AN EXPLORATION OF CHINESE INTERNATIONAL STUDENTS’ SOCIAL SELF-EFFICACIES

DISSERTATION

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By

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ABSTRACT

Despite a growing literature regarding both the social self-efficacy and the cross-cultural adjustment of international students, an integration of research in these two areas is still not yet well developed. Given concern over this lack of integration and interest in understanding the nature of the adjustment process of international students, this present study endeavored to explore the role of social self-efficacy in the process of cross-cultural adjustment for Chinese international students. Accordingly, the main purpose of this study is to seek to examine whether there is a discrepancy in the levels of social self-efficacy in different language settings for Chinese international students. Also, the relationships between social self-efficacy in different language settings and other constructs, such as acculturation stress, global self-esteem, and English proficiency, would be examined. Other hypotheses examining the predicting relationships between these variables would be discussed in this study as well for applications in intervening.

The sample of participants consisted of 203 Chinese international students who were mainly recruited from the Ohio State University. There were four measures administered in this study: the scale of Perceived Social Self-Efficacy, the Unconditional Self-Regard Scale, the Acculturative Stress Scale for International Students, and a Demographic Questionnaire, which contained three questions regarding English proficiency. A t-test was utilized to examine the differences between the two different social self-efficacies
when participants speak in Chinese versus English. Next, correlational analyses were employed to examine hypotheses regarding the relationships among all the variables, including social self-efficacy in different language settings, global self-esteem, acculturation stress, and English proficiency. Finally, hierarchical regression analysis was used to examine the predicting relationships among these above variables.

Several important findings have been evident in this study. First, Chinese international students reported different levels of social self-efficacy in different language settings. That is, they perceived a significantly higher social self-efficacy in Chinese interactional setting than in English setting. Secondly, English social self-efficacy is the major resource in influencing international students’ adjustment outcomes. That is, a higher level of social self-efficacy will predict a lower level of acculturation stress. Third, both the cognitive (social self-esteem) and affective (global self-esteem) parts of an individual contribute to the psychological adjustment outcomes, such as acculturation stress, in an essential fashion. Finally, variables like English proficiency and the length of residency in the USA have indirect influence on acculturation stress through social self-efficacy. That is, social self-efficacy is the mediator for the predicted relationships.
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Nancy Betz  Paul Pedersen  My parents
Paul Pedersen

Derek Bergeron  Bruce Walsh  Louise Douce  My sister and brothers

Cheng’s family  Old man Larry Papier  Wu’s family  Fan, Jinyan  K. C. Ting
Chen’s Little Larry Papier  DiDi’s family  Jamie Bromley  Participants for this study teacher Wu K.K. Hwang  HeiYing  Cheri Papier  Ilana T. Ann + Dr. Chern  John Powell and Mary  Members of BBAC  CP family  Joseph Dewitz  Jennifer Carter  My very first two clients and clients at Orient Correctional Center  CCS  Hung-Bin  Coin from David Campbell  Ping-pong partners at Jewish Center  Dave Diamond  Shu-Ping Lin and Ann Lin  Geese in my neighborhood

People I forgot… at this point

People that I can’t write their name in Chinese due to the language system
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Self-efficacy is a popular construct that counseling psychologists have been studying for nearly three decades. Bandura (1977) first proposed this psychological construct in the social psychology area and has successfully identified the influences of socio-cultural-environmental factors on individuals’ cognitive processes. Furthermore, functioning as a mediator, the cognitive entity self-efficacy affects the outcome of individuals’ behaviors. Because of the interventional feature of this theory, Bandura’s social-efficacy concept has been increasingly and frequently employed in the Counseling Psychology field in accord with the core themes of this helping profession: counseling as a process of social influence (Strong, Welsh, Corcoran, & Hoyt, 1992) appreciation for individuals’ strengths and assets as intact human beings, the influence of environmental factors, and the educational and interventional attributes (Gelso & Fretz, 2001).

As defined by Bandura (1977), self-efficacy is an individual’s perception of his/her ability to perform specific tasks or behavior. In other words, self-efficacy expectations are concerned not with an individual’s actual skills but with a person’s perceptions of his or her behavioral capacity (Bandura, 1986). In his work of 1977, Bandura also proposed a theoretical model of perceived self-efficacy and recommended the process of social influence on affecting this psychological construct. He suggested that there are
postulated sources of efficacy information, such as an individual’s performance accomplishments, vicarious learning, emotional arousal, and verbal persuasion experiences, which determine the strength of self-efficacy expectations for a specific domain of behavior. These self-efficacy expectations in turn influence the behavioral outcome of approach versus avoidance, persistence, and the quality of performance (see Figure 1). More specifically, this theory emphasizes the importance of self-efficacy for the outcome variables, and suggests that self-efficacy acts as a moderator for three specific outcome behaviors. In turn, it is proposed that an individual’s self-efficacy expectations will influence (1) whether one will approach or avoid a certain behavior, (2) how long one will persist his or her efforts in pursuing and performing a certain behavior regardless of the presence of obstacles or aversive experiences, (3) and the quality of one’s performance. In other words, this self-perceived social efficacy plays a significant determinant for individuals’ outcome behaviors of a given domain (Smith & Betz, 2002). This self-perceived confidence works separately from the actual ability that one possesses, and it serves as a better predictor for an individual’s outcome behaviors than one’s ability (Smith & Betz, 2002). Secondly, in this framework, Bandura strongly asserted that self-efficacy is a malleable construct that an individual would enhance with supplemental reinforcements. Unlike other rigid psychological constructs in personality trait theory, self-efficacy is a flexible construct that an individual would improve throughout his or her life by the learning experiences he or she obtains. Bandura asserted that four areas of supplemental reinforcements, including successful performance accomplishments from the past experiences, vicarious learning from the modeling others,
Figure 1.1: Bandura’s model of perceived self-efficacy (Based on Bandura, 1977; as adapted by Betz, 1992)
level of emotional arousal, and verbal persuasion or encouragement from significant others, would help individual to develop a higher level of perceived self-efficacy. His work on this amendable psychological construct has inspired numerous psychologists to further explore the nature of self-efficacy and its relationship with other psychological constructs and behaviors.

Bandura’s (1977) theoretical model of perceived self-efficacy beliefs has been successfully applied in different social areas and academic areas. The study of the outcome variables related to individuals’ perceived self-efficacy illustrates that the construct influences a variety of types of functioning. For example, strong self-efficacy beliefs have been found to relate to positive outcomes in academic achievement (e.g. Bandura, Pastorelli, Barbaranelli, & Caprara, 1999) and career choice (e.g. Betz & Hackett, 1981; Betz & Hackett, 1997). Also, self-efficacy (Bandura, 1977) has been negatively related to some negative psychological symptoms, such as depression and shyness (e.g. Ehrenberg, Cox, & Koopman, 1991; Smith & Betz, 2002).

Recently, Bandura (2001) has focused his study on the importance of self-efficacy in psychological adjustment broadly. He persuasively indicated the profound impact of self-efficacy in the process and outcome of an individual’s adjustment. One of the domains of self-efficacy often examined in accord with Bandura’s focus on adjustment has been self-efficacy in social domains. Psychologists have found that individuals’ belief in their social skills and confidence affects a wide variety of adjustment indices (e.g. Fan & Mak, 1998; Toyokawa & Toyokawa, 2002). Smith and Betz (2000) have applied Bandura’s theoretical model to social situations and have developed a psychological construct called social self-efficacy. Social self-efficacy was defined as an individual’s
confidence in her/his ability to engage in the social interactional tasks necessary to initiate and maintain interpersonal relationships (Smith & Betz, 2000). This definition of social self-efficacy (Smith & Betz, 2000) can be conceptualized as an example of the approach versus avoidance component of Bandura’s (1977) model.

Studies of social self-efficacy have suggested that perceived social confidence in social settings has strongly correlated to related variables in an individual’s psychological adjustment, such as shyness and depression (Smith & Betz, 2000; Stroiney & Betz, 2003). Also, social self-efficacy has been suggested to impact various domains of an individual’s life experiences, such as social adjustment and academic performance (e.g. Ferrari & Parker, 1992; Patterson & O’Brien, 1997; Smith & Betz, 2002; Herman & Betz, 2004). The beliefs regarding self-efficacy in social domains have important relationships to different aspects of adjustment, which suggests that social self-efficacy is one of the potentially most important domains of self-efficacy.

Although researchers have examined social self-efficacy in terms of its structure and its relationship with other domains of an individual’s life, there has been little research on the relationship between perceived social-efficacy and cultural factors. The relationship between the cross-cultural adjustment of international students and their perceived social self-efficacy is a particular area worthy of future exploration.

Cross-cultural adjustment has been a topic of study for several decades (Leong, 1984; Thomas, 1985; Furnham & Bochner, 1986; Black, Mendenhall, & Oddou, 1991; Pederson, 1997), and research on the cross-cultural adjustment of international students in the USA is an area that has been consistently growing (Black et. al., 1991). Most of these studies have either focused on the psychological symptoms of adjustment (Leong,
1984; Thomas, 1985; Furnham & Bochner, 1986, Sam & Eide, 1991) or on identifying concerns related to adjustment (Church, 1982; Parr & Bingi, 1992). For example, Ward (1967) suggested the label “the foreign student syndrome” to indicate the passive and withdrawn interpersonal style of international students. Overall, most of these studies have narrowly focused on the psychopathology of international students’ adjustment rather than examined individuals’ perceived self-concepts, such as social self-efficacy. It seems that such a focus on the self-concepts of international students would likely serve as a catalyst for generating effective interventions to foster successful adjustment experiences for international students, and is thus an area deserving further exploration.

Also, Davis (2000) indicated that 54% of the hundreds of thousands of international students in the U.S. are Asians. Not surprisingly, most studies on across-cultural adjustment focus on Asian international students because of the size of this population, as well as the salience of cultural, ethnic, and language differences between Easterners and Westerners. Although a number of factors likely contribute to the adjustment challenges faced by Asian international students, language differences in particular appear to be a promising factor worthy of exploration. Given findings from previous studies (Yeh & Inose, 2003; Constantine et. al., 2004) on international students in general that suggest language can play a moderating role in the adjustment process, it would not be surprising if language barriers were to play a vital role in Asian international students’ adjustment process. Particularly, this factor could potentially have a major contribution to one’s perception of social self-efficacy during the process of across-cultural adjustment. One promising domain in this regard with potentially important implications for fostering a more effective intervention for international students’ cross-cultural adjustment is that of
their perceived social self-efficacy in different settings which require different languages in communication.

 Accordingly, given the lack of integration of the literatures on cross-cultural adjustment and that on social self-efficacy, the purpose of this study is to explore the role of social self-efficacy in the process of cross-cultural adjustment for Asian international students. First, it is hypothesized that perceived social self-efficacy will be affected by the different language interactional settings. Significantly higher perceived social self-efficacy will be expected when international students communicate in their native tongue language versus when they communicate in English. More specifically, international students are expected to demonstrate a higher level of social confidence when they speak in their native language with their fellow nationals. However, they will be less confident in the social setting with native English speakers while they carry out the conversation in English.

 In addition to the previous concern, this study is also designed to examine the relationship between these two perceived social self-efficacies in varied social interactional settings and the adjustment outcomes, such as acculturative stress, of international students in general. It is hypothesized that social self-efficacy will be negatively related to acculturation stress, but that the relationship will be stronger for social self-efficacy in English speaking interaction versus those in Chinese.

 Finally, this study aims to investigate the psychological construct of self-esteem and its relationships with social self-efficacy and acculturation stress, given that prior research has suggested connections among these constructs (e.g. Connolly, 1989; Patterson & O’Brien, 1997). It is hypothesized that there will be high correlations among
these three variables. Furthermore, it is hypothesized that perceived self-esteem among international students will have less vital influence on international students acculturative stress than social self-efficacies.
CHAPTER 2

LITERATURE REVIEW

The present study endeavors to explore the construct of perceived social self-efficacy in different interactional settings in regards to international students’ cross-cultural adjustment experiences. Given this purpose, the literature review will focus on two major areas of the literature in Counseling Psychology, that is, social self-efficacy and international students’ cross cultural adjustment experiences.

This review will begin by exploring the definition, measurement, and correlates of the construct of social self-efficacy, as it is the central construct involved in the study. Hence, the correlation between social self-efficacy and other psychological constructs, such as self-esteem, adjustment outcomes, and depression will be reviewed. Subsequently, the research regarding international students’ cross-cultural adjustment experiences will be reviewed. Given the fact that there is a vast literature concerning the area of international students’ adjustment issues, a limited literature review on particular topics in this area germane to the present study will also be included. The topics of English language usage, adjustment outcomes, coping strategies, and environmental factors will be elaborated upon in order to form a picture of international students’ subjective worlds.
Overall, this literature review has the following purposes. First, it will present the argument that social self-efficacy is a worthwhile and promising area to explore in cross-cultural settings. Second, it will be argued that the literature on international students’ cross-cultural experiences misrepresents international students by pathologizing their psychological symptoms, and that the literature that does not unduly pathologize international students tends to suffer from a lack of focus on intervention. Overall, this represents a failure of making the well-being of international students paramount. Third, it will be argued that English language proficiency can act as a critical variable in influencing the across-cultural adjustment of international students. Finally, given these shortcomings in the literature and the apparent centrality of language concerns, evidence will be provided for how the construct of social self-efficacy, in which intervention methods are an inherent feature, can be applied in different language settings for international students. It is hoped that this undertaking will lead to the development of intervention models that can be utilized to increase the well-being of international students.

Social Self-Efficacy

This social domain of self-efficacy is based on the application of Bandura’s (1977) theory of self-efficacy to social situations. In order to elaborate the concept of social self-efficacy in depth, Bandura’s theory of self-efficacy will be reviewed.

Bandura (1977) proposed self-efficacy theory as a model for explaining the cognitive processes that produce change in psychological treatment settings. Bandura (1977) suggested that an individual’s perceived level of self-confidence, defined as self-efficacy
in his theoretical model, in a particular domain influences the individual’s change-producing behaviors. He also proposed four sources of self-efficacy in his agentic model of outcome behaviors. The first of these is identified as performance accomplishments, which are an individual’s experiences in her/his past performance in and exposure to a specific domain. Secondly, vicarious learning is the level of an individual’s exposure to others who have performed the behavior through processes such as modeling. Thirdly, emotional arousal is the level of anxiety or other positive or negative emotions that the thought of performing the behavior produces. As the final source, verbal persuasion is the level of outright encouragement from others that an individual receives. In his theoretical model, Bandura suggests that various treatment techniques supply one or more of these sources of efficacy information and are therefore successful because they produce change through increasing a sense of perceived self-efficacy. Throughout the change of perceived self-efficacy, an individual will carry out different actions toward her/his specific domain goal. These actions will reflect on whether the individual approaches or avoids the domain in question, the actual performance level in that domain, and the tendency to persist in completing a related task.

Sherer, Maddux, Mercandante, Prentice-Dunn, Jacobs, and Rogers (1982) first introduced social self-efficacy as a separate domain during the development of the Generalized Self-efficacy Scale. Their intention for this scale was to develop a measure to measure a global sense of generalized self-efficacy across an individual’s life domains. Results of a factor analysis, however, indicated one general factor (generalized self-efficacy) and one specific factor of six items whose content focused on social interactions. Accordingly, they named this smaller factor “social self-efficacy”.

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Following their work, Smith and Betz (2000) defined Social self-efficacy as the level of an individual’s confidence in her/his ability to engage in the social interactional tasks necessary to initiate and maintain interpersonal relationships. This definition has been widely accepted in subsequent research on social self-efficacy.

**Measurement of Social Self-Efficacy in college and adult populations.** The construct of social self-efficacy stems from this theory, referring to an individual’s level of perceived self-efficacy in social situations. The measure of generalized self-efficacy developed by Sherer et al. (1982) first “accidentally” introduced the concept of the social self-efficacy. They developed this 23-item scale to measure a generalized sense of self-efficacy, but found, through factor analysis, that six of the scale items produced a subscale addressing items related to social interactions. Analysis of validity information from the social interactions subscale revealed weak correlations between social self-efficacy and levels of control and self-esteem. Also, in an employment setting, analyses revealed negative correlations with the number of jobs quit ($r = -.20$) and number of times fired ($r = -.30$), suggesting possible implications for career development for college students. Subsequent social self-efficacy research in college and adult populations has relied heavily on Sherer et al.’s (1982) six-item social subscale of the Self-Efficacy Scale. Despite these empirical findings, this measure originally lacked a solid theoretical framework.

However, inspired by the work of Sherer et al. (1982), other researchers (e.g., Fichten, 1987; Alden, Teschuk, & Lee, 1992) attempted to provide a more well-defined theoretical framework for social self-efficacy. The work of Alden, Teschuk and Lee (1992) primarily relied on a single-item measure to define the social-confidence of an
individual, and has failed to be psychologically robust in supporting their attempts.

Fichten, Bourdon, Amsel, and Fox (1987) designed the College Interaction Self-Efficacy Questionnaire (CISEQ) to measure college’s students’ confidence in interacting effectively in social contexts. The measure involved samples of both nondisabled and disabled individuals of the same sex. Result from this study suggested good reliability and validity for the measures of this scale. Yet, the focus of this scale is limited due to the lack of generalizibility to the general population. Given the shortcomings of these attempts, a more desirable and reliable scale designed for general use was needed (Smith & Beth, 2000).

In an effort to create a more complete, theoretically based measure of social self-efficacy for general use, Smith and Betz (2000) created the Scale of Perceived Social Self-Efficacy. This 25-item scale measures an individual’s perceived confidence in a variety of social situations, including such areas as assertiveness and social influence as well as general social ability. The results of a screen test revealed that a single general factor most accurately represented the structure of the inventory. The eigenvalue of this general factor was 10.17, and it accounted for 40.70% of the variance. The validity data demonstrate a correlation between social self-efficacy and the constructs of social anxiety, shyness, and social efficacy in career settings. No significant gender differences were found on the PSSE, but gender differences were present on the other measures of social self-efficacy used in the study.

Overall, however, the reliability and validity data support the scale as a strong measure of social self-efficacy across gender and ethnic groups. The internal consistency reliability revealed a coefficient alpha of .94 from a sample of 354 college students.
(Smith & Betz, 2000). A 3-week test-retest reliability in a smaller sample (N = 109) yielded a high value of \( r = .82 \). Evidence from these two indices demonstrate high reliability. Concurrent validity data was obtained using the social subscale of the Self-Efficacy Scale (Sherer et al., 1982) and the Social Confidence Scale of the Skills Confidence Inventory (Betz, Borgen, & Harmon, 1996). Correlations of these scales with the PSSE were \( r = .60 \) for males and \( r = .62 \) for females on the former, and \( r = .46 \) for males and \( r = .53 \) for females for the latter. This scale appears to be a valid scale for use in further research regarding the antecedents and consequences of social self-efficacy.

**Social self-efficacy and other psychological constructs and outcomes.** Besides studies that have focused on defining social self-efficacy and on developing and validating adequate measures of this construct, other researchers (e.g., Schlenker & Leary, 1982; Connolly, 1989; Patterson & O’Brien, 1997) have focused their efforts on exploring the relationships between social self-efficacy and a range of personal adjustment and self-concept variables. In his work of 1989, Connolly indicated the significant correlations between social self-efficacy and a number of aspects of personal self-concepts. He suggested that a higher perceived social self-efficacy from an individual would predict a well self-accepted person who has a stronger sense of general self-worth, perceived social acceptance, cognitive and physical competence, and self-esteem. In a similar investigation in a college sample of 243 participants, Patterson and O’Brien (1997) found a significant positive relationship between social self-efficacy and the sense of social control, social adjustment, and global self-esteem. In another study focused on adjustment outcomes, Ferrari and Parker (1992) examined the relationship between social self-efficacy and academic performance. They found that a positive correlation existed
between these constructs among a college student population. Additionally, Anderson and Betz (2001) indicated the negative relationship between depression and social confidence. Not only in support of the negative relationship between emotional disturbance and social self-efficacy, Bandura (1997) further indicated that social support served as a mediating variable in having a buffering effect on an individual’s psychological functioning in general. Overall, based on these studies, it appears that several researchers (e.g., Connolly, 1989; Bandura, 1997; Anderson & Betz, 2001) are all in agreement that social self-efficacy is a robust variable in predicting an individual’s general social and psychological functioning.

Sources of Social Self-Efficacy. According to Bandura’s (1977) original theory on the antecedents and outcomes of self-efficacy, the postulated informational sources of self-efficacy, which are vicarious learning, emotional arousal, verbal persuasion, and performance accomplishments, have impact on outcome behaviors. Previous research has reported increased self-efficacy following an intervention designed to increase levels of each postulated source (Betz & Schifano, 2000) and on the impact that the perceived levels of the postulated sources during childhood have on current levels of self-efficacy (Stroiney, 2002). Thus, research to date supports Bandura’s original hypotheses, and suggests that the informational sources of self-efficacy are important constructs to consider in research on self-efficacy.

In an effort to incorporate the postulated sources of efficacy information into the study of social self-efficacy, Anderson and Betz (2001) studied the relationship between the postulated sources and the construct of social self-efficacy. The evidence from this study showed that the emotional arousal scale was the most distinct factor from the other
three in regards to social self-efficacy. The results indicated that past performance and emotional arousal were the most strongly related to social self-efficacy, with correlations of \( r = .62 \) (males) and \( r = .70 \) (females) for past performance and \( r = .69 \) in both genders for emotional arousal. Correlations were \( r = .65 \) (females) and \( r = .66 \) (males) for social persuasion, and vicarious learning had the smallest relationship with social self-efficacy with a correlation of \( r = .36 \) for males and \( r = .46 \) for females. These findings established some understanding of the relationship between past experience and current feelings regarding social self-efficacy.

Subsequent research on the relationship between social self-efficacy and each postulated source replicated these results by using the Scale of Perceived Social Self-Efficacy (Smith & Betz, 2000). The correlations between social self-efficacy and each source yield similar results to the previous study. The results showed that the sources were highly intercorrelated, however, and little unique variance could be attributed to any source. However, emotional arousal and past performance were the two variables making unique contributions, indicating that one or two sources may be sufficient in the development of social self-efficacy expectations.

In terms of demographic factors, gender and ethnic differences in the postulated sources of social self-efficacy are also of interest (Anderson & Betz, 2001). In their study, Anderson and Betz (2001) suggested that the emotional arousal scale did not demonstrate any significant ethnic or gender differences, but the other three scales did show some differences. Females tended to score higher on the vicarious learning, social persuasion, and past performance scales, indicating that they reported more exposure to these sources than males. A study by Stroiney (2002) produced similar findings on these
three sources, and also found a small but significant difference on the emotional arousal scale, indicating that men may report lower levels of arousal in social situations than females.

Smith and Betz (2000) also suggested ethnocultural concerns in understanding the relationship between resources and the perceived social self-efficacy. They described possible differences in social self-efficacy as a function of race/ethnicity. In regards to race, the general trend was that Caucasians and African Americans scored higher than Asian Americans, with Hispanics falling in between (Anderson & Betz, 2001). Stroiney (2002) found that African Americans scored significantly higher than did Asian Americans on all four source scales, meaning that they recalled more positive past performances, vicarious learning experiences, and social persuasion as well as lower levels of emotional arousal. Caucasians did not differ significantly from either group in past performance and emotional arousal, but reported significantly more past performance and social persuasion experience than did Asian Americans. These race and gender differences may be associated with cultural or gender socialization processes, and could therefore have important implications.

Similar to ethnicity/cultural concerns, mastery of language in social communication settings also serves as an important source of individual’s perceived social self-efficacy for non-native English speakers. Although the previous research suggests a relationship between past experiences with each postulated source and current levels of social self-efficacy, more research is necessary to understand perceived social self-efficacy across different social settings due to the level of language mastery. This
concern has been extremely important in understanding international students’
adjustment issues in their host country cultures.

*Cross cultural adjustment among international students*

Cross-cultural adjustment refers to the degree of a sojourner’s psychological comfort
with various aspects of a host country’s culture (Black & Grefersen, 1991). The level of
psychological comfort of sojourning international students has long been an intense topic
of research across different disciples (Black, Men, & Oddou, 1991; Church, 1982; Oberg,
1960). The findings from these areas have indicated 1) different types of cross-cultural
adjustment, which have been identified as general adjustment, academic adjustment, and
social adjustment (Black, 1988); 2) and the relationships between the level of
psychological comfort and the functioning of sojourning students’ daily life (e.g. Black,
Men, & Oddou, 1991; Barker et al., 1996). Fan and Mak (1998) indicated that
international students in their host country would face most difficulties in social
situations, both in academic contexts and in everyday encounters.

This topic also has been well researched by numerous researchers in psychology areas
(e.g. Leong, 1984; Thomas, 1985; Furnham & Bochner, 1986, Sam & Eide, 1991). Most
of these studies, representative of the early exploration of the adjustment of international
students, have focused on the psychological outcome of adjustment and suggested a
negative and pathological image of international students. An illustrative example of this
trend comes from Ward (1967), who suggested a label of “the foreign student syndrome”
to indicate the passive and withdrawn interpersonal style of international students.
Following this trend of focusing on psychopathology, Leong (1984) identified several
negative psychological symptoms common among international students, such as low
self-esteem, low self-worth, lack of social confidence, and shyness. In another study, Sam and Eide (1991) assessed the mental health of 118 female and 190 male international university students by using an Adjustment and Health Inventory in order to identify the psychological outcome in the process of adjustment. In general, international students reported a decline in their general state of health, and a rise in the syndromes of paranoia, anxiety, depression, and somatic complaints in this study. Overall, these earlier studies were guided by a vast etic (outsider) perspective and an individualistic western point of view in explaining international students’ cross-cultural adjustment issues (Lin & Betz, 2004). Because of this point of view, these studies misrepresent and pathologize international students. These studies also tend not to suggest interventions for increasing international students’ effective adjustment, such as enhancing their personal qualities with environmental support and providing more helpful information.

Some psychologists who are involved in international student adjustment research and counseling have indicated that research which focuses on the adjustment process as well as their coping strategies is clearly needed in this area (Pedersen, 1997; Swagler & Ellis, 2003). Inspired by this urge, authors have recently called for a shift through incorporating a multidimensional approach to understanding international student adjustment (e.g., Ying & Liese, 1994; Laughrin, 1999; Swagler, & Ellis, 2003, Lin & Betz, 2004). Environmental factors and personal variables are posited to be the moderating factors that predict cross-cultural adjustment. Examples of environmental factors include perceived stressful situations, economic resources, area of studying, social support, and size of fellow national community. Examples of personal variables include personality traits, English language fluency; and the utilization of coping strategies.
Environmental and personal variables as predictors of successful cultural adjustment. A variety of empirical research has examined the influence of environmental factors and personal variables. Stress and support from the environment around international students have been researched and suggested to act as mediators for psychological outcomes in the adjustment process (e.g., Lam, 1997; Laughrin, 1999; Swagler, & Ellis, 2003). Lam (1997) conducted in-depth interviews with 18 Chinese international students from Taiwan to further explore the themes of friendship formation for international students. Results indicated that interest and motivation for forming social relationship with Americans waned in time regardless of highly motivated intentions in the beginning of their sojourn. The findings suggested that language and cultural differences serve as barriers for Chinese international students from forming friendship with Americans. Participants suggested that the interactions with Americans would be stressful because of the lack of understanding of different cultures and additional effort needed for successful communication.

In research aimed at further understanding the environmental factors for more successful adjustment, Laughrin (1999) sought to identify stressful situations and helpful individuals during international students’ sojourn. The findings provided 107 examples of stressful situations and 82 examples of helpful individuals articulated by undergraduate international students. The author further uncovered three dimensions for understanding the stressful situations: interpersonal-academic, cultural adjustment-general adjustment, and little control –some control. In the stressful situations, the finding suggested that the more control an individual perceived in various stressful situations, the more well-adjusted behaviors would be expected. In terms of helpful individuals, there were also
three dimensions suggested: professionally known-personal known, general support-cultural support, and low authority-high authority. In general, the results suggested that more personally known helpers and more cultural help were perceived as being the most helpful to students in overcoming their stressful situations.

Lin, Fan, and Betz (2004) conducted a two-staged qualitative study in order to identify international students’ coping strategies and strengths in overcoming cross-cultural adjustment challenges. They interviewed 30 international students from China and Taiwan in phase one of this study regarding their cross-cultural experience in general. The data indicated some general concerns in the process of cross-cultural studying experience. Academic performance, the relationship with one’s academic advisor, and language challenges regarding mastering English as a second language were reported as the most significant of all concerns. Concerns regarding relationships with fellow students, emotional well-being and emotional support, and financial/funding support were reported as being of moderate importance in their lives. Also, they reported some minor concerns regarding the quality of social life in general, daily life adjustment, and cultural values adjustment. Follow-up interviews with six of the previous participants in identifying their coping strategies and strengths indicated that these international students actively and effectively strived for their successful adjustment in both a philosophical and practical manner. A dynamic self-modified attitude, including reevaluating oneself in seeking inner strength, seeing their foreign studying experience as a life learning opportunity, becoming more future-oriented, and normalizing their cross-cultural psychological distress, functioned as a regulating mechanism in balancing out their cross-cultural studying challenges. Some practical efforts, such as enormous time
spent studying, English language improvement activities, social networking for both academic and emotional support, and enriching social life, also strengthened them in facing both their academic and daily lives.

In a similar study, a collection of critical incidents (Pedersen, 1981, 1991, 1994) document some of the difficulties faced by international students, such as a discriminatory environment and cultural stereotyping. In continuation of this work, a recent study conducted by Pedersen (2004) in using The Michigan International Student Problem Inventory further describes 132 frequently occurring specific problems faced by international students. In this work, he strongly urged helping professionals to take a more active and direct approach in delivering culture-attuned service to international students. Along with this concern of environmental influence, Yin and Liese (1994) have identified several other variables that alter the adjustment process, which include size of the Chinese community surrounding the student, social support, financial resources, number and severity of problems experienced, extent of decline in level of control from pre- to postarrival, and some individual demographics. They suggested that along with some of the personality traits and English language fluency, these environmental variables highly moderate the predicted level of adjustment for Chinese international students.

Besides examining the impact of environmental factors to international students’ adjustment, some researchers found that it is important to reveal the influence of personal traits in the adjustment process as well (e.g., Brenner, 2003; Poyrazli et. al., 2002). Poyrazli et. al. (2002) suggested that assertiveness, academic self-efficacy, and English language fluency contribute uniquely to the variance in students’ general adjustment
level. Each of these three variables were found to be positively related to better adjustment. Yeh and Inose (2003) explored acculturative stress among international students, and suggested that English fluency, social support satisfaction, and social connectedness were all predictors. Along this line of focusing on individuals’ self-image, a study in Australia examined the social self-efficacy of international students in host countries (Fan & Mak, 1998). They suggested a four-factor model of social self-efficacy, including absence of social difficulties, social confidence, sharing interest, and friendship initiatives, as core self-awareness to foster a successful adjustment.

More focused on individual traits, Smith and Betz (2002) suggested the contribution of perception of self-esteem to affective adjustment in individuals. In the prediction of the degree of depressive symptoms by self-esteem, they found that this individual variable is correlated with the intermediate adjustment variables of shyness and career indecision, two variables that then contribute to depression. They also suggested gender effects in their finding, which suggests that the connection of self-esteem and depressive symptoms is stronger in females than in males.

Unique to other personal qualities, English language proficiency has been studied as a mediator in the process of cross-cultural adjustment among international students by researchers (e.g., Barratt & Huba 1994; Yeh & Inose, 2003; Constantine et. al., 2004). Conceptually, English language proficiency is deemed as the critical variable in the process of cross-cultural adjustment among immigrants and international students. Most researchers have suggested that the lower English language proficiency, the greater adjustment stress will be encountered by an individual. It is believed that higher perceived English language proficiency would make the interactions with majority group
members smoother (Barratt & Huba, 1994), and further reduce the acculturation distress. With a sample of 372 international students from different continents, Yeh and Inose (2003) found that acculturation stress is highly correlated with self-reported English language proficiency. Specifically, higher frequency of use, fluency level, and the degree of comfortableness in using English, predicted lower levels of acculturation stress. It was reported that a higher English language proficiency also predicts higher levels of social support satisfaction and social connectedness. Regarding the effect of culture, Asian and European international student participants demonstrated higher negative correlations between English languish proficiency and acculturation stress than the participants of Latin and African decent. In a study with a diversity of international students from African and Asian cultures, Constantine and colleagues (2004) also indicated a strong negative relationship between perceived English language proficiency and psychological symptoms, such as acculturation stress and depressed mood. A positive relationship between English language proficiency and involvement and persistence in social activities was reported by participants. Also, a greater difference in self-reported English proficiency was found in this study. In general, male students reported greater English proficiency than their female nationals.

Finally, researchers who have examined such environmental and personal factors have called for further attention to the study of intervention in the process of international students’ adjustment. Pedersen (1997) suggested that a focus on intervention in increasing international students’ understanding of their roles in various social and academic settings would foster a successful adjustment.

Social self-efficacy and cross-cultural adjustment
Scholars have called for a focus on individuals’ self-concept in understanding international students’ experiences in host countries. In this regard, fostering a successful cross-cultural adjustment for non-native English international student speakers through interventions for self-confidence in social domains will be a mission for researchers in future studies of international students’ cross-cultural adjustment (Pedersen, 1997; Swagler & Ellis, 2003).

Social self-efficacy as postulated by Smith and Betz has been a means for psychological interventions for individuals’ outcome behaviors (Smith & Betz, 2000). This concept was based on Bandura’s original theory of self-efficacy. In introducing the concept of self-efficacy, Bandura (1977) proposed that therapeutic change occurs due to changes in levels of perceived self-efficacy. More specifically, new experiences in each of the postulated sources occur during therapy, cognitive processing of efficacy information changes, and higher levels of self-efficacy result. These efficacy-enhancing experiences occur in a variety of theoretically different treatments, so Bandura proposed self-efficacy theory as an integrative theoretical approach to therapeutic change. Yet, the perceived social self-efficacy of international students has not been investigated.

Language continues to be a barrier in this regard, as international students utilize different languages in different social contexts. This concern will hinder effective intervention for the adjustment of international students until it is addressed through research.

Summary

Overall, this literature review suggests several general themes. First, that social self-efficacy is a worthwhile and promising area to explore in cross-cultural settings, given the practical utility this construct has demonstrated in a variety of areas. Second, that the
literature on international students’ cross-cultural experiences misrepresents international students through a tendency to pathologize their psychological symptoms, and that the literature that does not unduly pathologize international students often lacks a focus on intervention. Overall, this represents a failure of making the well-being of international students paramount, which is an unfortunate omission in this literature. Third, that English language proficiency can act as a critical variable in influencing the across-cultural adjustment of international students.

Based on these themes, an exploration of international students’ perceived social self-efficacy across social settings utilizing different languages appears to be a promising area of research. By incorporating an understanding of the dynamic of perceived social self-efficacy across different language settings, an employment of self-efficacy sources in counseling could lead to more effective intervention for international students’ adjustment issues.
CHAPTER 3

METHOD

Participants

The sample of participants consisted of 203 Chinese international students who were mainly recruited from the Ohio State University. “Chinese international student” refers to a student who met the following three criteria: (1) a student currently enrolled in a college or university as a full-time student; (2) a non-American citizen who is originally from a country where Chinese is the official language; and (3) an individual of Chinese descent who speaks Chinese as their primary language and English as a second language. According to these criteria, students who speak Chinese as their first language are primarily from either China or Taiwan.

Data was primarily collected from participants through a web-based inventory. Participants were recruited through several different means. Firstly, a general recruitment invitation email was sent to the following listserv groups: Chinese Student and Scholar Association, Taiwan Student Association, and the Tzi-Ching Group. Secondly, the primary researcher and her friends went to several events where international students were highly represented, such as the Taste of OSU and the OSU ping-pong tournament, to recruit participation. Thirdly, the primary researcher visited some churches and some
academic laboratories at OSU to recruit participants. Through these means of recruitment, both undergraduate and graduate students were recruited as participants.

A paper and pencil version of the study was also offered as an alternative for participants who were recruited from churches and laboratories. Although the majority of participants completed the web-based version of the study, a minority \((N=25)\) chose to complete the paper and pencil version instead. The sample of this paper and pencil version was identical to the sample presented through the surveymonkey webservice. Given that there appeared to be no significant differences in the demographic background of individuals across the web-based version of the survey and the paper and pencil version, as suggested by t-tests on the demographic variables, such as age, gender, and nationality, these two groups were subsequently analyzed as a whole.

Participation in this study was voluntary, and participants were informed of their right to withdraw from the study simply by closing their browser if taking the survey online, or by simply not answering any further questions if completing the paper and pencil version. An information form detailing the nature of the study and a consent form were provided to participants before they began the study, in order to insure that participants were aware of the nature of the study, including the benefits and risks posed. Appendix E to appendix I contain copies of these forms.

Demographics indicated that 54.7 % of the participants identified themselves as Taiwanese, 38.8 % as Chinese, and 6.5 % as other. Participants were primarily in the 20-40 age range (94.4 %), the range of 25-28 year-old was most prevalent, with 31.6 % of participants. A summary of the ages of participants can be found in Table 3.1. This distribution of age ranges is similar to the distribution of age ranges for the OSU
<table>
<thead>
<tr>
<th>Age Range</th>
<th>Number of Participants</th>
<th>Percentage %</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-20 year-old</td>
<td>4</td>
<td>2.00</td>
</tr>
<tr>
<td>21-24 year-old</td>
<td>27</td>
<td>13.80</td>
</tr>
<tr>
<td>25-28 year-old</td>
<td>62</td>
<td>31.60</td>
</tr>
<tr>
<td>29-32 year-old</td>
<td>46</td>
<td>23.50</td>
</tr>
<tr>
<td>33-36 year-old</td>
<td>37</td>
<td>18.90</td>
</tr>
<tr>
<td>37-40 year-old</td>
<td>13</td>
<td>6.60</td>
</tr>
<tr>
<td>41-45 year-old</td>
<td>5</td>
<td>2.60</td>
</tr>
<tr>
<td>46-50 year-old</td>
<td>2</td>
<td>1.00</td>
</tr>
<tr>
<td>51+ above year-old</td>
<td>0</td>
<td>.00</td>
</tr>
</tbody>
</table>

Note: N = 196

Table 3.1: Listing of Number and Percentage of Participants by Age
international student population. Seventy-nine participants (35.4%) were male, 119 (53.4%) were female, and 25 did not indicate their gender. Among participants who reported their marital status, 65.5% of them were single, and 34.5% of them were married (N=165). The average of the length of residency in the USA was 5.17 years (N=200). Summary is shown in Table 3.2. In terms of educational information, 89.9% of the 187 students reporting data indicated that they are attending the Ohio State University, while 10.2% of them reported being students from the University of Maryland, the University of Washington, and other universities in the USA. Among the 196 students who reported their education, 73.5% of them (N=144) identified as graduate students, 13.2% of them reported as undergraduate students, 5.2% were engaged in post-doctoral study, and 5.1% were in some other status. Among the valid sample of 203 participants, 195 students reported their major or specialty. Students from Bio-medical and chemistry areas comprised 25.1% (N=49) of the sample, 20.5% were from schools of social science, 17.9% from schools of education, 17.4% from schools of engineering and 14.4% from schools of business, and 4.5% from other academic areas.

**Instruments**

There were four measures administered in this study: the scale of Perceived Social Self-Efficacy (PSSE; Smith & Betz, 2000), the Unconditional Self-Regard Scale (USRS; Betz, Wohlgemuth, Serling, Harshbarger, & Klein, 1995), the Acculturative Stress Scale for International Students (ASSIS; Sandhu and Asrabadi, 1994), and a Demographic Questionnaire, which contained three questions regarding English proficiency. Because the purpose of this study was to discern whether or not social self-efficacy varies in different language interactional settings, two versions of instructions for the scale of
<table>
<thead>
<tr>
<th>Years of Residency in the USA</th>
<th>Number of Participants</th>
<th>Percentage %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 year</td>
<td>52</td>
<td>26.00</td>
</tr>
<tr>
<td>3-4 years</td>
<td>53</td>
<td>26.50</td>
</tr>
<tr>
<td>5-6 years</td>
<td>44</td>
<td>22.00</td>
</tr>
<tr>
<td>7-8 years</td>
<td>26</td>
<td>13.00</td>
</tr>
<tr>
<td>8 and above</td>
<td>25</td>
<td>12.50</td>
</tr>
</tbody>
</table>

Note: N = 200

Table 3.2: Listing of Number and Percentage of Participants by the Length of Residence in the USA
Perceived Social Self-Efficacy were administrated to participants. In total, participants would be asked to fill out five scales, including two versions of the Perceived Social Self-Efficacy, the Unconditional Self-Regard Scale, the Acculturative Stress Scale for International Students, and the Demographic Questionnaire. Participants were asked to fill out the survey in the above stated order of measures. All the instruments employed for this study were administered in English.

Perceived Social Self-Efficacy. The Scale of Perceived Social Self-Efficacy (PSSE; Smith & Betz, 2000) measures an individual’s degree of perceived social self-efficacy, defined as an individual’s degree of self-efficacy or confidence involving social behavior. This measure measures a broad range of social behaviors and consists of 25 rationally derived items that measure the level of confidence in a variety of social situations. Responses to items are scored by using a five-point Likert scale ranging from 1 (no confidence at all) to 5 (complete confidence). The PSSE consists several areas of social interaction, including making friends, pursuing romantic relationships, social assertiveness, performance in public situations, groups or parties, and giving or receiving help. Examples of items include “Find someone to go to lunch with” and “Put yourself in a new and different social situation”. A mean score are obtained by summing over all the items; higher score indicates greater perceived social self-efficacy (see Appendix A).

Smith and Betz (2000) reported an internal consistency reliability coefficient of .94 from a development sample of 354 college students (90 males and 264 females). They conducted 3 week test-retest reliability in a smaller sample ($N = 109$), yielding a value of $r = .82$. Evidence from these two coefficients indicates that the measure is highly reliable (Nunnally & Bernstein, 1994). In terms of validity, concurrent validity data were
obtained using the social subscale of the Self-Efficacy Scale (Sherer et al, 1982) and the Social Confidence Scale of the Skills Confidence Inventory (Betz, Borgen, & Harmon, 1996). Correlations of these scales with the PSSE were $r = .60$ for males and $r = .62$ for females on the former, and $r = .46$ for males and $r = .53$ for females for the latter.

Two different instructional formats for The Scale of Perceived Social Self-Efficacy was constructed for this study. One was constructed to guide the participants to indicate their perceptions of their self-efficacy while they are interacting with their fellow nationals in their first language, which is Chinese. Another format guided the participants to indicate their self-efficacy when they interact with native English speakers and English is the primary language for the communication. All participants were asked to fill out these two versions of the Scale of Perceived Social Self-Efficacy.

Self-Esteem. The Unconditional Self-Regard Scale (USRS; Betz, Wohlgemuth, Serling, Harshbarger, & Klein, 1995) was employed in this study to measure global self-esteem. The USRS measure was developed based on Carl Rogers’s theory of client-centered therapy. The concept of USRS was based on an adaptation of Carl Rogers’ (1957, 1961) notion of unconditional positive regard for a client by the therapist to the realm of self-evaluation. Unconditional self-regard is also akin to Rogers’ notion of self-ideal congruence, which is defined as a noncontingent valuing and acceptance of oneself by Betz et al. (1995). The USR consists of 20 items, of which 8 are positively worded (e.g., “Even though I make mistakes, I feel good about myself as a person”), 7 are negatively worded and reverse scored (e.g., “I can never quite measure up to my own standards”), and 5 are filler items that are not scored. Responses to the items are obtained on a 5-point Likert scale ranging from “strongly disagree” (1) to “strongly agree” (5).
Total scores are computed by reverse-scoring the negatively worded items and then summing across responses for all 15 of the included items. The mean of the total scores of 15 items indicate the level of global self-esteem. Higher scores indicate greater levels of unconditional self-regard or global self-esteem (see Appendix B).

Data support the reliability and validity of the USRS. Specifically, values of coefficient alpha ranging from .89 in a sample of 98 undergraduates, .90 in the development sample of college students, and .92 in a study by Betz and Klein (1996) suggest adequate internal consistency reliability. Validity was supported by significant and moderately sized relationships with other measures of self-esteem and psychological adjustment (Betz et al., 1995) and to perceptions of both level and unconditionality of regard from significant individuals in the participants’ childhood and adolescent years (Harshbarger, 1991).

**Acculturation Stress.** The Acculturative Stress Scale for International Students (ASSIS; Sandhu and Asrabadi, 1994) measures the overall adjustment problems of international students to a new culture (see Appendix C). This questionnaire is a self-report, Likert-type scale consisting of 36 statements that assess various aspects of adjusting to American culture. The Likert scale ratings range from 1 (strongly disagree) to 7 (strong agree). The ASSIS consists of seven subscales, including (a) Perceived Discrimination, eight items, for example, “I am treated differently in social situations”; (b) Homesickness, four items, for example, “I miss the people and country of my origin”; (c) Perceived Hate, five items, for example, “People show hatred toward me nonverbally”; (d) Fear, four items, for example, “I fear for my personal safety because of my different cultural background”; (e) Stress due to change, three items, for example, “I
feel uncomfortable to adjust to new cultural values”; (f) Guilt, two items, for example, “I feel guilty to leave family and friend behind”; and (g) Miscellaneous, ten items, for example; “I feel nervous to communicate in English”. The mean of the scores from seven subscales yields an overall indicator of acculturation stress. A higher score is associated with greater acculturative stress perceived by participants. If needed, the scores from subscales will be used to analyze the relationship between the perceived social self-efficacy and various aspects of adjustment problems.

It is reported that the internal consistency coefficients for the ASSIS total score ranged from Cronbach’s alpha of 0.87 to 0.95 for the full scale (Sandhu & Asrabadi, 1994; Darcy & Durante, 2000; Yeh & Inose, 2003; Constantine et. al., 2004).

**Demographic Questionnaire.** A brief questionnaire asked for information regarding nationality, age, gender, education, major, perceived mastery level of English, and years of residence in the USA. The perceived level of English mastery was indicated by the combined score from three questions. Participants self reported the following questions on a 5-point, Likert-type scale: (a) ‘What’s is your current level of English fluency?’ (b) “How comfortable are you communicating in English?” and (c) “How often do you communicate in English?” Higher scores indicate greater perceived mastery level of English. Cronbach’s alpha was reported ranging from 0.78 to 0.84 in previous studies (Yeh & Inose, 2003; Constantine et. al., 2004). Barratt and Huba (1994) first documented this method of assessing and measuring English language fluency (see Appendix D ).

**Procedure**

All the participants recruited from the website survey were asked to review a brief introduction describing the general nature of the study, including their rights to not be
involved in this particular study. A brief consent form also was included to document their consent to completing the study. Following, participants were asked to complete a battery of measures, including the demographic questionnaire, the perceived social self-efficacy measures in versions of both instructions, the acculturative stress scale for international students, and the unconditional self-regard scale. Confidentiality was maintained by not collecting any personally identifiable information, such as the name of participants, during this study. A brief debriefing statement that detailed the nature and purpose of this study and provided referral information for counseling services available to students with further concerns regarding the study was also provided after participants’ completion of the instruments.

Before beginning data collection, a pilot study of 30 Chinese international students was undertaken to examine the appropriateness of the two versions of the PSSC. Feedback from six participants was utilized to revise the order of measurements, the format of the survey, and the instructions for simulating the primary situations in which participants speak in different languages. For example, participants were confused by the two versions of the PSSC in this pilot study. The order of instruments was originally set as the PSSC-English, the USRS, the ASSIS, the PSSC-Chinese, and the demographics questionnaire. However, participants found it confusing to have the two versions of the PSSC separated. Participants indicated that these two scales should connected together in order to help participants recognize that the instructions for the two different language settings differ.

According to the feedback from participants, some of demographic questions were revised as well. For example, the question regarding ethnicity was dropped since it was
not a concern in this study, and since there was not variation in the ethnicity of participants. Instead, the question regarding nationality and place of origin was utilized. Besides the suggestions for the demographics items, some feedback has been made to the survey itself. Originally, it was intended that all participants would fill out all the four measures included in this study. But, feedback from participants and the responses to the Acculturative Stress Scale for International Students indicated some potential problems before the study was completed. Feedback received from participants suggested that the survey was too long. Additionally, some participants indicated that they found the ASSIS inadequately represented their experiences as international students, and furthermore some found the negative tone of this scale offensive. Given a poor response rate up to this point, as well as this feedback from participants, the decision was made to remove the ASSIS from the survey as used in further data collection. Due to this revision, the data were analyzed as two major samples. Out of the total of 203 participants in this study, one sample of 79 participants responded to all of the five scales responses, while the remaining 124 participants responded to only four measures, as they did not complete the ASSIS.

Analysis of Data

Reliability analyses were performed on all of the scales utilized in this study. Basic descriptive statistical data, including means and standard deviations, for the measures utilized were calculated. Concerning the first hypothesis of this study, a t-test was used to examine the differences between the two different social self-efficacies when participants speak in Chinese versus English. Next, correlational analyses were employed to examine the relationships among all the variables utilized in this study. These relationships include
(a) perceived levels of social self-efficacy in different language interaction settings and acculturative stress, (b) perceived levels of social self-efficacies in different language interaction settings and self-esteem, (c) self-esteem and acculturation stress, and (d) the mastery level of English and the previous four psychological indices. Also, multiple regression analyses were used to explore the potential predicted relationship between mastery level of English, social self-efficacies, and acculturation stress. Finally, in regards to the demographic variables, ANOVA was used to assess the impact of these variables, including genders, majors, years of residence in the USA, and level of mastery of English, on the relationship between the PSSE scores and the psychological outcome variables.
CHAPTER 4

RESULTS

Reliability of Measurement

The internal consistency reliability for the measures utilized in this study was examined, and high internal consistency was found for each of the measures. The values of coefficient alpha for the scale of Perceived Social Self-Efficacy (PSSE) were .96 and .97 in English and Chinese language settings respectively, and support the internal consistency of the PSSE. The perceived English social self-efficacy and the perceived Chinese social self-efficacy will be further used as the indicators for the social self-efficacy in English and Chinese language interactional settings. Also, the other two scales—the Unconditional Self-Regard Scale, and the Acculturative Stress Scale for International Students had Cronbach’s alphas greater than .85 in supporting these scales’ internal consistency (.86 and .95 respectively). In summary, values of coefficient alpha indicate adequate reliability for all the scales utilized in this study. The means, standard deviations, Cronbach’s alphas, and other information for the four scales are shown in Table 4.1.

Comparisons on Demographic Variables

Table 4.2 and table 4.3 show the means, standard deviations, and t-test comparison
<table>
<thead>
<tr>
<th>Measure Scale</th>
<th>Number of Items</th>
<th>M</th>
<th>SD</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scale of Perceived Social Self-Efficacy</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>English</td>
<td>25</td>
<td>3.08</td>
<td>0.73</td>
<td>.96</td>
</tr>
<tr>
<td>Chinese</td>
<td>25</td>
<td>3.77</td>
<td>0.74</td>
<td>.97</td>
</tr>
<tr>
<td><strong>The Unconditional Self-Regard Scale</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>3.62</td>
<td>0.67</td>
<td>.86</td>
</tr>
<tr>
<td><strong>English Proficiency</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>3.7</td>
<td>0.85</td>
<td>.84</td>
</tr>
<tr>
<td><strong>The Accculturative Stress Scale for International Students</strong></td>
<td>36</td>
<td>3.22</td>
<td>1.09</td>
<td>.95</td>
</tr>
<tr>
<td>Subscale-Discrimination</td>
<td>8</td>
<td>3.26</td>
<td>1.41</td>
<td>.92</td>
</tr>
<tr>
<td>Subscale-Homesickness</td>
<td>4</td>
<td>4.02</td>
<td>1.32</td>
<td>.67</td>
</tr>
<tr>
<td>Subscale-Perceived Hate</td>
<td>5</td>
<td>2.58</td>
<td>1.3</td>
<td>.87</td>
</tr>
<tr>
<td>Subscale-Fear</td>
<td>4</td>
<td>2.65</td>
<td>1.21</td>
<td>.73</td>
</tr>
<tr>
<td>Subscale-Stress</td>
<td>3</td>
<td>3.3</td>
<td>1.19</td>
<td>.38</td>
</tr>
<tr>
<td>Subscale-Guilt</td>
<td>2</td>
<td>2.71</td>
<td>1.41</td>
<td>.38</td>
</tr>
</tbody>
</table>

Note: N= 200 for first three scales
N= 79  for ASSIS

Table 4.1: Means, Standard Deviations, and Cronbach's Alpha for the scales of PSSE, USRS, and ASSIS
for the demographic variables. The demographic variables of gender, nationality, age, major/specialty, marital status, education, and the years of residency in the USA were analyzed in this study. Other than the years of residency in the USA, there were no significant differences as a function of demographic variables in perceived social self-efficacies in different language settings, in global self-esteem, or in acculturation stress. Female students ($N=118$, $M=3.0$ in English, $M=3.8$ in Chinese) reported the similar levels of perceived social self-efficacy in different language settings in comparison to male students ($N=78$, $M=3.1$ in English, $M=3.8$ in Chinese). There was no significant differences between male ($N=24$, $M=3.2$) and female ($N=53$, $M=3.3$) respondents on the acculturation stress scale, nor on scale of self-esteem (male: $N=78$, $M=3.6$; female: $N=118$, $M=3.5$).

Regarding nationality, international students from Taiwan ($N=117$) reported the same level of social self-efficacies on the PSSE in different language settings as international students from China ($N=74$). Taiwanese scored 2.97 average on the perceived English social self-efficacy scale while Chinese scored 3.20. Taiwan citizens reported a score of 3.78, and Chinese scored 3.81, on perceived Chinese social self-efficacy. Furthermore, both groups of students reported similar levels of self-esteem (Taiwanese $M=3.5$; Chinese $M=3.6$) and acculturation stress (China, $N=30$, $M=3.1$, and Taiwan, $N=50$, $M=3.3$).

Scores on the PSSE, USRS, and ASSIS did not vary significantly as a function of specialty/major filed, marital status, nor level of education. Thus, overall, none of the above demographic variables were found to be related to variable of interest herein. Thus, other than the basic descriptive analysis, regarding these variables, the demographic variables were not examined further in this study.
<table>
<thead>
<tr>
<th>Scale</th>
<th>Males (n = 78)</th>
<th>Females (n = 117)</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scale of Perceived Social Self-Efficacy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>English</td>
<td>3.12  0.74</td>
<td>3.02  0.69</td>
<td>.97</td>
</tr>
<tr>
<td>Chinese</td>
<td>3.81  0.68</td>
<td>3.79  0.75</td>
<td>.23</td>
</tr>
<tr>
<td><strong>Unconditional Self-Regard Scale</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.57  0.59</td>
<td>3.48  0.59</td>
<td>1.10</td>
</tr>
<tr>
<td><strong>Acculturative Stress Scale for International Students</strong> (Male n=24; female n=53)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived Discrimination</td>
<td>3.17  1.36</td>
<td>3.30  1.45</td>
<td>-.37</td>
</tr>
<tr>
<td>Homesickness</td>
<td>4.02  1.44</td>
<td>4.02  1.27</td>
<td>.001</td>
</tr>
<tr>
<td>Perceived Hate</td>
<td>2.49  1.37</td>
<td>2.61  1.29</td>
<td>-.39</td>
</tr>
<tr>
<td>Fear</td>
<td>2.57  1.35</td>
<td>2.68  1.16</td>
<td>-.35</td>
</tr>
<tr>
<td>Stress due to change</td>
<td>3.24  1.36</td>
<td>3.36  1.12</td>
<td>-.43</td>
</tr>
<tr>
<td>Guilt</td>
<td>3.22  1.59</td>
<td>2.47  1.26</td>
<td>2.24</td>
</tr>
</tbody>
</table>

Note: N= 196 for the first three scales  
N= 77 for the ASSIS  
* indicates significance at the .05 level; ** indicates significance at the .01 level; and  
*** indicates significant at the .001 level

Table 4.2: Means, Standard Deviations, and Gender Comparisons of Measures of the Perceived Social Self-Efficacy, the Unconditional Self-Regard Scale, the Acculturative Stress Scale for Chinese International Students
<table>
<thead>
<tr>
<th>Scale</th>
<th>China (n = 78)</th>
<th>Taiwan (n = 117)</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scale of Perceived Social Self-Efficacy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>English</td>
<td>3.19 (0.58)</td>
<td>2.97 (0.77)</td>
<td>2.16</td>
</tr>
<tr>
<td>Chinese</td>
<td>3.81 (0.57)</td>
<td>3.78 (0.81)</td>
<td>0.25</td>
</tr>
<tr>
<td>Unconditional Self-Regard Scale</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.58 (0.50)</td>
<td>3.47 (0.62)</td>
<td>1.20</td>
</tr>
<tr>
<td>Acculturative Stress Scale for International Students (China n=30; Taiwan n=45)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived Discrimination</td>
<td>3.15 (1.22)</td>
<td>3.31 (1.55)</td>
<td>-.48</td>
</tr>
<tr>
<td>Homesickness</td>
<td>3.99 (1.30)</td>
<td>4.05 (1.38)</td>
<td>-.17</td>
</tr>
<tr>
<td>Perceived Hate</td>
<td>2.37 (0.90)</td>
<td>2.71 (1.53)</td>
<td>-.11</td>
</tr>
<tr>
<td>Fear</td>
<td>2.48 (1.03)</td>
<td>2.76 (1.32)</td>
<td>-.95</td>
</tr>
<tr>
<td>Stress due to change</td>
<td>3.51 (1.22)</td>
<td>3.20 (1.15)</td>
<td>1.13</td>
</tr>
<tr>
<td>Guilt</td>
<td>2.83 (1.39)</td>
<td>2.63 (1.43)</td>
<td>0.60</td>
</tr>
</tbody>
</table>

Note: N= 196 for the first three scales  
N= 77 for the ASSIS  
* indicates significance at the .05 level; ** indicates significance at the .01 level; and  
*** indicates significant at the .001 level

Table 4.3: Means, Standard Deviations, and Nationality Comparisons of Measures of the Perceived Social Self-Efficacy, the Unconditional Self-Regard Scale, the Acculturative Stress Scale for Chinese International Students
In feedback from the pilot study, the years of residency in the USA were suggested as a factor in the level of social self-efficacy in English settings as well as in acculturation stress. Given the preliminary findings from the pilot study, the years of residency in the USA was classified into four groups. Group 1 represents the students who have been in the USA less than two years. Group 2 represents the residency length of three to four years. Group 3 describes the students who have lived in the USA five to six years. Group 4 includes students who have lived in the USA for seven years or more.

A significant difference in perceived social self-efficacy as a function of years of residency was indicated by an one-way ANOVA ($F=8.75$, $p<.001$). Post hoc tests indicate that the longer the residency length, the higher level of social self-efficacy in English reported by Chinese international students. Table 4.4 shows the means, standard deviations, and comparisons for English social self-efficacy and Chinese social self-efficacy. The Tukey analysis indicates that students who have lived in the USA more than seven years ($N=51$) have significantly higher English social self-efficacy than the students who have inhabited in the USA less than four years, including groups 1 ($N=51$) and 2 ($N=52$) students ($p<.001$ and $p<.005$, respectively). Also, group 3 students ($N=44$, mean=3.2) reported higher English social self-efficacy when compared with group 1 ($N=51$, mean=2.8, $p<.005$). There were no significances difference in English social self-efficacy for students in group 1 versus 2 ($p=.62$).
<table>
<thead>
<tr>
<th>Group</th>
<th>M</th>
<th>SD</th>
<th>group 1</th>
<th>group 2</th>
<th>group 3</th>
<th>group 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1 (1-2 years) (n=51)</td>
<td>2.76</td>
<td>0.67</td>
<td>-.16</td>
<td>-.48**</td>
<td>-60***</td>
<td></td>
</tr>
<tr>
<td>Group 2 (3-4 years) (n=52)</td>
<td>2.91</td>
<td>0.74</td>
<td>-.06</td>
<td>-.32</td>
<td>-.44**</td>
<td></td>
</tr>
<tr>
<td>Group 3 (5-6 years) (n=44)</td>
<td>3.24</td>
<td>0.61</td>
<td>.48*</td>
<td>.32</td>
<td>-12</td>
<td></td>
</tr>
<tr>
<td>Group 4 (7 and 8 above years) (n=51)</td>
<td>3.36</td>
<td>0.63</td>
<td>.60***</td>
<td>.44**</td>
<td>.12</td>
<td></td>
</tr>
</tbody>
</table>

Note: N= 198 for the first three scales

* indicates significance at the .05 level; ** indicates significance at the .01 level; and *** indicates significant at the .001 level

Table 4.4: Means, Standard Deviations, and the Comparisons for the length of residency in the USA of Measures of the Perceived Social Self-Efficacy
There were also significant differences on the scale of acculturation stress for international students as a function of length of residency in the USA ($F=6.42, \ p<.001$). The Tukey tests indicated that the only significant differences in acculturation stress were those comparing group 2 (M=4.0) to groups 3 (M=3.1) and 4 (M=2.7). Table 4.5 contains the means, standard deviations, and comparisons for the acculturation stress as a function of length of residency in the USA. No significant differences due to the length of residency in the USA are evident on the measures of the Chinese social self-efficacy or global self-esteem among Chinese international students.

English proficiency was also suggested to be related to acculturation stress and other psychological outcomes. In this study, three facets of English proficiency, including the level of English fluency, the psychological comfort in communicating English, and the frequency in communicating English, were assessed. Before examining these relationships, the possible relationship of demographic variables to English proficiency was examined. Of the demographic variables only nationality and years of residency in the USA were related to English proficiency. Students from Taiwan ($N=118, \ M=3.4$) reported significantly lower levels of English fluency than did students from China ($N=74, \ mean=3.8$) even though they reported higher frequency of communicating in English. Students from both nations reported similar levels of comfortableness in communicating in English (Taiwanese $M=3.6$, Chinese $M=3.8$). No significant differences in English proficiency as a function of gender, major/specialty, marital status, education level, or age.

Length of residency in the USA was found to be related to the English proficiency of participants. It was reported that the longer students had stayed in the USA, the higher
The Acculturative Stress Scale for International Students

<table>
<thead>
<tr>
<th>Group</th>
<th>M</th>
<th>SD</th>
<th>group 1</th>
<th>group 2</th>
<th>group 3</th>
<th>group 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1 (1-2 years) (n=11)</td>
<td>3.11</td>
<td>0.87</td>
<td>-.88</td>
<td>.03</td>
<td>.38</td>
<td></td>
</tr>
<tr>
<td>Group 2 (3-4 years) (n=21)</td>
<td>3.98</td>
<td>1.28</td>
<td>.88</td>
<td>.91*</td>
<td>1.26***</td>
<td></td>
</tr>
<tr>
<td>Group 3 (5-6 years) (n=21)</td>
<td>3.08</td>
<td>0.76</td>
<td>-.03</td>
<td>-.91*</td>
<td></td>
<td>.35</td>
</tr>
<tr>
<td>Group 4 (7 and 7 above years) (n=24)</td>
<td>2.72</td>
<td>0.91</td>
<td>-.38</td>
<td>-1.26***</td>
<td></td>
<td>-.35</td>
</tr>
</tbody>
</table>

Note: N= 77

* indicates significance at the .05 level; ** indicates significance at the .01 level; and *** indicates significant at the .001 level

Table 4.5: Means, Standard Deviations, and the Comparisons for the length of residency in the USA of Measure of the Acculturation Stress for International Students
reported English proficiency (F=15.66, p<.000). Group 1 students (residency one to two years) obtained a mean of 3.0, in comparing to means of 3.51 (group 2), 4.00 (group 3), and 3.94 (group 4) respectively. Post hoc tests indicated significant differences between the following groups: 1 versus 2 (p<.05), 1 versus 3 (p<.001), 1 versus 4 (p<.001), 2 versus 3 (p<.05), and 2 versus 4 (p<.05). In examining the relationships between different facets of English proficiency, including level of English fluency, comfortableness and frequency in communicating in English, and the length of residency in the USA, the level of English fluency was found to be positively related to the length of residency in the USA (F=15.7, p<.001). Post hoc tests indicated significant differences between the following groups: 1 versus 2 (p<.05), 1 versus 3 (p<.001), 1 versus 4 (p<.001), 2 versus 3 (p<.05), and 2 versus 4 (p<.05). Also, students reported an increased level of comfortableness in communicating in English as the length of residency increased (F=12.6, p<.001). The tests indicated significant differences between the following groups: 1 versus 3 (p<.001), 1 versus 4 (p<.001), 2 versus 3 (p<.05), and 2 versus 4 (p<.05). Furthermore, participants reported higher scores for communicating in English as residency length increases (F=8.2, p<.001). Post hoc tests indicated significant differences between the following groups: 1 versus 3 (p<.05), 1 versus 4 (p<.001), and 2 versus 4 (p<.05).

Main Hypothesis: Mean Comparisons for Social Self-Efficacy

A t value of 13.23 indicated a statistically significant difference (p<.001) between perceived social self-efficacy in English versus Chinese (N=203). Participants reported significant higher scores (M=3.8) on Chinese social self-efficacy than on English social
self-efficacy (M=3.1). In general, participants reported lower levels of English social self-efficacy than Chinese social self-efficacy in performing all social interactional tasks.

Table 4.6 contains the comparisons for participants’ social self-efficacies in different language settings for each of the items of the PSSE. The means, standard deviations, and t tests for each item are shown in this table. For individual items, the Bonferroni test was employed to control the familywise type 1 error (Keppel, 1991). It was suggested that p-values smaller than .002 would indicate a significant difference in the comparison of each item in different language interactional settings based on a p value at .05 level for the scale of 25 items. All the t-values for the items are greater than 7 (p< .001), which suggested a significant difference on every item in the two different language settings. Participants reported higher levels of Chinese social self-efficacy than English social self-efficacy in performing all 25 social interactional tasks.
<table>
<thead>
<tr>
<th>Items</th>
<th>English M</th>
<th>English SD</th>
<th>Chinese M</th>
<th>Chinese SD</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Start a conversation with someone you don’t know very well.</td>
<td>3.06</td>
<td>0.9</td>
<td>3.74</td>
<td>.98</td>
<td>-8.78</td>
</tr>
<tr>
<td>2. Express your opinion to a group of people discussing a subject that is of interest to you.</td>
<td>3.35</td>
<td>0.98</td>
<td>4.19</td>
<td>.90</td>
<td>-10.9</td>
</tr>
<tr>
<td>3. Work on a school, work, community or other project with people you don’t know very well.</td>
<td>3.05</td>
<td>0.93</td>
<td>3.86</td>
<td>.89</td>
<td>-10.23</td>
</tr>
<tr>
<td>4. Help to make someone you’ve recently met feel comfortable with your group of friends.</td>
<td>3.6</td>
<td>0.95</td>
<td>4.16</td>
<td>.84</td>
<td>-8.28</td>
</tr>
<tr>
<td>5. Share with a group of people an interesting experience you once had.</td>
<td>3.57</td>
<td>0.98</td>
<td>4.21</td>
<td>.84</td>
<td>-8.26</td>
</tr>
<tr>
<td>6. Put yourself in a new and different social situation.</td>
<td>2.74</td>
<td>0.97</td>
<td>3.51</td>
<td>.92</td>
<td>-10.63</td>
</tr>
<tr>
<td>7. Volunteer to help organize an event.</td>
<td>2.82</td>
<td>1.05</td>
<td>3.66</td>
<td>1.00</td>
<td>-10.48</td>
</tr>
<tr>
<td>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.</td>
<td>3.11</td>
<td>1.05</td>
<td>3.81</td>
<td>.94</td>
<td>-8.78</td>
</tr>
<tr>
<td>9. Get invited to a party that is being given by a prominent or popular individual.</td>
<td>2.98</td>
<td>1</td>
<td>3.66</td>
<td>.97</td>
<td>-9.21</td>
</tr>
<tr>
<td>10. Volunteer to help lead a group or organization.</td>
<td>2.73</td>
<td>1.07</td>
<td>3.58</td>
<td>1.03</td>
<td>-10.53</td>
</tr>
<tr>
<td>11. Keep your side of the conversation.</td>
<td>3.17</td>
<td>0.92</td>
<td>3.93</td>
<td>.94</td>
<td>-10.34</td>
</tr>
<tr>
<td>12. Be involved in group activities</td>
<td>3.24</td>
<td>0.95</td>
<td>3.98</td>
<td>.91</td>
<td>-10.04</td>
</tr>
</tbody>
</table>

Note: N= 203
Table 4.6: Means, Standard Deviations, and results of the t-test comparisons for the 25 items of the scales of PSSE in English and in Chinese interactional settings
Table 4.6 continued: Means, Standard Deviations, and results of the t-test comparisons for the 25 items of the scales of PSSE in English and in Chinese interactional settings

<table>
<thead>
<tr>
<th>Items</th>
<th>English M</th>
<th>SD</th>
<th>Chinese M</th>
<th>SD</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>13. Find someone to spend a weekend afternoon with.</td>
<td>3.16</td>
<td>1.03</td>
<td>3.98</td>
<td>.92</td>
<td>-10.61</td>
</tr>
<tr>
<td>14. Express your feelings to another person.</td>
<td>3.29</td>
<td>1</td>
<td>3.96</td>
<td>1.04</td>
<td>-9.03</td>
</tr>
<tr>
<td>15. Find someone to go to lunch with.</td>
<td>3.47</td>
<td>0.98</td>
<td>4.13</td>
<td>.89</td>
<td>-8.58</td>
</tr>
<tr>
<td>16. Ask someone out on a date.</td>
<td>2.52</td>
<td>1.05</td>
<td>3.19</td>
<td>1.23</td>
<td>-8.44</td>
</tr>
<tr>
<td>17. Go to a party or social function where you probably won't know anyone.</td>
<td>2.48</td>
<td>1.01</td>
<td>3.27</td>
<td>1.02</td>
<td>-9.83</td>
</tr>
<tr>
<td>18. Ask someone for help when you need it.</td>
<td>3.48</td>
<td>0.97</td>
<td>4.04</td>
<td>.90</td>
<td>-8.38</td>
</tr>
<tr>
<td>19. Make friends with a member of your peer group.</td>
<td>3.6</td>
<td>0.93</td>
<td>4.14</td>
<td>.85</td>
<td>-7.25</td>
</tr>
<tr>
<td>20. Join a lunch or dinner table where people are already sitting and talking.</td>
<td>2.7</td>
<td>1</td>
<td>3.65</td>
<td>.95</td>
<td>-12.44</td>
</tr>
<tr>
<td>21. Make friends in a group where everyone else knows each other.</td>
<td>2.77</td>
<td>1.04</td>
<td>3.64</td>
<td>1.04</td>
<td>-10.08</td>
</tr>
<tr>
<td>22. Ask someone out after s/he was busy the first time you asked.</td>
<td>2.64</td>
<td>1</td>
<td>3.34</td>
<td>1.08</td>
<td>-10.24</td>
</tr>
<tr>
<td>23. Get a date to a dance that your friends are going to.</td>
<td>2.47</td>
<td>1.06</td>
<td>3.19</td>
<td>1.22</td>
<td>-10.15</td>
</tr>
<tr>
<td>24. Call someone you’ve met and would like to know better.</td>
<td>3.07</td>
<td>0.97</td>
<td>3.8</td>
<td>1.04</td>
<td>-9.93</td>
</tr>
<tr>
<td>25. Ask a potential friend out for coffee.</td>
<td>3.29</td>
<td>0.95</td>
<td>3.97</td>
<td>.92</td>
<td>-9.64</td>
</tr>
</tbody>
</table>

Note: N= 203
Main Hypothesis: Correlational Analyses

In this section, the correlational analyses were conducted to examine the nature of the relationships among the scales administered herein. A total sample of 198 participants were analyzed for the correlations among the PSSE, USRS, and EP. A smaller group of participants (N=79) were involved in the correlational analyses between the ASSIS and other four scales due to the revision of the web-survey. After receiving negative feedback regarding the ASSIS, the measure of ASSIS was removed after the consideration of the feedback from participants and the consultation with committee members.

Two major parts of the correlational analyses will be reviewed as follows. First, the relationships between social self-efficacies and other indices of psychological health were examined. The two versions of the scale of Perceived Social Self-Efficacy in two different language settings, the Unconditional Self Regard Scale, and the Acculturation Stress Scale for International Students (including its six subscales) were utilized in this analysis. The six subscales include a) Perceived Discrimination, (b) Homesickness, (c) Perceived Hate, (d) Fear,(e) Stress due to change, and (f) Guilt. Table 4.7 shows the correlations among these scales. Figure 4.1 demonstrates the correlations between selected variables. The relationships between measures of the English Perceived social self-efficacy, acculturation stress, and English proficiency will be summarized in table 4.8 and discussed subsequently.

As shown in table 4.7, significant positive correlations were found between the English PSSE scores and the Chinese PSSE (r = .43, p < .01), USRS (r = .41, p < .01), and English Proficiency (r = .53, p < .01). Significant negative correlations were found between the English PSSE scores and the ASSIS (r = -.56, p < .01). These correlations
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Table 4.7: Overall Correlations Among the Measures of Social Self-Efficacy, Self-Esteem, English Proficiency, Acculturation Stress, And its Subscales
Figure 4.1: The correlations among Self-Esteem, English Social Self-Efficacy, Chinese Social Self-Efficacy, and Acculturation Stress for Chinese International Students

Note that this is not a tested causal model, nor is it intended to imply causality.
are in the range of medium in magnitude, given Cohen and Cohen’s (1983) recommendation that correlations between .1 to .3 are small in magnitude and correlations from .3 to .5 are medium in magnitude. In contrast, there was no significant correlation between Chinese social self-efficacy and acculturation stress ($r = -.13, p = .25$), including its six subscales. Thus, acculturation stress only had a negative relationship with international students’ English social self-efficacy.

Global self-esteem was found to be significantly positively related to social self-efficacy in both English and Chinese interactional settings ($r = .41$ and $.46, p < .01$, respectively) as well as the mastery level of English($r = .30, p < .01$). In addition, global self-esteem had a negative relationship with acculturation stress ($-.53, p < .01$).

In terms of the six ASSIS subscales, significant negative correlations were observed between five of these scales and the PSSE. Besides the guilt subscale of ASSIS($r = -.22, ns$), the correlations between the English PSSE scores and the other five subscales ranged from -.26 to -.54, indicating a medium degree of relationship ($p < .01$). Significant negative correlations were also found between global self-esteem and five of these subscales (perceived discrimination, perceived hate, fear, stress due to change, and guilt). The correlations ranged from -.37 to -.52 ($p < .01$). Significant negative correlations ranging from -.23 to -.32 were found between the English proficiency and four of these subscales (perceived discrimination, perceived hate, fear, and stress due to change). No significant correlations were found between Chinese social self-efficacy and the six acculturation stress subscales. The results of this analysis are shown in Table 4.7.
The relationships among English social self-efficacy, acculturation stress and English proficiency and its three aspects (fluency level, comfortableness, and frequency in communicating in English) are shown in table 4.8 and graphed in figure 4.2.

Both English proficiency and English social self-efficacy were negatively related to acculturation stress. Three components of English proficiency were found to be significantly positively related to English social self-efficacy. The comfortableness subscore was most highly related to participants’ English social self-efficacy ($r = .61$, $p < .01$). English fluency and frequency in communicating in English had correlations of .48 and .33 with English social self-efficacy ($p < .01$). Both level of English fluency and comfortableness were found to have significant negative correlations with acculturation stress ($r = -.28$ and -.35). It suggested that the level of comfortableness in communicating in English has a higher correlation with participants’ acculturation stress than the level of English fluency. However, the frequency in communicating in English is not correlated with the level of acculturation stress ($-.20$, $p = .08$).

Examining the nature of the relationships between the English proficiency components and the ASSIS subscales, indicated that the level of comfortableness was strongly negatively related to four of the ASSIS subscales (perceived discrimination, perceived hate, fear, and stress due to change), values of $r$ ranged from -.25 to -.31. The higher the level of comfortableness, the less reported distress from perceived discrimination, hatred, fear, and stress. The level of English fluency was found to be negatively correlated with three of the ASSIS subscales, that is, perceived discrimination, hatred, and fear. The correlation coefficients were -.23, -.25, and -.27 respectively. In
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Table 4.8: Overall Correlations Among the Measures of English Social Self-Efficacy, English Proficiency and its subscales, and Acculturation Stress, and its Subscales
Figure 4.2: The correlations among English Proficiency, English Social Self-Efficacy, Chinese Social Self-Efficacy, and Acculturation Stress for Chinese International Students

Note that this is not a tested causal model, nor is it intended to imply causality.
terms of frequency in communicating in English, negative correlations were found with only two subscales (fear and stress due to change) \((r=-.25 \text{ and } -.24, p<.05)\).

**Main Hypothesis: Regression Analyses**

One objective of this study was to provide information by which to construct an intervention model for international students’. Because of this interest, the causal relationships between all variables were examined (Cohen & Cohen, 1983). Originally, path analysis was to be utilized to suggest a causal structure model of interpreting the relationships among all the variables in this study. Due to the removal of the Acculturation Stress Scale for International Students, an inadequate sample size \((N=79)\) was obtained for this analysis. According to effect size recommendations for practical significance, a minimum of 180 participants is required to satisfy this path analysis. Instead of path analysis, Multiple Regression/Correlation (MRC) analysis was employed in this study since the power analyses were satisfied for all sets of regression analysis. Multiple Regression/Correlation was utilized in order to examine the following two concerns. First, whether independent variables of global self-esteem, the length of residency, and English proficiency would predict levels of English social self-efficacy. Second, whether or not English social self-efficacy, global self-esteem, the length of residency in the USA, and English proficiency would be predictors of international students’ acculturation stress.

Before this analysis, the normality of the scores on acculturation stress, self-esteem, and English social self-efficacy, and the test for linear prediction relationship were examined in order to satisfy this examination. Byrne (1994) suggested that an investigation of the normality of the measured variables is essential for accurate
interpretation for the results. The following means of examination are a legitimate tests of normality: the degree of skewness/ asymmetry and kurtosis, and the shape of the distribution (Cohen & Cohen, 1983). Based on the results from the Histogram and normal P-P Plot normality tests, the normality assumptions for English social self-efficacy, acculturation stress, and self-esteem were satisfied. Also, the results from scatter plot test satisfied the test for linear relationship between variables, and strongly suggested a regression analysis for the strength of casual relationships for these variables. Overall, these results from normality test and linearity test strongly support further regression examination.

Results of the regression analyses examining the relationship of variables to English social self-efficacy, and acculturation stress can be found in Tables 4.9. In terms of the English social self-efficacy, results of the regression analyses indicated a strong, statistically significant relationships ($R^2 = .40$, $\Delta R^2 = .39$, $F= 43.44$, $p<.001$) from all three variables together, self-esteem ($\beta = .36$, $t [197] =5.81$, $p<.001$), English proficiency ($\beta = .30$, $t [197] =5.75$, $p<.001$), and the length of residency ($\beta = .09$, $t [197]=2.49$, $p=.01$). Self-esteem was found to have the largest contribution to an individual’s English social self-efficacy. The length of residency in the USA has a rather small influence on English social self-efficacy for Chinese international students.

In terms of acculturation stress, the result from hierarchical regression analysis suggested that English social self-efficacy and self-esteem ($R^2 = .39$, $\Delta R^2 = .38$, $F= 24.06$, $p<.001$) together had a significant effect in explaining perceived acculturation stress. English social self-efficacy has the strongest negative relationship ($\beta = -.60$, $t [76] = -3.76$, $p <.001$), and self-esteem also has a significant influence ($\beta = -.57$, $t [76] = -3.16$, $p<.001$).
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Note: N=197 for English Social Self-Efficacy; N=79 for Acculturation Stress
* indicates significance at the .05 level; ** indicates significance at the .01 level
*** indicates significance at the .001 level

Table 4.9: Regression Analyses in Predicting Social Self-Efficacy and Acculturation Stress
The remaining two independent variables, including English proficiency and the length of residency, were not found statistically significant in directly predicting acculturation stress. A pictorial representation of the results from the regression analyses among each individual variables were graphed in figure 4.3. Note that this is not a tested structured model and that none of these relationships allows an assumption of causality.
Figure 4.3: The relationships among Self-Esteem, English Social Self-Efficacy, English Proficiency, and Length of Residency in the USA, and Acculturation Stress for Chinese International Students

Note that this is not a tested causal model, nor is it intended to imply causality.
CHAPTER 5

DISCUSSION

Despite a growing literature regarding both the social self-efficacy and the cross-cultural adjustment of international students, an integration of research in these two areas is still not yet well developed. Given concern over this lack of integration and interest in understanding the nature of the adjustment process of international students, the present study endeavored to explore the role of social self-efficacy in the process of cross-cultural adjustment for Chinese international students. Hence, this study sought to obtain knowledge for developing intervention models through the understanding of the dynamic of perceived social self-efficacies in the process of adjustment. The development of a pragmatic intervention model to improve the well being of international students reflects the major underlying goal of this study.

Accordingly, the main purpose of this study is to add to the existing knowledge of social self-efficacy in different language settings for Chinese international students. It was suggested that Chinese international students would demonstrate different levels of social self-efficacy in different language interactional setting. More specially, it was hypothesized that Chinese international students would perceive a higher level of social self-efficacy when they communicate in Chinese versus in English. Also, the
relationships between social self-efficacy in different language settings and other
constructs, such as acculturation stress, global self-esteem, and English proficiency, were
examined. Other hypotheses examining the relationships between these variables were
also examined.

The main findings of this study were as follows. First, students’ social self-efficacy
was significantly higher when they imaged themselves interacting in their native
language than when they imaged themselves interacting in English speaking settings.
These differences applied not only to the total scores but to all 25 items of the PSSE.
Thus there was no single interactional setting in which these students reported greater
self-efficacy when considering English language, versus Chinese, interactional settings.
Additional correlations indicated that both English- and Chinese-setting social self-
efficacy were related to global self-esteem, and that both global self-esteem and English-
setting self-efficacy were negatively related to acculturation stress. That is, as individuals
reported higher self-esteem and higher English social self-efficacy, they reported lower
levels of acculturation stress. Although Chinese social self-efficacy was not related to
acculturation stress, its relationship to global self-esteem suggests the possibility of an
indirect relationship. Also, related to all of the previously mentioned variables was
English proficiency, in particular comfortableness with English speaking. Thus, greater
English proficiency was related to higher social self-efficacy both in English and Chinese
interactional settings, to higher self-esteem, and to lower levels of acculturations stress.
Although the design of this study does not allow causal inferences, these variables, along
with years of residency, were entered in regression equation using English social self-
efficacy as the dependent variable in the first analysis and acculturation stress the second
dependent variable in the second. These analyses indicated that self-esteem and English proficiency were the most important “predictors” at English social self-efficacy and that English social self-efficacy, and self-esteem, were the most important predictors of acculturation stress.

The first main hypothesis of this study, that Chinese international students would demonstrate a higher level of social self-efficacy when they communicate in Chinese versus in English, was supported by the findings from this study. Participants reported significantly higher levels of social self-efficacy in Chinese interactional settings with their fellow nationals. Despite their high level of social self-efficacy in communicating in Chinese, Chinese international students’ confidence in communicating in English was lower when they imaged themselves in interaction with English native speakers. This lower level of confidence in communicating in English was perceived by Chinese international students on all social interaction items of the PSSE, including making friends, pursuing romantic relationships, social assertiveness, performance in public situations, groups or parties, and giving or receiving help.

This finding contributes to the existing literature on social self-efficacy and on the cross-cultural adjustment of international students in two ways. First, the differences of perceiving social self-efficacy in cross-cultural settings was confirmed in this study. This finding suggests that social self-efficacy is a dynamic psychological construct that varies according to the familiarity of the language used in social interactional settings. Recently, researchers (e.g. Fan & Mak, 1998; Constantine et al., 2004) have been aware of the importance of social self-efficacy in cross-cultural settings and the effect that in understanding international students’ cross-cultural adjustment outcomes, such as
acculturation stress and depression. Although some researchers have suggested that social self-efficacy may not be the most salient factor in understanding the adjustment outcomes for non-native English speakers in the USA (e.g. Constantine et al., 2004), such conclusions have failed to consider the role of social self-efficacy in this process. This study has investigated social self-efficacy in cross-cultural settings and has suggested that social self-efficacy differs as a function of different language interaction settings. Secondly, the finding that Chinese international students demonstrate different levels of social self-efficacy in different language settings suggests a more emic perspective in examining the adjustment issues of international students. When psychologists (e.g. Ward, 1964; Leong, 1984; Thomas, 1985; Furnham & Bochner, 1986, Sam & Eide, 1991) described the passive-withdrawal interpersonal style in viewing cross-cultural experiences of international students, it failed to present international students’ image in whole by not understanding the dynamic of social self-efficacy. That is, Chinese international students have high level of confidence in social interactional tasks when they communicate in Chinese, and have rather lower level of confidence in English interactional settings.

Overall, this finding strongly recommends that an assessment of social self-efficacy in different language settings in viewing international students’ cross-cultural experience can contribute to the development of an accurate understanding of cross-cultural experiences of international students. This understanding will serve as a fundamental step for an intervention model in enhancing international students’ cross-cultural adjustment.

As suggested by the findings that social self-efficacy would vary in different language settings, the function of language proficiency is worthy of discussion. In this study, the
relationships between the different levels of social self-efficacy in different language interactional settings and English proficiency were explicated. Not surprisingly, the findings suggested a strong positive relationship between English social self-efficacy and English proficiency. Although there was small relationship between English proficiency and Chinese social self-efficacy due to the mediator of self-esteem, English proficiency was not related to Chinese social self-efficacy. The findings from this study suggest that the mastery of language is significantly related to individuals’ social self-efficacy in a specific language interactional setting.

In order to further understand the nature of the relationships between the different components of English proficiency and English social self-efficacy, more detailed findings suggested that comfortableness in communicating in English is related to individuals’ English social self-efficacy, while the level of English fluency and the frequency in communicating in English are not related to that variable. This finding suggests an intervention model for enhancing English social self-efficacy for English non-native speaker might be focused on enhancing their comfortableness in communicating in English rather than improving their actual level of English fluency.

In addition, English proficiency has been long investigated in the relationship with adjustment outcomes for non-native English speakers in the USA, including immigrants, and international students. Findings from previous studies suggested that the level of English proficiency was a vital factor that contributes to acculturation stress for these non-native English speakers (e.g. Nwadiora & McAdoo, 1996; Lin & Yi, 1997; Yeh & Inose, 2003; Constantine et al., 2004). That is, the lower level of English proficiency is the higher level of acculturation stress is. It is argued that this correlational relationship is
too simplistic in understanding the psychological distress of individuals’ during the process of adjustment by failing to take the cognitive determination/thought of individual into account. The findings from this study indicate that English social self-efficacy plays a vital role in mediating acculturation stress, while English proficiency plays a partial role in contributing to English social self-efficacy. Overall, it is suggested from this study that English proficiency itself doesn’t serve as a direct factor in influencing individuals’ acculturation stress, but that rather perception of confidence (social self-efficacy) is the direct variable.

In summary, the suggestions from this study contribute a more advanced knowledge in understanding acculturation stress and other constructs. The nature of the relationships among social self-efficacy, English proficiency, and acculturation stress were well examined and clarified. Rather than focus on the level of English proficiency, the level of English social self-efficacy is the variable that researchers and practitioners should give attention to in order to deliver a more appropriate and effective intervention in reducing individuals’ psychological distress due to difficulties in cross-cultural adjustment.

In this study, self-esteem was also examined in order to elucidate the dynamic of all the psychological variables during the process of adjustment of international students. Not surprisingly, self-esteem has high correlations with the different levels of social self-efficacy in different language settings for Chinese international students. This finding is consistent with the findings from other researchers (Betz & Klein, 1996), which suggest a high correlation between social self-efficacy (cognition) and self-esteem (affect). As suggested by Bandura (1997), self-efficacy is concerned with the judgment of personal capability, while self-esteem is concerned with judgment of self-worth, and the two of
them work together in affecting individuals’ psychological outcomes. In this study, both the variables of English social self-efficacy and self-esteem together were found to have significant influence to acculturation stress of Chinese international students. It was the combination of cognition (social self-efficacy) and affect (self-esteem) together that provided the most powerful prediction of acculturation stress in Chinese international students, accounting for 40% of the variance in self-reported acculturation stress. Also, the findings from this study revealed a stronger relationship between social self-efficacy and acculturation stress than the relationship between self-esteem and acculturation stress. This finding suggests that the subjective cognitive function of individuals serves a better predictor in understanding acculturation stress among international students than the affective part (global self-esteem). While self-esteem has been suggested to be a static psychological construct, it is beneficial that social self-efficacy is a dynamic construct. The dynamic nature of social self-efficacy makes it a fitting construct for the development of interventions, since based on self-efficacy theory (Bandura, 1977; Bandura, 1997) there is a high probability that levels of social self-efficacy can be increased through manipulating the sources of self-efficacy information.

Also, length of residency in the USA was found to be related to both English social self-efficacy and acculturation stress on Chinese international students. Like English proficiency, the length of residency in the USA appeared to influence the level of acculturation stress through English social self-efficacy. One point worthy of attention is that the increasing positive relationship between length of residency in the USA and English social self-efficacy stabilizes after six years. In other words, the level of English
social self-efficacy levels off after international students have inhabited in the USA more than six years.

In terms of demographic variables, the variables examined included gender, nationality, specialty/major, marital status, and level of education. None of the variables examined contributed to differences in levels of social self-efficacy in different language interaction settings, global self-esteem, acculturation stress, or English proficiency. Finally, in regards to the intervention model, the development of a structural model encompassing the main variables utilized in this study was a goal. Yet, due to the small sample size for the acculturation stress scales, this analysis could not be done. However, all the relationships among the variables that were used in this study, including social self-efficacy in different language interactional settings, self-esteem, English proficiency, and the lengthy of residency in the USA, were examined through correlational analyses instead. A possible pictorial representation of the interrelationships among these variables was shown in figure 4.3.

Overall, the importance of considering the contribution of perception of cognitive capability (social self-efficacy) and affect (self-esteem) to the adjustment outcomes of international students has been addressed in this study. In accord with the intervention model focusing on social self-efficacy derived from Bandura (1977), this study represents the first step towards developing a postulated intervention model for enhancing internationals students’ well-being during their cross-cultural adjustment.

In summary, several important conclusions have been drawn through this study. First, social self-efficacy is a vital factor that researchers should employ in order to fully understand the process of adjustment of international students. We must consider the
language settings in which students interact, and understand that low social self-efficacy among international students may be a problem only in the settings where they are forced to interact in their second or third or fourth language rather than their native language. Give that, English social self-efficacy is the major resource in influencing international students’ adjustment outcomes. That is, a higher level of social self-efficacy will predict a lower level of acculturation stress. Third, both the cognitive (social self-esteem) and affective (global self-esteem) parts of an individual contribute to the psychological adjustment outcomes, such as acculturation stress, in an essential fashion. Finally, variables like English proficiency and the length of residency in the USA have indirect influence on acculturation stress through social self-efficacy. That is, social self-efficacy is the mediator for the relationships.

Some applications for counseling professionals and other professionals in working with international students based on the findings from this study are suggested. Professionals should be aware of the two different levels of social self-efficacy and acknowledge how they play a role in the process of cross-cultural adjustment of international students. As suggested by (Lin & Pedersen, in press), the cross-cultural experience can be a positive experience for international students, if therapists might guide international students to see their strengths and view their cross cultural studying experience in an explorative and experiential fashion, like a journey. It is strongly suggested from this study that helping professionals would guide international students to see their strengths by referring to their Chinese social self-efficacy and other areas in which they are confident in order improve their comfortableness in their English cross-cultural interactional settings. Given the strong negative relationship between this latter
confidence and acculturation stress, the importance of these interventions can not be overly emphasized. Furthermore, offices dedicated to international student welfare should be able to construct effective and influencing orientation services in order to guide international students into better cross-cultural adjustment. An educational model for international students would be developed based on the findings from this study, one which recognizes the importance of perceived confidence/comfortableness in English speaking, rather than focusing solely on fluency.

Although the results from the present study help to address the lack of integration of literatures and have implications for intervention in serving international students, some limitations must be acknowledged. One of the limitations worthy of note is that participants were limited to Chinese international students who mostly are graduate students in the Ohio State University. It is important to be cautious in applying the results from this study to international students who are from different ethnicities and language backgrounds. Further, not enough data was gathered to support path analysis and structural modeling, which means that the causal inference cannot be made. A more adequate sample size needed in order to examine this structural model.

Another limitation worthy of note is the utilization and application of the Acculturation Stress Scale for International Students (Sandhu & Asrabadi, 1994) in this study. As previously noted, feedback from participants has commented on (1) the length of this scale, and (2) the negative tone of this scale. Given the nature of this scale, it may offend and bore participants. So, the results from this scale might not be adequate to represent international students’ cross-cultural experiences. Thus, this scale appears to require further conceptual and methodological examination as a measure of international
students’ acculturation experience. However, a scale of cross-cultural experience for international students is worthy of development in order to fully capture the nature of the cross-cultural experiences of international students. Other adjustment outcome variables should also be included in further studies.

In conclusion, the present study presented an exploration of social self-efficacy in different language settings as a means of understanding the cross-cultural adjustment of international students. The study provided an integration of the literatures in social self-efficacy and the cross-cultural experiences of international students. Given the findings, an intervention model for enhancing international student well-being in succeeding in their cross-cultural adjustment is strongly recommend. The concept of social self-efficacy in particular seems to have more considerable relevance for both understanding and improving the adjustment of international students in U. S. colleges and universities.
APPENDIX A

SCALE OF PERCEIVED SOCIAL SELF-EFFICACY IN ENGLISH SETTINGS

Instructions: Please read each statement carefully. Then decide how much confidence you have that you could perform each of these activities successfully when you communicate in English with native English speakers. Mark the appropriate number for your level of confidence. There are some situations that may not apply to your actual case, please try to answer each item in a hypothetical manner.

<table>
<thead>
<tr>
<th>No Confidence at all</th>
<th>Little Confidence</th>
<th>Moderate Confidence</th>
<th>Much Confidence</th>
<th>Complete Confidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

1. Start a conversation with someone you don’t know very well.
2. Express your opinion to a group of people discussing a subject that is of interest to you.
3. Work on a school, work, community or other project with people you don’t know very well.
4. Help to make someone you’ve recently met feel comfortable with your group of friends.
5. Share with a group of people an interesting experience you once had.
6. Put yourself in a new and different social situation.
7. Volunteer to help organize an event.
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.
9. Get invited to a party that is being given by a prominent or popular individual.
10. Volunteer to help lead a group or organization.
11. Keep your side of the conversation.
12. Be involved in group activities.
13. Find someone to spend a weekend afternoon with.
14. Express your feelings to another person.
15. Find someone to go to lunch with.
16. Ask someone out on a date.
17. Go to a party or social function where you probably won’t know anyone.
18. Ask someone for help when you need it.
19. Make friends with a member of your peer group.
20. Join a lunch or dinner table where people are already sitting and talking.
21. Make friends in a group where everyone else knows each other.
22. Ask someone out after s/he was busy the first time you asked.
23. Get a date to a dance that your friends are going to.
24. Call someone you’ve met and would like to know better.
25. Ask a potential friend out for coffee.
APPENDIX B

SCALE OF PERCEIVED SOCIAL SELF-EFFICACY IN CHINESE SETTINGS

Instructions: Please read each statement carefully. Then decide how much confidence you have that you could perform each of these activities successfully when you communicate in Chinese with your fellow nationals. Mark the appropriate number for your level of confidence. There are some situations may not apply to your actual case, please try to answer each item in a hypothetical manner.

No Confidence at all | Little Confidence | Moderate Confidence | Much Confidence | Complete Confidence
---|---|---|---|---
1 | 2 | 3 | 4 | 5

1. Start a conversation with someone you don’t know very well.
2. Express your opinion to a group of people discussing a subject that is of interest to you.
3. Work on a school, work, community or other project with people you don’t know very well.
4. Help to make someone you’ve recently met feel comfortable with your group of friends.
5. Share with a group of people an interesting experience you once had.
6. Put yourself in a new and different social situation.
7. Volunteer to help organize an event.
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.
9. Get invited to a party that is being given by a prominent or popular individual.
10. Volunteer to help lead a group or organization.
11. Keep your side of the conversation.
12. Be involved in group activities.
13. Find someone to spend a weekend afternoon with.
14. Express your feelings to another person.
15. Find someone to go to lunch with.
16. Ask someone out on a date.
17. Go to a party or social function where you probably won’t know anyone.
18. Ask someone for help when you need it.
19. Make friends with a member of your peer group.
20. Join a lunch or dinner table where people are already sitting and talking.
21. Make friends in a group where everyone else knows each other.
22. Ask someone out after s/he was busy the first time you asked.
23. Get a date to a dance that your friends are going to.
24. Call someone you’ve met and would like to know better.
25. Ask a potential friend out for coffee.
APPENDIX C

ATTITUDE QUESTIONNAIRE

DIRECTION: The 20 questions below deal with the attitude of you towards yourself and others. Please read each statement carefully. Then decide how strongly you agree or disagree with each statement. These are no right or wrong answers.

<table>
<thead>
<tr>
<th>Strongly</th>
<th>Moderately</th>
<th>Aren’t Sure</th>
<th>Moderately</th>
<th>Strongly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree</td>
<td>Disagree</td>
<td>or Neutral</td>
<td>Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

1. I feel good about myself as a person.
2. I make time for relaxation activities. F
3. I like who I am. R
4. It is hard for me to remember the positive things people say about me. R
5. I am very critical of myself. R
6. I think I am a worthwhile person.
7. I argue a lot with my parents. R
8. I enjoy spending time with my friends. R
9. Even though I make mistakes, I still feel good about myself as a person.
10. I think of myself in negative terms. (e.g., stupid, lazy). R
11. It is easy for me to list 5 things I like about myself.
12. I like to spend the holidays with my family. F
13. I can never quite measure up to my own standards. R
15. I like to be involved with team sports. F
16. Even when I goof up, I basically like myself.
17. There are times when I doubt my worth as a person. R
18. I tend to look at what I do badly rather than what I do well. R
19. My sense of self-esteem is easily disturbed. R
20. When I look in the mirror I like who I see.

\[ F = \text{Filler (not scored)} \quad R = \text{Reverse keyed} \]
APPENDIX D

ACCULTURATION STRESS SCALE FOR INTERNATIONAL STUDENTS

Directions: the questionnaire contains items regarding the reaction of international students toward across-cultural adjustment. Please read each statement carefully. Then decide how strongly you agree or disagree with each statement. Click on the corresponding bubble to indicate how closely each statement describes your situation. These are no right or wrong answers and your responses to this questionnaire are completely anonymous.

<table>
<thead>
<tr>
<th>Strongly</th>
<th>Moderately</th>
<th>Slightly</th>
<th>Aren’t Sure</th>
<th>Slightly</th>
<th>Moderately</th>
<th>Strongly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree</td>
<td>Disagree</td>
<td>Disagree</td>
<td>or Neutral</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

1. Homesickness bothers me.
2. I feel uncomfortable to adjust to new foods.
3. I am treated differently in social situations.
4. Others are sarcastic toward my cultural values.
5. I feel nervous to communicate in English.
6. I feel sad living in unfamiliar surroundings.
7. I fear for my personal safety because of my different cultural background.
8. I feel intimated to participate in social activities.
9. Others are biased toward me.
10. I feel guilty to leave my family and friends behind.
11. Many opportunities are denied to me.
12. I feel angry that my people are considered inferior here.
13. Multiple pressures are placed upon me after migration.
15. People show hatred toward me nonverbally.
16. It hurts when people don’t understand my cultural values.
17. I am denied what I deserve.
18. I frequently relocate/move for fear of others.
19. I feel low because of my cultural background.
20. Others don’t appreciate my cultural values.
21. I miss the people and country of my origin.
22. I feel uncomfortable to adjust to new cultural values.
23. I feel that my people are discriminated against.
24. People show hatred toward me through actions.
25. I feel that my status in this society is low due to my cultural background.
26. I am treated differently because of my race.
27. I feel insecure here.
28. I don’t feel a sense of belonging (community) here.
29. I am treated differently because of my color.
30. I feel sad to consider my people’s problems.
31. I generally keep a low profile due to fear.
32. I feel some people don’t associate with me because of my ethnicity.
33. People show hatred toward me verbally.
34. I feel guilty that I am living a different lifestyle here.
35. I feel sad leaving my relatives behind.
36. I worry about my future for not being able to decide whether to stay here or to go back.
APPENDIX E

DEMOGRAPHICS QUESTIONNAIRE

Please answer the following questions about yourself.

1. Please fill-in your Nationality: ___________

2. Please identify your Race/Ethnicity
   c. Korean/Korean American    d. Asian Indian
   e. Hispanic-American, Latino/Latina  f. African-American  g. Caucasian American
   h. Native American           i. Other __________________

3. What is your age? ______; How many years that you have been in the USA? ____________

4. What is your gender?  ○ Female;  ○ Male

5. What is your education:
   a. freshman              b. sophomore      c. junior       d. senior
   d. graduate student                              e. other: ____________

6. What is your major? ____________

7. How would you describe your English ability by answering the following questions?
   a. What’s is your current level of English fluency? ( 1: not fluent at all; 5: very fluent )
      ○ 1  ○ 2  ○ 3  ○ 4  ○ 5

   b. How comfortable are you communicating in English?
      ( 1: not comfortable at all; 5: very comfortable )
      ○ 1  ○ 2  ○ 3  ○ 4  ○ 5
c. How often do you communicate in English? (1: not often at all; 5: very often)

〇 1 〇 2 〇 3 〇 4 〇 5
APPENDIX F

RECRUITMENT LETTER

Dear fellow students,

**Tired of Studying in English?**
**Tired of Cross-Cultural Difference?**
**Tired of Speaking in English?**
**Or just simply tired!**

How about take off 15 minutes from your studying to let me know about your concerns of studying in English in the United States!

My name is Shu-Ping Lin, a doctoral candidate in Department of Psychology. I am recruiting participants for my dissertation, which investigates the cross-cultural challenges among International Students who are from China and Taiwan. A better understanding of adjustment challenges and coping strategies among international students will hope to be obtained through this study. Through this effort, it is also hoped that more effective and empowering interventions will be delivered to international students in coping with their cross-cultural challenges.

I am asking for YOUR HELP to participate in this research project. The survey will take roughly 10-20 minutes to complete. The answers to this survey will be completely confidential and will be kept anonymous. Although I cannot guarantee complete confidentiality of the information because it will be sent over the Internet, your answers will not be linked to you or your site.

Your participation is entirely voluntary and you can end this study at any time without any penalty. Your input is extremely valuable, and indeed I need your voice towards further understanding the adjustment concerns among Chinese international students. Your participation will mean a lot to me. Also, Please feel free to pass this email message to Chinese international students who may are interested in this study. Again, I deeply appreciate your time and your valuable input.
If you would like to participate in this study please go to the link below:

http://www.surveymonkey.com/
Thank you for your interest in this study. The study contains approximately 100 one-sentence items to respond to, which altogether should take around 20 to 30 minutes of your time. Before beginning, I would like to provide you with some information regarding this study.

* What is the purpose of this study?

The following study focuses on exploring the cross-cultural challenges among Asian international students.

* What are the possible contributions of taking part in this study?

The main benefits of participating in this study lie in the contribution you would make towards further understanding the adjustment concerns among Asian international students.

* Will my taking part in this study be kept confidential?

Yes. This study will not request any identifying information from you, such as your name or address. Therefore, your responses are anonymous.

* What if I am interested in the results of this study?

You may contact the researchers for this study, listed at the bottom of this page, for more information.

* Who has reviewed this study?

The procedures for this study have been reviewed by the Behavioral and Social Sciences Institutional Review Board at The Ohio State University.
Thank you. If you have any other questions, you may contact:

**Shu-Ping Lin, M.S.**  
lin.566@osu.edu  
(614) 404-1752

**Dr. Nancy Betz**  
betz.3@osu.edu  
(614) 292-4166

**Office of Responsible Research Practices (ORRP)**  
Phone: (614) 688-8457  
Address:  
The Ohio State University  
Third Floor Research Foundation Building  
1960 Kenny Road  
Columbus, Ohio  
43210-1063

To continue with this study, you will be presented with a brief informed consent form, which describes that you understand several points discussed in this information. To go to the informed consent form and continue with this study, please click here: ____.
APPENDIX H

INFORMED CONSENT

By clicking to continue, I indicate that I understand the procedures involved in this study.

I am aware that I have the right to ask questions and receive answers related to this study by contacting the investigators: Shu-Ping Lin, M.S., lin.566@osu.edu, (614) 404-1752; Dr. Nancy Betz, betz.3@osu.edu, (614) 292-4166. Furthermore, if I have questions about my rights as a research participant, I can call the Office of Research Risks Protection at (614) 688-4792.

I am aware that I have the right to refuse to participate and may withdraw at any time without any penalty, simply by closing my web browser. Furthermore, I know I do not have to answer any question that I do not wish to, and can merely skip such questions. I understand that my participation is voluntary.

Click here to indicate your consent and continue with this study: ___
APPENDIX I

DEBRIEFING STATEMENT

**Social self-efficacies and Acculturative Stress**

The study you just participated in assessed the relationship between social self-efficacy with one’s acculturative stress to adjust to American culture. Overall, this study focuses on exploring the discrepancy of Chinese international students’ social self-efficacies when they communicate in English versus in Chinese. Social self-efficacy was defined as an individual’s confidence in her/his ability to engage in the social international tasks necessary to initiate and maintain interpersonal relationships. It is has been hypothesized that perceived social self-efficacy has impact on individuals’ adjustment stress. And, this study aims to further verify the relationship between acculturative stress with different social efficacies as well as with other psychological construct, such as self-esteem and social desirability.

Please feel free to ask any questions about the study or the concepts presented. If you have any questions or want to hear about the results, you can contact the Principal Investigator, Shu-Ping Lin, M.S., at (614) 404-1752 or lin.566@osu.edu; or the Co-Investigator, Dr. Nancy Betz, at (614) 292-4166 or betz.3@osu.edu. Furthermore, if the content of this study brought up questions or issues that you would like to explore with someone, an option is to consider pursuing counseling to discuss these issues. You can do so by looking in the yellow pages under counseling, therapy, and psychology, for example. Another option is to contact your state board of mental health, which often provides referral services.

Thank you very much for your participation.
Q. **How do you keep our data secure?**

A. Our privacy policy states that we will not use your data for our own purposes. The data you collect is kept private and confidential.

In regards to the security of our infrastructure, here is an overview of our setup. The servers are kept at Berbee Networks ([www.berbee.com](http://www.berbee.com)) and owned and maintained by SurveyMonkey staff.

**Physical Security**

- Servers kept in locked cage
- Entry requires a passcard and biometric recognition
- Digital surveillance equipment
- Controls for temperature, humidity and smoke/fire detection
- Staffed 24/7

**Network Security**

- Multiple independent connections to Tier 1 Internet access providers
- Fully redundant OC-48 SONET Rings
- Uptime monitored every 5 minutes, with escalation to SurveyMonkey staff
- Firewall restricts access to all ports except 80 (http) and 443 (https)

**Hardware Security**

- Servers have redundant internal power supplies
- Data is on RAID 10, operating system on RAID 1
- Servers are mirrored and can failover in less than one hour

**Software Security**
• Code in ASP, running on SQL Server 2000 and Windows 2000 Server
• Latest patches applied to all operating system and application files
• SSL encryption of all billing data
• Data backed up every hour internally
• Data backed up every night to centralized backup system, with offsite backups in event of catastrophe
LIST OF REFERENCES


Hawaii


Stroiney, K. M. (2002). The role of instrumentality and expressiveness in the link between social self-efficacy, shyness, and depression. Published masters thesis, The Ohio State University.


