to have higher social self-efficacy. (b) International students with preference in integrative conflict handling style will have higher scores in their openness to change. International students with preference in avoidance style

will have higher scores in conservation. (c) Different conflict handling styles will influence the relationship between English proficiency and social self-efficacy differently. International students with a preference in avoidance styles when handling conflict will have a decrease in their social self-efficacy even when they have high English proficiency. (d) International students perceived social support moderate the influence of social self-efficacy on their socio-cultural adaptation difficulties. And (e) International students' perceive discrimination will moderate the impact on their sociocultural adjustment in the United States.

## Chapter III

### METHODOLOGY

This method chapter will be divided into four subsections. First, the characteristics of the participants will be described. Second, the psychometric properties of each instrument will be described. The researcher divided variables into environmental factors and personal factors. Environmental factors are perceived discrimination and perceived social support. Personal factors are social self-efficacy, language fluency, values, and conflict handling style. The Socio-cultural Adaptation Scale (SCAS) was used to measure international students' socio-cultural adjustment. The Perceived Social Self-efficacy Scale (PSSE) was used to measure the level of international students' social self-efficacy. The International Student Social Support scale and Perceived Discrimination Scale were used to measure the interpersonal supports and barriers that international students face in the United States. The Perceived Language Proficiency Scale measured the level of English proficiency that participants think they have. The Short Schwartz Value Survey (SSVS) assessed ten values proposed in Schwartz' Theory of Basic Values. The Conflict Handling Style was used to measured individuals' way of handling interpersonal conflicts. Third, the procedures will describe how data was collected. Finally, the last section will describe how data was analyzed.

#### *Research Questions*

The following research questions were investigated via multiple regression model.

1. Does English proficiency in different domains (i.e. listening, reading, writing and speaking) have different degrees of impact on international students' social self-efficacy?
2. Are international students' conflict handling styles influenced by their cultural values?
3. Would conflict handling style influence the relationship between English proficiency and social self-efficacy?

4. How do perceived discrimination and perceived social support moderate the relationship between social-self-efficacy and sociocultural adjustment?

*Hypotheses:*

The four research questions led to the hypotheses about the relationships between international students' language proficiency, social support, social self-efficacy, discrimination, intercultural conflict, cultural value differences and international students' sociocultural adjustment.

Hypothesis 1: International students who have more confidence in their English speaking and listening skills are more likely to have higher social self-efficacy.

Hypothesis 2: International students with preference in integrative conflict handling style will have higher scores in their openness to change. International students with preference in avoidance style will have higher scores in conservation.

Hypothesis 3: The relationship between language proficiency and self-efficacy varies depending on the differences between the four conflict handling styles.

Hypothesis 4: International students perceived social support will moderate the effect of social self-efficacy on socio-cultural adaptation difficulties.

Hypothesis 5: International students' perceive discrimination will moderate the impact on their sociocultural adjustment in the United States.

**Participants and Procedure**

The participants were 363 international students from thirteen countries who are currently studying in the United States. Forty-seven percent of them came from China, 24% came from Taiwan, 17% were from Japan, four percent came from Korea, 3% percent from Singapore, 2% percent from India and 2% of participants came from Europe. The majority of (96%) the participants' first language was not English. About 61% of the participants were male and 38%



were female. Participants' age ranged from 18 to 40 years of age ( $M=22.56$ ,  $SD=3.64$ ). About 44% of the participants studied in undergraduate program in the United States, 32% were working on their doctoral degree and 22% were working on their master's degree at the time of study. Most of the international students have been in the United States for their current study for two to three years. Thirty five percent of the participants reported that they had experience living in the United States or another English speaking country before they came to United States for their current studies. More than half (57%) of the participants reported they lived in an Urban city in the United States, 27% of the participant lived in a suburban area, 10% lived in a college town and about 4% of them live in a rural area.

Most of the participants (80%) were single, ten percent of the participants were married and nine percent of them were in a committed relationship. For participants who had a partner, 47% of their partners lived in the same city with them, 19% of their partners lived in another city in the United States and 28% of their partners are in their home country. About half (53%) of the participants reported that their families were middle class, about one third (30%) came from upper middle class, 9% came from lower middle class, 5% came from upper class and 3% came from working class. Sixty four percent of the participants reported that there were other international students in their program, and 47% reported belonging to a student organization that is composed by people from their country.

Using the authors' personal and professional networks, participants of this study were mostly recruited via social media (Facebook and bulletin board system), e-mail and student organizations. The recruitment occurred during the Spring 2015 semester. The survey link was posted on Facebook and bulletin board system or sent to participants; some of the surveys were given as a paper copy (and entered into Qualtrix). The survey link was also sent to different Chinese or Indian international students organizations. All of the participants were over 18

years of age, currently enrolled in an undergraduate or graduate program in United States, understand and speak English and have an F1 Visa (which is a visa explicitly for students). Given that snowball sampling is not a random selection procedure (Browne, 2005), it is possible that this sample may not be representative to the whole international student population in the United States.

#### Instruments:

Participants were asked to complete a demographic questionnaire for their background information. Their perceived English proficiency was assessed by a revised Self-Reported Fluency of English Scale. International students' self-efficacy was measured by the Scale of Perceived Social Self-efficacy (Smith & Betz, 2000), outcome expectations was measured by the Schwartz Value Survey (Schwartz, 1992), perceived social support was measured by the Index of Sojourner Social Support Scale (Ong & Ward, 2005), perceived discrimination was assessed by Perceived Discrimination subscale from Acculturative Stress Scale, and intercultural conflict style was assessed by the Conflict Handling Styles (Daly, Leem Soutar & Rasmi, 2010). Finally, international students' sociocultural adjustment was measured by the Socio-cultural Adaptation Scale (Ward & Kennedy, 1999).

#### 1. Demographic questionnaire:

The demographic questionnaire asked participants for their age, gender, relationship status, education, country of origin, length of residency in the United States, native language, family members or friends in the States, program of study, the existence of a student organization from their country of origin, if the student is involved in any international student organization (e.g. Chinese students' association), and the university surrounding (i.e. Urban, college town, country).

#### 2. Perceived Level of English Mastery (PLEM):

The perceived level of English mastery scale (PLEM; Barratt & Huba, 1994) measures non-native English speakers' self-perception of their English fluency. This scale consists of three questions on a 5-point Likert-type scale, ranging from 1 (very poor) to 5 (very good) (Barratt & Huba, 1994). The original questions were: (a) "What is your current level of English fluency", (b) "how comfortable are you communicating in English", and (c) "how often do you communicate in English". The higher the total score, the greater the self-perceived mastery level of English (Barratt & Huba, 1994). The Cronbach's alpha for the whole scale was ranging from .78 to .84 with an international student sample (Yeh & Inose, 2003). Higher level of self-efficacy, lower level of depression, and lower level of acculturative stress were related with higher total score of PLEM (Lin & Betz, 2009). Reliability for this sample is .86 for whole scale. With 320 international students from Africa, Asia, and Latin American, Constantine, Okazaki and Utesy (2004) provided evidence for construct validity. They found that the score in the perceived level of English mastery scale was positively related to social self-efficacy and negatively related to depression and acculturative stress (Constantine et al., 2004).

Based on PLEM, this study expanded the initial three questions into twelve questions by focusing on listening, speaking, reading and writing specifically. For example, the question "What is your current level of English fluency" was revised to be four questions: "What is your current level of English listening fluency", "What is your current level of English speaking fluency", "What is your current level of English reading fluency" and "What is your current level of English writing fluency". These questions were answered through the same 5-point Likert-type scale as the original measure.

### 3. Scale of Perceived Social self-efficacy (PSSE)

The Scale of Perceived Social self-efficacy (PSSE; Smith & Betz, 2000) is a 25-item

scale to assess individuals' social degree of perceived social self-efficacy. The scale used a 5-point Likert-type scale, ranging from 1 (no confidence at all) to 5 (complete confidence). The higher the score, the higher the international students' social self-efficacy is. Social self-efficacy is defined as "an individual's degree of self-efficacy or confidence involving social behavior" (Lin & Betz, 2009, p.455). The statements include several domains of social interaction, such as making friends, social assertiveness, starting romantic relationships, receiving help, and performance in public situations, groups or parties (Lin & Betz, 2009). Sample items include "Start a conversation with someone you don't know very well" and "Work on a school, work, community, or other project with people you don't know very well".

The internal consistency reliability coefficient of the PSSE was .94 from a sample of 354 college students in a large Midwestern university (90 males and 264 females) (Smith & Betz, 2000). The 3-week test-retest reliability with a sample of 109 students was .82 (Smith & Betz, 2000). With 196 Chinese and Taiwanese international students, the scale has a .96 coefficient alpha (Lin & Betz, 2009). This indicated that PSSE is highly reliable (Groves, Fowler, Couper, Lepkowski, Singer & Tourangeau, 2009). Correlations between PSSE and the Social Self-efficacy subscale of Self-efficacy scale was around .60 for males and females. Reliability for this sample is .94. The evidence of construct and discriminant validity of the scale was also reported given that it was strongly related to Social confidence and Enterprising Confidence scale and shyness (Smith & Betz, 2000).

#### 4. The Short Schwartz Value Survey (SSVS)

The Short Schwartz Value Survey (SSVS; Lindeman & Verkasalo, 2005) is a 10-item scale split into two lists, assessing ten individuals' values proposed in Schwartz Theory of Basic Values. Instead of using several value indicators (57 items), the SSVS

asks participants to rate 10 items that represent these ten values (Lindeman & Verkasalo, 2005). Sample items are: “POWER, that is, social power, authority, wealth” and “Achievement, that is, success, capability, ambition, and influence on people and events.”

SSVS asks participants to assess the importance of each value on a 9-point Likert-type scale. In this scale, 0 as opposed to my principles, 1 as not important, 4 as important and 8 as supreme importance (Lindeman & Verkasalo, 2005). In order to assess the dimensions Conservation and Self-Transcendence, Lindeman and Verkasalo (2005) created two formulas for each dimension. The general reliability coefficient (GRC) for Conservation was .78 and was .72 for Self-Transcendence (Lindeman & Verkasalo, 2005). According to Lindeman and Verkasalo (2005), the SSVS has good reliability and validity and the assessed values’ relationship were identical to the theoretical structure of values. The correlations with Schwartz Value Survey (SVS) and the Portrait Values Questionnaire (PVQ) of each assessed value ranged from .45 to .72 (Lindeman & Verkasalo, 2005). Reliability for this sample is .76. Because the value of openness to change represent the “readiness for new experience and favor inter-group contact” (Sapienza, Hichy, Guarnera & Nuovo, 2010) which is found to be a critical component in research (Yakunina, Weigold, Wrigold, Herecegovic & Elsayed, 2013), only the scale of openness to change will be analyzed.

##### 5. Index of Sojourner Social Support Scale (ISSS)

Index of Sojourner Social Support Scale (ISSS; Ong & Ward, 2005) is an 18-item scale that assesses international students’ perceived functional social support. Students indicate the “perceived availability of supportive behaviors that serve particular types of functions” (Ong & Ward, 2005, p. 638). The 18 statements present helpful behaviors that other people do to support an individual. It is a 5-point Likert-type scale, 1 indicates that

no one would do it and 5 indicates that many would do this. Score range from 18 to 90. Examples of items include “Visit you to see how you are doing” and “Comfort you whenever you feel homesick”. The higher the score, the higher the perceived availability of social support behaviors (Ong & Ward, 2005).

With a multinational sample of individuals who were in the workforce or were students in Singapore (N=426), a .95 Cronbach’s alpha coefficient for the total score of the ISSS was found (Ong & Ward, 2005). Similarly, a .95 Cronbach’s alpha coefficient for the total score of the ISSS was found with a 237 international students studied in New Zealand (Ong & Ward, 2005). The overall Cronbach’s coefficient alpha for the ISSS was .97 with 104 international students studied in United States (Chavajay, 2013). This indicated that ISSS is highly reliable (Groves et al., 2009). Using cross-validation procedure, Ong and Ward (2005) reported evidence of external and internal structures of the ISSS with 426 students in Singapore.

The mean of the scale with international students was 2.72 with standard deviation of 1.07 (Chavajay, 2013). Reliability for this sample is .97.

#### 6. Perceived Discrimination subscale

The Perceived Discrimination Subscale is from the Acculturative Stress Scale (Sandhu & Asrabadi, 1994). It is an 8-item scale with a 5-point range for each items, 1 means strongly disagree and 5 means strongly agree. The score is ranged from 8 to 40, the higher the score, the greater the levels of perceived discrimination. A sample item of the scale is “I am treated differently in social situations.” Coefficient alpha for this subscale was .92 in a sample of Chinese and Taiwanese international student (Wei et al., 2008). With a sample of 239 Turkish international students, Cronbach’s alpha coefficient was .84. This indicates that Perceived Discrimination subscale is highly reliable (Groves et al., 2009).

Research showed that the score of perceived discrimination is positively associated with depressive symptoms and social undermining (Jung et al., 2007). Reliability for this sample is .97.

## 7. Conflict Handling Styles

The Conflict Handling Best-Worst Scaling (Daly, Lee, Soutar & Rasmi, 2010) contains 12 items; participants answer with a best-worst scaling (BWS) measurement. Participants indicate one statement that is the best and worst description of him/her. Sample items from the scales are: “I look for the best outcomes for both of us.” and “I try to avoid conflict and negotiations”. This scale measures four types of conflict handling styles, they are: avoidance, obligation, integrative and dominate (Daly et al., 2010). This scale calculate each style score based on the square root of the best-worst ratio (Daly et al., 2010). This scale has shown evidence for both convergent and predictive validity, it was positively correlated with corresponding style in other instruments such as DUTCH and ROCI-II (Daly et al., 2010).

## 8. Socio-cultural Adaptation Scale

Socio-cultural Adaptation Scale (SCAS; Ward & Kennedy, 1999) is a 29 item scale, assessing individuals’ perceptions when facing difficulties in understanding American values and cultures. SCAS is a 5-point Likert-type scale, ranging from 1 (no difficulty) to 5 (extreme difficulty). The scores range from 0 to 92, and higher scores represent greater social difficulties and acculturation stress (Ward & Rana-Deuba, 1999). This scale assesses both behavioral-adaptation difficulty and cognitive-adaptation difficulty. The sample items are: “making yourself understood” and “Understanding the \_\_\_\_\_ (host country’s) world view.” Past studies showed that the scales’ alpha range from .75 to .91 (Cemalcilar, Falbo & Stapleton, 2005). The scale was found to be consistent with contemporary theory and thus the construct

validity was supported (Ward & Kennedy, 1999). This scale has been found to be significantly correlated with cross-cultural self-efficacy scales and positively related to international students' contact with host national scale (Li & Gasser, 2002). Reliability for this sample is .93.

#### Data Analysis Method

Quantitative measurements were used to investigate the hypotheses above. The relationship between variables was analyzed by correlations and regressions. Regression and correlation analyses are flexible data analytic frameworks for various research questions in psychology (Hoyt, Imel, & Chan, 2008). Regression is a widely used data analytic system in psychological research (Kelley & Maxwell, 2010). It can be used to provide a summary of the relationship between variables, an equation to predict future outcomes based on observed variables, and explanation or theory testing (Hoyt et al., 2008). Assumptions underlying this method are: (a) Variables are normal distributed, (b) dependent and independent variables have a linear relationship (c) measurements have good reliability to reduce the risk of Type II errors, and (d) homoscedasticity is assumed. (Cohen et al., 2013).

The first hypothesis examined the relationship between English proficiency in listening and speaking domains and international students' social self-efficacy. Participants self-reported their English proficiency in listening, speaking, reading and writing. This hypothesis tested the regression of different domains of English proficiency with individuals' score on Scale of Perceived Social self-efficacy. The second hypothesis is investigating whether international students with different conflict handling styles value openness, self-enhancement, conservation, and self-transcendence differently. This was analyzed through One-Way ANOVA method. The third hypothesis examined the relationship between English proficiency and social self-efficacy and whether conflict handling style moderated the relationship. This was also examined through regression method.



The fourth and fifth hypotheses were investigated through hierarchical regression. International students' perceived social support and perceived discrimination are viewed as moderators which could affect the direction or strength of the relationship between social self-efficacy and their socio-cultural adaptation (Baron & Kenny, 1986). International students' perceived social support was a moderator between social self-efficacy and sociocultural adjustment. International students' perceived discrimination was also investigated as a moderator between social self-efficacy and sociocultural adjustment.

## Chapter IV

### RESULTS

This chapter describes and summarizes the statistical analyses used to evaluate the research questions and hypotheses established in previous chapters. This chapter reports the results of the examination of the normality of distributions. Next, the researcher checked if scores on the dependent variables are different across demographic variables including: gender, having other international students in the program, had lived in USA/ English speaking country prior to current study, have international students organization composed by country of origin, social economic status and level of current study. Finally, results are presented by each hypothesis.

As stated in the previous chapter, all of the participants completed the self-reported fluency of English scale (PLEM), social cultural adaptation scale (SCAS), Index of Sojourner Social Support Scale (ISSS), perceived discrimination scale (PDS), perceived social self-efficacy (PSSE), the short Schwartz value survey (SSVS) and conflict handling style scale. Results from data analyses are as follows. The research questions are listed below:

1. Does English proficiency in different domains (i.e. listening, reading, writing and speaking) have different degrees of impact on international students' social self-efficacy?
2. Are international students' conflict handling styles influenced by their cultural values?
3. Would conflict handling style influence the relationship between English proficiency and social self-efficacy?
4. How do perceived discrimination and perceived social support moderate the relationship between social-self-efficacy and sociocultural adjustment?

Because there are several assumptions under regression such as normal distribution of variable (Cohen et al., 2013), it is important for researchers to examine whether the collected data met with these assumptions. The researcher first examined whether the data met regression assumptions of normality, linearity and homoscedasticity. Mean, standard deviation, skewness and kurtosis of the measures for all participants are listed in the table below (Table 1). For all of the variables, the absolute value for skewness and kurtosis were less than 2. This indicates that scores from this sample are likely normally distributed. Even though the results of Shapiro-Wilk test showed that all of the scales were not normally distributed ( $p < .00$ ), the result of this test could be significant with a large sample (Field, Andy, 2009). The Q-Q plots showed that it could be normally distributed. The correlation of each scale is shown in table 2.

Table 1 Means, Standard Deviations, Skewness, and Kurtosis for the scales (N=363)

<b>Variable</b>	<b>Mean</b>	<b>SD</b>	<b>Skewness</b>	<b>Kurtosis</b>
<b>SCAS</b>	3.81	.85	-.18	-.44
<b>ISSS</b>	2.97	.86	-.36	-1.09
<b>PDS</b>	3.30	.84	-.60	-.81
<b>PSSE</b>	3.24	.68	.04	-1.30
<b>SRFE</b>	3.63	.55	-.80	.99
<b>Values</b>				
<b>Openness</b>	3.71	.69	-.73	-.07
<b>Self-Enhancement</b>	3.62	.70	-.68	.04
<b>Conservation</b>	3.62	.70	-.73	.63
<b>Self-transcendence</b>	3.77	.84	-1.13	.83

Note. SCAS= Social cultural adaptation scale, ISSS= International student social support, PDS=Perceived Discrimination Scale, PSSE=Perceived social self-efficacy, SRFE =Self report fluency of English, Values= Short Schwartz value survey. Openness, self-enhancement, conservation and self-transcendence are the subscales of Short Schwartz value survey.

Table 2 Correlations of Variables (N=363)

Variable	1	2	3	4	5	6	7	8	9
1.English Fluency	--								
2.Perceived social self-efficacy	.48**	--							
3.Percived social support	.31**	.77**	--						
4.Percieved discrimination	.13*	.38**	.26**	--					
5.Socio-cultural adaptation	.11*	.36**	.33**	.55*	--				
6.Openness	.39**	.02	-.16**	.13*	-.06	--			
7.Self-enhancement	.39**	.02	-.16**	.22*	.05	.69**	--		
8.Conservation	.39**	.26**	.11*	-.02	.11*	.24**	.40**	--	
9.Self-transcendence	.46**	.05	-.09	-.05	.02	.45**	.39**	.47**	--

\* $p < .05$ , \*\* $p < .01$

#### *Analyses of Moderator Variables:*

In order to test whether international students' perceived social support and perceived discrimination will moderate the effect of social self-efficacy on socio-cultural adaptation difficulties in the United States, a hierarchical regression was performed. The researcher standardized the predictor and moderator variables before computing the interaction terms to decrease multicollinearity as suggested by previous researchers (Frazier, Tix & Barron, 2004). Two-way interaction terms were created, one of them was the multiplication of perceived social self-efficacy and perceived social support. The other one was perceived social self-efficacy and perceived discrimination. Perceived social self-efficacy were entered as a covariate in step 1. Perceived social support and perceived discrimination was entered in step 2, and both of the interaction terms were entered to test the moderator effect in step 3. Results are presented in Table 3.

Table 3 A Hierarchical Multiple Regression Analysis Predicting Socio-cultural Adaptation from Perceived Discrimination, Perceived Social Support, Perceived Social Self-efficacy, and Their Interactions (N=363)

Variable	B	SE B	$\beta$	R	R <sup>2</sup>	$\Delta R^2$	$\Delta F(df)$
Step 1				.364	.132	.130	55.07(1, 361)**
Perceived social self-efficacy	.44	.06	.364				
Step 2				.583	.340	.334	56.31(2, 359)
Perceived social Support	.12	.05	.15*				
Perceived Discrimination	.43	.04	.49**				
Step 3				.724	.524	.517	69.22(4, 357)**
SE x social Support	-.03	.07	-.02				
SE x Discrimination	.54	.05	.44**				

\* p<.05 \*\* p<.01

In step 1, perceived social self-efficacy accounted for 13% of the variance in socio-cultural difficulties. Perceived social self-efficacy uniquely predicted socio-cultural adaptation difficulties. In step 2, perceived social support and perceived discrimination accounted for 34% more variance in socio-cultural difficulties. Perceived discrimination and perceived social support uniquely predicted socio-cultural adaptation difficulties. In step 3, the two-way interaction added significant increments in explaining socio-cultural difficulties. Specifically, the interaction between social self-efficacy and perceived discrimination uniquely predicted socio-cultural adaptation difficulties, but interaction between social self-efficacy and perceived social support did not.

To interpret the nature of the interaction between the two predictor variables, the relationship between the perceived social self-efficacy and socio-cultural adaptation

difficulties was plotted against the levels of the perceived discrimination (moderator). Figure 1 illustrates that when international students perceived low discrimination, their socio-cultural adaptation difficulties were lower when they had high social self-efficacy. However, when they perceived high discrimination, the higher their social self-efficacy, the higher their socio-cultural adaptation difficulties.

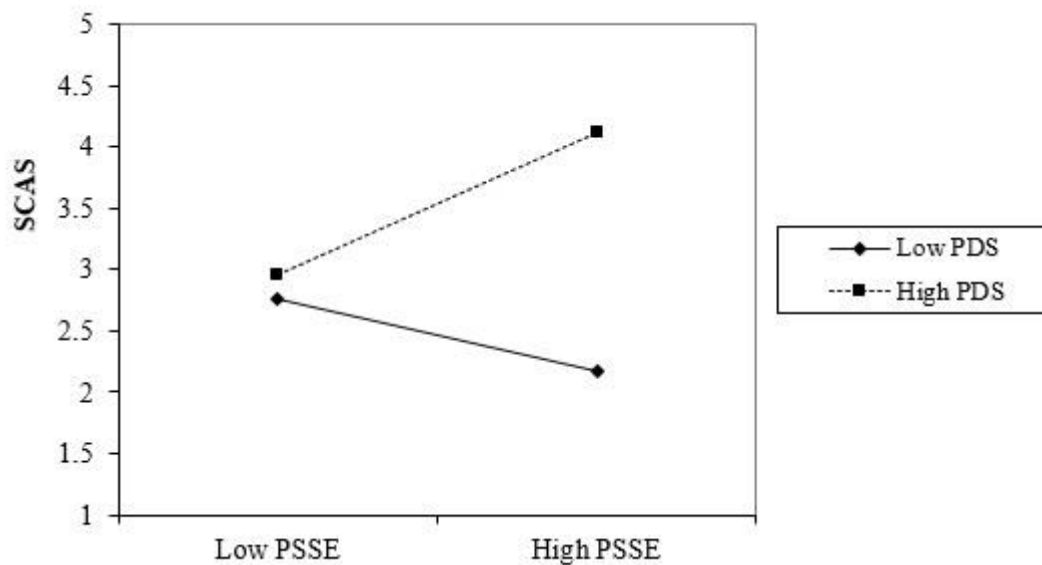


Figure 1 Interaction between perceived social self-efficacy (PSSE) and perceived discrimination (PDS) predicting socio-cultural adaptation difficulties (SCAS) for whole group. (N=363)

The result of this analysis rejected the hypothesis that perceived social support would moderate the relationship between social self-efficacy and socio-cultural adaptation difficulties. However, the results confirmed the hypothesis that perceived discrimination did have moderation effect on the relationship between social self-efficacy and socio-cultural adaptation difficulties.

In order to test whether international students’ openness to change would moderate the effect of their perceived English fluency on their social self-efficacy, a hierarchical regression was performed. A two-way interaction term was created by the multiplication of perceived

English fluency and openness to change. Perceived English fluency and openness were entered as a covariate in Step 1 and the interaction term was entered to test the moderator effect in Step 2. Results are presented in Table 4.

Table 4 A Hierarchical Multiple Regression Analysis Predicting Social Self-efficacy from Perceived English fluency, Openness to change, and Their Interactions (N=363)

Variable	B	SE B	$\beta$	R	R <sup>2</sup>	$\Delta R^2$	$\Delta F(df)$
Step 1				.524	.274	.270	67.96(2, 360)**
Language	.70	.06	.57**				
Openness	-.18	.04	-.19**				
Step 2				.526	.277	.271	1.373(1, 359)
Language x Openness	.07	.06	.06				

\*\* p<.01

Language: Perceived English Fluency

In step 1, perceived English fluency and openness to change accounted for 27% of the variance in international students' social self-efficacy. Perceived English fluency and openness to change uniquely predicted social self-efficacy. In step 2, the two-way interaction did not add significant increments in explaining social self-efficacy. The interaction between English fluency and openness to change did not uniquely predict socio-cultural adaptation difficulties.

In order to examine whether English fluency in listening, speaking, reading and writing have different impact on international students' social self-efficacy, a simultaneous regression was conducted. As a whole group, the adjusted R<sup>2</sup> was .32, indicating that English fluency in different domains can explain 32 % of the variance in social self-efficacy (F(4, 358)=41.92, p<.01). Speaking and writing were found to be significant predictors (p < .05, p<.01, respectively) of social self-efficacy for international students in general. Table 5 shows the regression analysis predicting social self-efficacy. This result confirmed the hypothesis that

international students with more confidence in their English speaking skills would have higher social self-efficacy. However, the result also indicated that international students with higher speaking fluency did not have higher social self-efficacy, which did not support the second half of hypothesis.

Table 5 Regression Analysis Predicting Social Self-efficacy (Whole group)

Variable	B	SE B	B	T
Listening	.05	.07	.05	.64
Speaking	.16	.06	.16	2.45*
Writing	.49	.06	.49	7.68**
Reading	-.09	.08	-.08	-1.13

Dependent variable: social self-efficacy, \*  $p < .05$ , \*\* $p < .01$

A third regression model was conducted to test whether the four conflict handling styles would influence the relationship between English fluency and social self-efficacy differently. This hypothesis was tested with the conflict handling style x language fluency interaction term in a multiple regression analysis. Social self-efficacy was the criterion variable. Language fluency scores were mean centered.

For international students as a whole group, this model was found significant. In total, 26% of the variance in perceived social self-efficacy could be explained by English fluency and conflict handling styles (Adjusted  $R^2 = .26$ ,  $F(7, 318) = 17.57$ ,  $p < .01$ ). No moderation effect was found within this group (Table 6). Language fluency uniquely predicted social self-efficacy. People with oblige or dominate conflict handling style have higher social self-efficacy when compared to people with Integrate conflict handling style.



Table 6 Regression Analysis Predicting Social Self-efficacy with English Fluency and Conflict Handling Styles.

Variable	B	SE B	B	T
English Fluency	.53	.09	.44	5.86**
Integrate vs Avoidance	.11	.08	.07	1.31
Integrate vs Oblige	.19	.08	.13	2.33*
Integrate vs Dominate	.18	.09	.11	1.97*
Language*D1	-.04	.16	-.01	-.24
Language*D2	.08	.16	.03	.49
Language*D3	.26	.17	.09	1.57

Dependent variable: Perceived Social Self-efficacy. D1=Integrate vs. Avoidance, D2=Integrate vs. Oblige, D3= Integrate vs. Dominate\*p<.05, \*\*p<.01.

Finally, a one-way ANOVA was performed to compare mean differences across different conflict handling styles. The result indicates that there was a significant effect of conflict handling style on individuals' conservation value (Table 7). Post hoc comparisons with Scheffe's statistic suggests that people with dominate conflict handling style (M=3.91, SD=.68) have higher score in conservation than people with avoidance conflict handling style (M=3.51, SD=.68). Which indicated that people with dominate conflict handling style tend to looking for stability and security for self and close others than those who use avoidance conflict handling style (Roccas & Sagiv, 2009). This result rejected the hypothesis that international students with integrative conflict handling style had higher scores in openness to change. It also showed that international students preferring avoidance style did not have higher scores in conservation. Instead, international students with dominate conflict handling style have a higher score in conservation than international students with avoidance conflict handling style.

Table 7 One-Way Analysis of Variance of Conservation in international students by conflict handling style

Source	df	SS	MS	F	<i>p</i>
Between groups	3	6.18	2.06	4.65	.00
Within groups	322	142.64	.44		
Total	325	148.82			

## Chapter V

### Discussion

The chapter will discuss the implications of the results presented in Chapter 4. Next, research implications of the study will be discussed. Finally, limitations of the study will be reviewed and suggestions for future directions within international students' socio-cultural adaptation research will be made.

The two purposes of this study are: (1) identifying various factors that influence international students' sociocultural adjustment in the host country; (2) exploring how the interaction between these factors affect international students' sociocultural adjustment levels and their retention in the United States in order to understand what kind of resources would be helpful for counselors working with international students. With a social cognitive model, this study focused on how various factors influence international students' socio-cultural adaptation. It also focused on the influence of interaction between each variable on international students' socio-cultural adaptation. The research questions are:

1. Does English proficiency in different domains (i.e. listening, reading, writing and speaking) have different degrees of impact on international students' social self-efficacy?
2. Are international students' conflict handling styles influenced by their cultural values?
3. Would conflict handling style influence the relationship between English proficiency and social self-efficacy?
4. How do perceived discrimination and perceived social support moderate the relationship between social-self-efficacy and sociocultural adjustment?

The main findings of this study include the significant moderating effect of perceived discrimination on social self-efficacy and socio-cultural adaptation difficulties. It has been

established that social self-efficacy was positively related to international students' social adaptation (Gong & Fan, 2006; Li & Gasser, 2005; Ying & Liese, 1994). However, past researchers did not investigate the role that perceived discrimination plays in this relationship. In this study, the results showed that international students with high social self-efficacy had less socio-cultural adaptation difficulties when they perceived low discrimination. However, when these students perceived high discrimination, they reported higher socio-cultural adaptation difficulties. In this study, the regression results indicated that when international students perceived higher discrimination, they had higher socio-cultural adaptation difficulties. However, the results did not indicate a significant effect of social self-efficacy on socio-cultural adaptation. Bandura (1986) found that there are times that self-efficacy beliefs do not have influential or predictive power in individuals' behavior. In this study, other environmental factors such as perceived discrimination might have had a stronger relationship with socio-cultural adaptation difficulties. That is, when perceiving a high level of discrimination even people with high social self-efficacy may choose not to put efforts in adapting socio-culturally to the host country. As Bandura (1986) found, when students felt there were no desired outcomes that will occur after the effort they put in, they might choose not to engage in a task.

In addition to perceived discrimination, social support is another factor that has been widely studied in previous research. It was well documented that social support can moderate the relationship between acculturative stress on anxiety and depressive symptoms (Crockett, Iturbide, Stone, McGinley, Raffaelli & Carlo, 2007; Lee, Koeske & Sales, 2004). However, in this study, the results of the hierarchical regression indicated that there was no significant moderating effect of perceived social support on social self-efficacy and socio-cultural adaptation difficulties for international students. Furthermore, inconsistent with previous researches, the results indicated that social support and socio-cultural adaptation difficulties

were positively correlated. This could be because individuals' perceived social support is found to affect psychological adjustment instead of socio-cultural adjustment (Ward & Kennedy, 1999; Yang, Noels & Saumure, 2006). While psychological adjustment is related to stress and emotional well-beings, socio-cultural adjustment focuses on an individual's ability to fit in (Yang, Noels & Saumure, 2006). In this study, socio-cultural adaptation was defined as being involved in the new society, which is different from psychological adjustment. This may help to explain the inconsistent results with previous research. Also, past research found that implicit social support (focusing on valued social groups) could benefit Asian and Asian Americans psychologically and biologically more than explicit social support (seeking and using advice and emotional solace) (Taylor, Welch, Kim & Sherman, 2007). Given that most of the participants in this study were international students from East Asia and the scale to assess social support contained many items related to explicit social support (e.g. Listen and talk with you whenever you feel lonely or depressed), it might also explain why perceived social support was positively related to socio-cultural adaptation difficulties.

Other than environmental factors, this study also included personal factors. In terms of personal values, the hierarchical regression results showed that values, especially openness to change, predicted international students' socio-cultural adaptation difficulties. It was found that the more open to change a person is, the less socio-cultural adaptation difficulties he or she would feel. People who value openness tend to have higher motivation in exploring or seeking new things, and they are also more prepared for new experiences (Roccas, Schwartz & Amit, 2010). Thus, they might feel less socio-cultural adaptation difficulties.

English fluency is also another personal factor that was investigated in this study. Even though past research has emphasized the critical role that English fluency plays in reducing international students' psychological symptoms and acculturative stress (Poyrazli, Kavanaugh,

Baker & Al-Timimi, 2004; Ye, 2005; Yeh & Inose, 2003, Ying & Liese, 1991), the results of this study indicated that after the variance of social support, perceived discrimination, social self-efficacy and values were accounted for, language fluency did not predict socio-cultural adaptation difficulties. It might be because language is not as strong as other factors in international students' socio-cultural adaptation process. It might also be because other factors that occur in international students' socio-cultural adaptation process such as perceived social support and perceived discrimination might have a moderating or mediating effect on the relationship between English ability and international students' socio-cultural adaptation.

However, language fluency did uniquely predict social self-efficacy. The higher the international students' English speaking and writing fluency were, the higher their social self-efficacy was. Given that many courses in the United States requires class discussion or group projects, it was not unexpected that speaking would influence international students' social self-efficacy. Also, for many international students studying in higher education in western countries, writing in English is often highlighted as a difficulty (Li & Vandermensbrugge, 2011). For international students who had more confidence in their writing ability, it is possible that they have better performance and feel more confident when interacting with professors or their classmates, which contributes to their higher social self-efficacy.

It was hypothesized that international students with a preference in avoidance styles when handling conflict would have a decrease in their social self-efficacy even when they had high English proficiency. It was found in this study that English fluency could predict international students' social self-efficacy. When conflict handling styles were added to the model, it did not moderate the relationship between English fluency and perceived social self-efficacy for international students. This might be because the relationship between English fluency and

social self-efficacy was very strong. Thus, adding other factors did not significantly change the strength of this relationship.

Finally, the researcher examined whether people with different conflict handling styles would prefer different values. The results of this study indicated that there is a difference in the level of conservation between different conflict handling styles. Specifically, an ANOVA showed that people with a dominate conflict handling style tended to value conservation more than people who used avoidance conflict handling style. Since people who value conservation look for stability and security for self and close others (Roccas & Sagiv, 2010), and people who use dominate style tend to focus on their own needs (Daly, Lee, Soutar & Rasmi, 2009), people who used a dominate conflict handling style might value conservation more than people who use avoidance conflict handling styles.

#### Limitations:

There are several limitations of this study. First of all, data was collected by snowball sampling. As a result, the representativeness of the sample is not guaranteed. Since it started with the researchers' personal and professional network, it is possible that the participants shared similar traits and characteristics. Most of the participants were from East Asia. As a result, the findings may not be suitable for all of international students. Future researchers can cooperate with different schools or universities' international student center to get a more diverse and representative sample.

Secondly, most of the participants were from East Asia, which might also influence the generalizability of the results. Given that most studies were focusing on Asians or discussing international students as a whole group (Zhang & Goodson, 2011), there is a need to investigate international students who came from other countries and ethnic backgrounds to see whether they encounter different challenges in adjusting to the United States.

Thirdly, it is not clear whether the participants' perceived social support came from other international students from the same country, international students from other countries or people from the host country. Given that international students who socialize with people from the host country were found to be more satisfied, content and less homesick than those who did not (Hendrikson, Rosen & Aune, 2011), it is critical to further examine this factor in detail in the future. Fourthly, all of the measures were based on self-report questionnaires. The results are potentially limited by the research method.

In sum, the results of this study support that English fluency in different domains have different degrees of influence on international students' social self-efficacy. People using dominate conflict handling style and people using avoidance conflict handling style showed differences on their conservation value, but different conflict handling styles did not influence the relationship between English fluency and social self-efficacy. This study also provided empirical support that perceived discrimination not only had an effect on international students' socio-cultural adaptation, it also moderated the effect of social self-efficacy on socio-cultural adaptation. Finally, the results demonstrated that social support may not affect international students' socio-cultural adaptation as much as it does on psychological adjustment.

#### Implications and Future Research:

The results of the study have theoretical implications for understanding international students' socio-cultural adaptation in the United States. Previous research has documented that social self-efficacy is positively related to international students' social adjustment (Gong & Fan, 2006; Li & Gasser, 2005; Ying & Liese, 1994). Yet none of these researchers examined factors that might influence this relationship. This study provides the evidence that it is critical to also consider other environmental factors (e.g. perceived discrimination) when interpreting the effect of social self-efficacy.



Even though social support has been found to decrease international students' psychological symptoms (Crockett et al., 2007; Lee, Koeske & Sales, 2004), this study showed that social support did not have the same effect on their sociocultural adaptation. Whether social support could assist international students' socio-cultural adaptation process needs further examination. There might be a need of creating new scales to assess social support that contain implicit and explicit social support items for international students so that it could better capture the effect of different types of social support.

Given that not many studies focus on the comparison between international graduate students and undergraduate students, it could be beneficial for future researchers to further examine the differences between these two groups. It could also be beneficial for researchers to study conflict handling styles and how it might influence international students' socio-cultural adaptation. Furthermore, based on the results, there seems to be other factors such as perceived discrimination that could moderate the impact of social self-efficacy on socio-cultural adaptation difficulties. Investigating whether there are still other factors that can influence the prediction of international students' socio-cultural adaptation is necessary.

These research findings also pointed out the importance of perceived discrimination on international students' socio-cultural adaptation. It is critical for universities to continuously work on providing a more supportive and welcoming environment for international students. International students' educators and universities could also think about ways to assist international students in improving their English writing and speaking skills, such as providing workshops or writing groups (Li & Vandermensbrughe, 2011).

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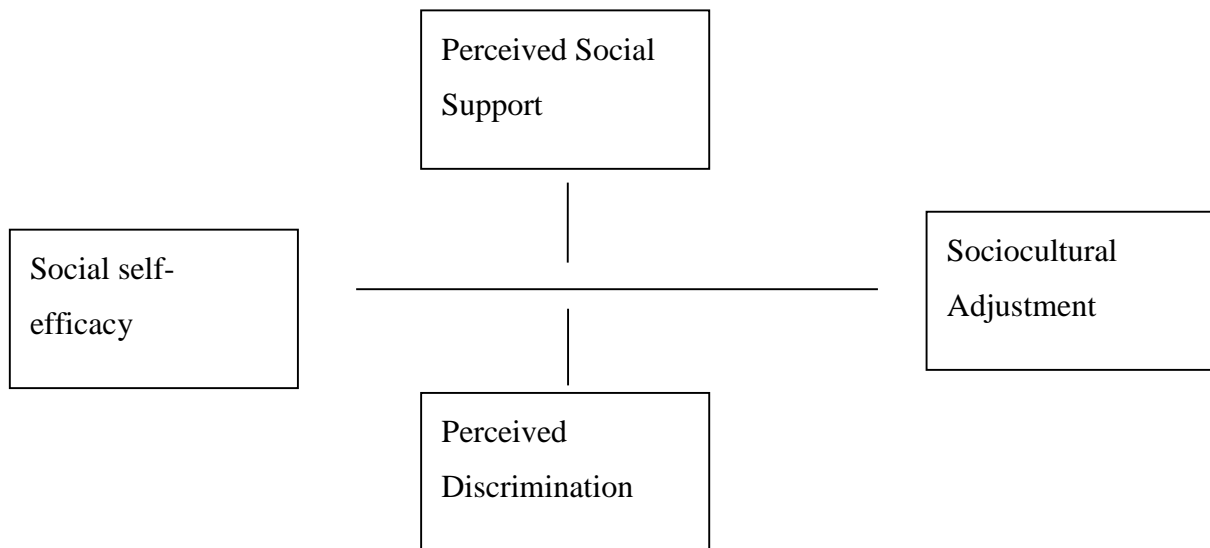
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## Appendix A Model



## Appendix B Demographics Questionnaire

### Demographics Questionnaire

1. Age \_\_\_\_\_
2. Gender: Male Female other (Please specify) \_\_\_\_\_
3. Which Country or region are you originally from? \_\_\_\_\_
4. What is your native language? \_\_\_\_\_
5. How long you have been in the States for your current study?  
Less than 1 year 1-2 years 2-3 years 3-4 years  
4-5 years 5-6 years 6 years and above
6. Did you have any experience living in the U.S. or any other English-speaking country before you came to the U.S. to pursue your current studies?  
Yes  
how old were you? \_\_\_\_\_  
how long did you stay? \_\_\_\_\_  
No
7. Which state is your current college/ university?
8. You consider the city/ area you are currently living in is  
Urban Suburban Rural  
College town Other, please specify \_\_\_\_\_
9. Your relationship status: \_\_\_\_\_  
 Single Committed Relationship Married
10. If you are married or in a stable relationship, does your partner live with you?  
Yes, in the same city. No, in another city in the U.S.  
No, partner stays in my home country. Other \_\_\_\_\_
11. Has any of your siblings lived in the States?  
Yes, he/she is in the same city with me.  
Yes, but he/she is not in the same city/state.  
Yes, but he/she went back to my home country before I came.  
Yes, but he/she went back to my home country after I came.  
No, none of my sibling(s) has ever lived in the States.
12. Has your father studied abroad?  
Yes  
No
13. Has your mother studied abroad?  
Yes  
No

14. Do you have any relative lives in the States?
- Yes, in the same city/State  
 Yes, in different city/State  
 No
15. What is the highest level of education your father has completed?
- Less than High School    High School    2-year College  
 4-year College    Master Degree    Doctoral Degree  
 Professional degree    Other, please specify \_\_\_\_\_
16. What is your mother's education level?
- Less than High School    High School    2-year College  
 4-year College    Master Degree    Doctoral Degree  
 Professional degree    Other, please specify \_\_\_\_\_
17. What is the level of your current program of study? (Please select whichever is most appropriate)
- Graduate Doctorate    Graduate Master's / Professional  
 Undergraduate    Other, please specify \_\_\_\_\_
18. What is your current study type?
- On Campus    Student exchange  
 Study Abroad Program    Other. Please Specify \_\_\_\_\_
19. What is your field of study/ major? \_\_\_\_\_
20. What is your school/ division/ department? \_\_\_\_\_
21. Where are you in your program of study?
- First year or single year program    Other year  
 Last/final year    Short program (Less than 1 year)
22. Do you have other international student in your program?
- Yes, how many \_\_\_\_\_  
 No
23. Do you have any student association that is composed by people from your country? E.g. Japanese Students Association.
- Yes    No

## Appendix C Socio-cultural Adaptation Scale

### Socio-cultural Adaptation Scale

Please indicate how much difficulty you experience in the United States in each of these areas. Use the following 1 to 5 scale, 1 means No difficulty and 5 means extreme difficulty.

	No difficulty			Extreme Difficulty		
	1	2	3	4	5	
1. Making friends.	1	2	3	4	5	
2. Finding food that you enjoy	1	2	3	4	5	
3. Following rules and regulations.	1	2	3	4	5	
4. Dealing with people in authority.	1	2	3	4	5	
5. Taking a Americans' perspective on the culture.	1	2	3	4	5	
6. Using the transport system.	1	2	3	4	5	
7. Dealing with bureaucracy	1	2	3	4	5	
8. Understanding the Americans' value system.	1	2	3	4	5	
9. Making yourself understood.	1	2	3	4	5	
10. Seeing things from a Americans' point of view.	1	2	3	4	5	
11. Going shopping.	1	2	3	4	5	
12. Dealing with someone who is unpleasant.	1	2	3	4	5	
13. Understanding jokes and humor.	1	2	3	4	5	
14. Accommodation.	1	2	3	4	5	
15. Going to social gatherings.	1	2	3	4	5	
16. Dealing with people staring at you.	1	2	3	4	5	
17. Communicating with people of a different ethnic group.	1	2	3	4	5	
18. Understanding ethnic or cultural differences.	1	2	3	4	5	
19. Dealing with unsatisfactory service.	1	2	3	4	5	
20. Worshipping.	1	2	3	4	5	
21. Relating to members of the opposite sex.	1	2	3	4	5	
22. Finding your way around.	1	2	3	4	5	
23. Understanding the United States' political system.	1	2	3	4	5	
24. Talking about yourself with others.	1	2	3	4	5	
25. Dealing with the climate.	1	2	3	4	5	
26. Understanding the United States' world view.	1	2	3	4	5	
27. Family relationships.	1	2	3	4	5	
28. The pace of life.	1	2	3	4	5	
29. Being able to see two sides of an inter-cultural issue	1	2	3	4	5	

## Appendix D Scale of Perceived Social Self-efficacy

### Scale of Perceived Social Self-Efficacy

Please read each statement carefully. Then decide how much confidence you have that you could perform each of these activities successfully. Please use the following key:

**No confidence at all**

**Complete Confidence**

1

2

3

4

5

#### **How much confidence do you have that you could:**

1. Start a conversation with someone you don't know very well.	1	2	3	4	5
2. Express your opinion to a group of people discussing a subject that is of interest to you.	1	2	3	4	5
3. Work on a school, work, community, or other project with people you don't know very well.	1	2	3	4	5
4. Help to make someone you've recently met feel comfortable with a group of your friends.	1	2	3	4	5
5. Share with a group of people an interesting experience you once had.	1	2	3	4	5
6. Put yourself in a new and different social situation.	1	2	3	4	5
7. Volunteer to help organize an event.	1	2	3	4	5
8. Ask a group of people who are planning to engage in a social activity (e.g., go to a movie) if you can join them.	1	2	3	4	5
9. Get invited to a party that is being given by a prominent or popular individual.	1	2	3	4	5
10. Volunteer to help lead a group or organization.	1	2	3	4	5
11. Keep up your side of the conversation.	1	2	3	4	5
12. Be involved in group activities.	1	2	3	4	5
13. Find someone to spend a weekend afternoon with.	1	2	3	4	5
14. Express your feelings to another person.	1	2	3	4	5
15. Find someone to go out to lunch with.	1	2	3	4	5
16. Ask someone out on a date.	1	2	3	4	5
17. Go to a party or social function where you probably won't know anyone.	1	2	3	4	5
18. Ask someone for help when you need it.	1	2	3	4	5
19. Make friends with a member of your peer group.	1	2	3	4	5
20. Join a lunch or dinner table where people are already sitting and talking.	1	2	3	4	5



21. Make friends in a group where everyone else knows each other.	1	2	3	4	5
22. Ask someone out after he/she was busy the first time you asked.	1	2	3	4	5
23. Get a date to a dance that your friends are going to.	1	2	3	4	5
24. Call someone you've met and would like to know better.	1	2	3	4	5
25. Ask a potential friend out for coffee.	1	2	3	4	5

## Appendix E Perceived Level of English Mastery

### Perceived Level of English Mastery (PLEM-Revised)

This following questionnaire is designed to assess how much confidence you have with your English proficiency when communicating with other people. Please make your responses in the following manner:

	Very Poor	1	2	3	4	5	Very Good
1. What is your current level of English <u>listening</u> fluency?	1	2	3	4	5		
2. What is your current level of English <u>speaking</u> fluency?	1	2	3	4	5		
3. What is your current level of English <u>reading</u> fluency?	1	2	3	4	5		
4. What is your current level of English <u>writing</u> fluency?	1	2	3	4	5		
5. How comfortable are you communicating in <u>listening</u> English?	1	2	3	4	5		
6. How comfortable are you communicating in <u>speaking</u> English?	1	2	3	4	5		
7. How comfortable are you communicating in <u>reading</u> English?	1	2	3	4	5		
8. How comfortable are you communicating in <u>writing</u> English?	1	2	3	4	5		
9. How often do you communicate in <u>listening</u> English?	1	2	3	4	5		
10. How often do you communicate in <u>speaking</u> English?	1	2	3	4	5		
11. How often do you communicate in <u>reading</u> English?	1	2	3	4	5		
12. How often do you communicate in <u>writing</u> English?	1	2	3	4	5		

## Appendix F Perceived Discrimination Subscale

### Perceived Discrimination Subscale

Below are 8 statements of situations that you may/ may not encounter in your life in America.

Using the 5 point scale below, indicate your agreement with each item.

**Strongly Disagree**

**Strongly Agree**

**1**

**2**

**3**

**4**

**5**

1. Many opportunities are denied to me.	1	2	3	4	5
2. I am treated differently in social situations.	1	2	3	4	5
3. Others are biased toward me.	1	2	3	4	5
4. I feel low because of my cultural background.	1	2	3	4	5
5. I feel that my people are discriminated against.	1	2	3	4	5
6. I am treated differently because of my race.	1	2	3	4	5
7. I am treated differently because of my color.	1	2	3	4	5
8. I feel that my status in this society is low due to my cultural background	1	2	3	4	5

## Appendix G The Short Schwartz Value Survey

### The Short Schwartz Value Survey (SSVS)

Please rate the importance of the following values as a life-guiding principle for you. Choose alternatives on the scale 1 Not important and 5 Very important

	Not important					Very important	
	1	2	3	4	5		
1. POWER (social power, authority, wealth)	1	2	3	4	5		
2. ACHIEVEMENT (success, capability, ambition, influence on people and events)	1	2	3	4	5		
3. HEDONISM (gratification of desires, enjoyment of life, self-indulgence)	1	2	3	4	5		
4. STIMULATION (daring, a varied and challenging life, an exciting life)	1	2	3	4	5		
5. SELF-DIRECTION (creativity, freedom, curiosity, independence, choosing one's own goals)	1	2	3	4	5		
6. UNIVERSALISM (broad-mindedness, the beauty of nature and the arts, social justice, a world at peace, equality, wisdom, unity with nature, environmental protection)	1	2	3	4	5		
7. BENEVOLENCE (helpfulness, honesty, forgiveness, loyalty, responsibility)	1	2	3	4	5		
8. TRADITION (respect for tradition, humbleness, accepting one's portion in life, devotion, modesty)	1	2	3	4	5		
9. CONFORMITY (obedience, honoring parents and elders, self-discipline, politeness)	1	2	3	4	5		
10. SECURITY (national security, family security, social order, cleanliness, reciprocation of favors)	1	2	3	4	5		

## Appendix H Index of Sojourner Social Support Scale

### Index of Sojourner Social Support Scale (ISSS)

Please read each statements below and consider if you know persons in the United States with whom they were maintaining some form of regular contact who would perform the helpful behaviors. Please use the following key:

	No one would do this					Many would do this				
	1	2	3	4	5	1	2	3	4	5
1. Comfort you whenever you feel homesick.						1	2	3	4	5
2. Listen and talk with you whenever you feel lonely or depressed.						1	2	3	4	5
3. Share your good and bad times.						1	2	3	4	5
4. Spend some quiet time with you whenever you do not feel like going out.						1	2	3	4	5
5. Spend time chatting with you whenever you are bored.						1	2	3	4	5
6. Accompany you to do things whenever you need someone for company.						1	2	3	4	5
7. Visit you to see how you are doing.						1	2	3	4	5
8. Accompany you somewhere even if he or she doesn't have to.						1	2	3	4	5
9. Reassure you that you are loved, supported, and cared for.						1	2	3	4	5
10. Provide necessary information to help orient you to your new surroundings.						1	2	3	4	5
11. Help you deal with some local institutions' official rules and regulations.						1	2	3	4	5
12. Show you how to do something that you didn't know how to do.						1	2	3	4	5
13. Explain things to make your situation clearer and easier to understand.						1	2	3	4	5
14. Tell you what can and cannot be done in Singapore.						1	2	3	4	5
15. Help you interpret things that you don't really understand.						1	2	3	4	5
16. Give you some tangible assistance in dealing with any communication or language problems that you might face.						1	2	3	4	5
17. Explain and help you understand the local culture and language.						1	2	3	4	5
18. Tell you about available choices and options.						1	2	3	4	5

## Appendix I Conflict Handling Styles

### Conflict Handling Styles

In this section we will ask you to pick which of the following are the best and worst descriptions of you personally when in a situation that requires negotiation or conflict resolution with your peers.

While more than one may be accurate please choose the best and worst description of you. In total there are four different sets. Even though some sets may seem similar please answer all sets.

Set A: Of these, which are the best and worst descriptions of you?

	Best description (pick one)	Worst description (Pick one)
1. I look for the best outcomes for both of us.		
2. I try to avoid conflict and negotiations.		
3. I try to give the other person what they want.		

Set B: Of these, which are the best and worst descriptions of you?

	Best description (pick one)	Worst description (Pick one)
1. I try to give the other person what they want.		
2. I try to win my position.		
3. I try to avoid conflict and negotiations.		

Set C: Of these, which are the best and worst descriptions of you?

	Best description (pick one)	Worst description (Pick one)
1. I try to avoid conflict and negotiations.		
2. I look for the best outcomes for both of us.		
3. I try to win my position.		

Set D: Of these, which are the best and worst descriptions of you?

	Best description (pick one)	Worst description (Pick one)
1. I look for the best outcomes for both of us.		
2. I try to win my position.		

3. I try to give the other person what they want.		
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