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The statistics from the Institute of International Education (2006) show that the number of international graduate students studying at universities in the U.S. continues to increase, and that more international students choose to acquire work experience in the U.S. after they graduate from their academic programs. Therefore, it is important for counselors and other helping professionals to understand the factors that would impact these students' career development. This study was designed to examine international graduate students' acculturation experiences and its impact on their self-efficacy in making career decisions.

Two survey instruments were used in the study, the International Students Acculturation Questionnaire (ISAQ), and the Career Decision Making Self-Efficacy Scale-Short Form (CDMSE - SF). A total of 190 graduate level international students were surveyed to assess their cross culture adjustment experiences and their career decision-making self-efficacy.

Independent sample t-test and ANOVA analysis revealed significant mean differences of acculturation and career self-efficacy between the individualistic and collectivistic groups. However, no gender difference was found on acculturation score. Pearson product-moment correlation coefficient did not display a significant relationship between students' length of residence and their career self-efficacy. Finally, a multiple linear regression analysis demonstrated that students' acculturation experiences are significant predictors of their career self-efficacy.

The results suggest that international graduate students' cross culture adjustment experiences might be an important variable in the development of confidence to accomplish career tasks and make career relevant decision. The results have implications for the counseling practice with international graduate students. Further research using extensive sample is needed to provide more empirical support for these findings.

EXAMINING THE IMPACT OF INTERNATIONAL GRADUATE STUDENTS' ACCULTURATION EXPERIENCES ON THEIR CAREER DECISION-MAKING SELF-EFFICACY

by

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CHAPTER I

INTRODUCTION

The number of international graduate students studying at colleges and universities in the U.S. continues to increase (Institute of International Education, 2006), with indications that more and more of these students may seek out work experiences in the U.S. in the form of internships and post-graduation U.S. employment. International graduate students, however, face challenges not only in adjusting to the U.S. culture, but also in making a successful transition into the American workplace. To date, however, there has been little research on strategies and factors leading to international graduate students' positive cross-cultural adjustment experiences, and no studies were found that examined positive coping strategies used by international graduate students to cope with the school-to-workplace transition. Further, the relationship between students' cross-cultural adjustment experiences and their self-efficacy in career development has not been examined. The purpose of the proposed study is to examine how international graduate students' acculturation experiences impact their career development self-efficacy.

Overview of Related Literature

Statistics from the Institute of International Education (2006) show an increase in the numbers of international students on college campuses, totaling 564,766 for the 2005-2006 academic year. It is estimated that this population of international students represents over 186 nationalities attending approximately 2500 institutions of higher

education across the U.S. (Jacob, 2001). According to the Chronicle of Higher Education (2004), in 2003-04, the majority of international students came from Asia (56%), followed by Europe (13%), Latin America (12%), Africa (7%), the Middle East (6%), Canada and Bermuda, (5%) and Oceania (1%). Of all international enrollments in the 2005-06 academic year (Institute of International Education, 2006), 46% were enrolled at the graduate level, with 20% in Master's programs, 19% in doctoral programs, 1.5% in professional training, and 5% unspecified. There also was a large increase in the percentage of students reported as engaged in Optional Practical Training (46%), which included internships in fields related to their studies. These statistics indicate that more international students seem to be choosing to acquire work experience in the U.S. after they graduate from their academic programs.

International students face various concerns by virtue of their being a foreign student living in the host society. One typical concern is adjusting to a new culture (Khoo & Abu-Rasain, 1994). It has been acknowledged in the literature that international students have to deal with the problems of loss of their social ties (Leung, 2001), struggle with language barriers (Carr, Koyama, & Thiagarajan, 2003; Toffoli & Allan, 1992), adjust to social customs and norms (Carr, et al., 2003; Leung, 2001), and deal with cultural shock and acculturation stressors (Constantine, Okazaki, & Utsey, 2004; Poyrazli, Kavanaugh, Baker, & Al-Timimi, 2004; Winkelman, 1994). Many of these cross-cultural adjustment issues could be due to the different cultural backgrounds that international students came from. Leung (2001) suggested that the differences in cultural values and behavior might have implications for international students' adaptation in the host society. While students

from a more individualistic culture may identify with the U.S. mainstream culture, those from a more collectivistic culture may feel distant (Poyrazli & Graham, 2007).

Williams (2003) defined individualism and collectivism as worldviews that make up a portion of a culture's core set of values and serve as organizing principles for both interpersonal and intrapersonal relationships. According to Williams, both worldviews mediate such varied psychological processes as cognition, emotion, and motivation, and play a potentially significant role in career development and vocational behavior. In general, individuals from Africa, Asia, Center/Latin America, Arabic countries are considered to be from collectivistic cultures, while individuals from Europe and Australia are considered to be from individualistic cultures (Bandura, 2002; Constantine, Okazaki, & Utsey, 2004; Leong, 1993; Williams, 2003; Yeh & Inose, 2003).

Culture consists of patterns of attitudes, values, beliefs and behaviors that are transmitted by symbols and that constitute distinctive aspects of human groups (Shim & Schwartz, 2007). Cultural adjustment involves both acculturation and assimilation (Kagan & Cohen, 1990)**.** Often, researchers use adjustment, acculturation, and assimilation interchangeably to denote behavior, value, and attitude changes associated with feelings of mental health and social integration (Kagan & Cohen). Cultural adjustment has been found to be affected simultaneously by behavioral, cognitive, and affective factors (Kagan & Cohen). Acculturation is a critical factor to understand when examining immigrants' cross-cultural adjustment and adaptation, and can be defined as the manner in which individuals negotiate two or more cultures (Yeh, 2003). Research studies have demonstrated that the process of acculturation occurs along

three separate dimensions: behavioral, cognitive and affective/psychological (Kagan & Cohen, 1990; Marino, Stuart, & Minas, 2000; Shim et al., 2007). In this study, the terms cultural adjustment and acculturation are used interchangeably to refer to changes in behaviors, cognition, and affect when describing research related to international students' experiences in the host society.

Marino et al. (2000) noted that the level of acculturation along these dimensions and the correlation among them might fluctuate according to individual and group need, capacity, or opportunity for integration into the host culture. These authors suggested that new knowledge and roles can be acquired quickly, and an individual can comply with, learn, or imitate another's actions without affecting his or her attitudes, beliefs, or values. Consequently, it is possible to be highly acculturated in one aspect of life (e.g., knowledge of the language of the host society), and not in other aspects (e.g., health-related beliefs and practices). Thus, they concluded that measuring the adoption of the most observable, external aspects of the host culture (behavioral acculturation) does not necessarily reflect the extent to which a person has adopted host society norms and values, the basic personality structure, or cultural identity.

The relationship between acculturation and psychological adjustment has been studied from different perspectives. One view has considered acculturation to be a one-dimensional construct, in which an individual adopts aspects of the dominant culture at the expense of the native one (Kagan & Cohen, 1990). Multidimensional models of acculturation, however, have found more support in the literature (Burnapp, 2006; LaFromboise, Colenman, & Gerton, 1993; Miranda & Umhoefer, 1998; Rahman &

Rollock, 2004). These multidimensional models have challenged the view that acculturation to one culture necessarily comes at the expense of the other. In other words, individuals may maintain ties with and become competent in more than one culture without experiencing negative mental health outcomes.

LaFromboise et al. (1993) proposed an alternation model of second culture acquisition to describe the process of change that occurs in transitions within, between, and among cultures. This model assumes that it is possible for an individual to have a sense of belonging in two cultures and maintain a positive relationship with both cultures without compromising his or her sense of cultural identity. The model also implies that individuals who learn to alternate their behavior to fit into the cultures in which they are involved will experience less acculturative stress. Subsequent study provided empirical support for the idea that those individuals who maintain their culture and are able to incorporate functional skills from the host culture fit better in the new environment and do so with fewer detrimental effects to their mental health (Miranda et al., 1998). Findings such as these suggest that achieving bicultural competence is the preferred model of acculturation.

In discussing the adjustment experience of international students in England, Burnapp (2006) noted that international students might need to adapt their approaches to learning and their views of themselves as learners in their new situation. Burnapp emphasized the focus on change, and that fostering bicultural competence rather than complete acculturation might be the best result. Winkelman (2001) defined successful cross-cultural adjustment/acculturation as a process in which one becomes bicultural,

integrating one's original identity with a new identity created in the new culture. According to Winkelman, this process involves cognitive, behavioral and emotional changes. Cognitive and behavioral changes can be achieved by cognitive flexibility (openness to new ideas, beliefs, and experiences and the ability to accept these new conditions) and behavioral flexibility (the ability to change behavior as required by the culture). Emotional changes, however, require more than knowledge, empathy, and understanding. Successful emotional adjustment requires that one is able to simulate new behaviors and to express affective aspects (emotions, feelings) expected in the host culture.

The above description of successful cross-cultural adjustment in the literature indicates some coping strategies that international students could use to make their experience in the host society a positive one. Students' attitudes toward the new cultural environment, and how they cope with difficulties and challenges during the cross-cultural adjustment process will impact their changes in behaviors, cognition, and affect. Thus, the process of acculturation is a reflection of behavioral, cognitive and affective strategies and factors that might lead to both positive adjustment and experiences for international students.

Acculturation has been found to impact immigrants' career self-efficacy (Miranda & Umhoefer, 1998; Rivera, Chen, Flores, Blumberg, & Ponterotto, 2007), general occupational functioning (Smart & Smart, 1995), and international students' mental health (Constantine, Okazaki, & Utsey, 2004). Most international students encounter adjustment issues over the course of their studies in the host society. The increasing

number of international students in the U.S. has generated numerous research studies aimed at understanding their cross-cultural adjustment experiences. A few researchers have specially addressed international students engaged in graduate studies (Hyun, Quinn, Madon, & Lustig, 2007; Ku, Lahman, Yeh, & Cheng, 2008; Poyrazli & Kavanaugh, 2006). In these studies, researchers focused on international graduate students' educational experiences, their adjustment strains, and mental health needs in the U.S. However, researchers did not further examine the impact of these students' study abroad experiences on their career development. Clearly, an improved understanding of factors that influence the cross-cultural adjustment of these students could help college career counselors and other student affairs professionals design intervention programs to enhance students' confidence in the job search, and therefore better prepare them for school-to-workplace transitions.

Statement of the Problem

Many research studies have been conducted to examine the educational and acculturation experiences of international students, and their special career development needs in the U.S. These studies have indicated that international students who attend colleges and universities in the U.S. face common concerns and difficulties in adjustment related to second language anxiety (Chen, 1999; Olivas & Li, 2006), educational stressors (e.g., adjusting to a different educational system) (Charles & Stewart, 1991; Chen, 1999; Heggins, & Jackson, 2003; Jacob, 2001; Mori, 2000; Wan, 2001), and sociocultural stressors (e.g., experiences of culture shock, social isolation and alienation, and financial concerns) (Chen, 1999; Lacina, 2002; Poyrazli & Kavanaugh, 2006). In terms of their

career challenges and needs, most studies have focused on international students' career development in the U.S., finding that major career concerns of international students include overcoming interview barriers (especially language and cultural barriers) (Bikos & Furry, 1999; Spencer-Rodgers, 2000; Yang, Wong, Hwang, & Heppner, 2002), obtaining working experience (Spencer-Rodgers, 2000), dealing with legal requirements (Spencer-Rodgers, 2000; Yang et al., 2002), and developing job-search skills (Bikos et al., 1999; Yang et al., 2002). Researchers also have noted that students who intend to pursue careers in their home countries need reentry vocational assistance to prepare for the transition back to their home cultures and workplace norms (Mori, 2000; Spencer-Rodgers, 2000).

When discussing specific concerns among international students, some researchers did not specify whether they focused on undergraduate students or graduate students (e.g., Charles & Stewart, 1991; Chen, 1999; Jacob, 2001; Lacina, 2002; Olivas & Li, 2006; Yang et al., 2002). Instead, these researchers used the term "international students" to refer to "a group of individuals who temporarily reside in a country other than their country of citizenship in order to participate in international educational exchange as students" (Lin & Yi, 1997). In some empirical studies that focused on understanding the educational experience and vocational situation of international students, researchers included both undergraduate and graduate students in the sample (for example, Hanassab & Tidwell, 2002; Spencer-Rodgers, 2000). Heggins and Jackson (2003) specifically explored the collegiate experience of undergraduate international students. A summary of these studies revealed students' cross-cultural adjustment concerns such as language

challenges, adjusting to the U.S. educational system, dealing with cultural differences, social interaction, and career development. Results from studies focused on international graduate students (Chen, 2004; Hyun et al., 2007; Ku et al., 2008; Poyrazli & Kavanaugh, 2006; Wan, 2001) indicated similar adjustment concerns. However, these studies also revealed concerns specifically associated with students engaged in graduate studies. In addition to adjusting to a new educational and socio-cultural system, international graduate students also face the challenges of socialization to values and culture of a profession (Nesheim, Guentzel, Gansemer-Topf, Ross, & Turrentine, 2006). Compared to undergraduate international students, it seems that international graduate students are more career oriented. Therefore, it is important to investigate factors impacting these students' confidence in their career development.

Although two recent studies (Chen, 2004; Zhou & Santos, 2007) have examined international students' cross-cultural adjustment and their career development in Canada (Chen, 2004) and England (Zhou & Santos, 2007), there continues to be a lack of research on the effect of some psychosocial variables of international students on their career development in the U.S. These psychosocial variables are those related to the acculturation process – the process of change in knowledge, attitudes, cultural beliefs, values, and practices that occurs when the individual is exposed to a new cultural environment (Marino, Stuart, & Minas, 2000). Because of international students' cross-cultural experiences, these variables may be particularly relevant to the career-related behaviors of international students.

Need for the Study

Studies have examined career concerns of certain ethnic/national groups (e.g., Asian students or Chinese students), and how those career concerns are related to factors influencing students' career choices and aspirations, career satisfaction, and their career decision-making styles (e.g., Chiang, 1997; Henderson & Chan, 2005; Leung, Ivey, and Suzuki, 1994). Other researchers have studied influences of parents and family (Tang, 2002), cultural dimensions of career decision making among international students (Mau, 2004), and the influence of cultural values on certainty and indecision regarding career decisions among Chinese American students (Mah & Yeh, 2005). These studies indicated that cultural values might have played a significant role in career decision-making in students with an Asian background. There is a lack of research, however, on similar career concerns among international students studying in the U.S.

Existing research on international students' career development needs has focused mainly on helping students acquire career related skills for obtaining employment in the workplace (Bikos & Furry, 1999; Spencer-Rodgers, 2000; Yang, Wong, Hwang, & Heppner, 2002). Although numerous studies have investigated appropriate counseling strategies for working with international students on their career and cross-cultural adjustment concerns, no research has been found that looks at other aspects of international students' career development such as career decision making self-efficacy.

In studies on career self-efficacy, researchers have examined some variables such as age, gender, length of residence, residency plan, and acculturation experiences and their relationship with the development of individuals' career self-efficacy in diverse

populations within different cultural contexts (Lindley, 2006). Given the status of international graduate students and their career-oriented concern, it is essential to include these variables when investigating the factors that would influence their self-efficacy in career development.

Purpose of the Study

This study focused on the subpopulation of international graduate students. The purpose was to examine how international graduate students' acculturation experiences impact their career development self-efficacy. Because international graduate students already have chosen an academic major leading to a future career path, their career decision-making self-efficacy would relate to career preparation rather than deciding on a college major. The variables examined in the study were international graduate students' cross-cultural adjustment experiences as measured by the International Students Acculturation Questionnaire (ISAQ), and their career self-efficacy as measured by the Career Decision-Making Self-Efficacy Scale – Short Form (CDMSES - SF) (Betz, Klein, & Taylor, 1996).

Research Questions

The present study explores how the cross-cultural adjustment experiences of international graduate students impact on their career decision-making self-efficacy. Specifically, it answered the following research questions:

Research Question 1: Is there a significant mean difference in career decision-making self-efficacy (as measured by total scores on the CDMSES - SF) among international graduate students from different cultural groups?

Research Question 2: Is there a significant mean difference in overall acculturation experiences (as measured by total scores on the ISAQ) among international graduate students from different cultural groups, and between male and female students?

Research Question 3: Do international graduate students' age and overall acculturation experiences (as measured by total scores on the ISAQ) significantly predict their career decision-making self-efficacy (as measured by the CDMSES - SF)?

Research Question 4: What are the relationships between students' demographic variables such as gender, cultural group, residency plans, and students' academic majors and their overall career decision-making self-efficacy?

Significance of the Study

International students bring intellectual assets to U.S. college campuses. Pandit (2007) noted the importance of international students on U.S. college campuses. First, international students, with their links to researchers in their home countries, serve as excellent conduits to build international scholarly networks. Second, at the national level, there is the recognition that international students historically have played an important role in advancing America's research competitiveness in the STEM disciplines (science, technology, engineering, and mathematics). Because international graduate students compromise almost half of all international enrollments (i.e., 46%) in U.S. institutions of higher education (Institute of International Education, 2006), and are primarily engaged in research activities in their colleges and universities (Poyrazli & Kavanaugh, 2006), this study proposes to add to the literature by examining international graduate students' cross-cultural adjustment experiences and their career development concerns.

International students present a challenge to counselors, psychologists, and educational administrators. Representing over 180 nations and many more distinct cultural groups, they constitute an extremely heterogeneous group of individuals with diverse needs and concerns (Spencer-Rodgers, 2000). Their acculturation experiences may have a strong impact on their self-identity and self-concept (Mori, 2000). Understanding the acculturation experiences of international students could help counselors better conceptualize students' career concerns, assist students in their school-to-work transition, and facilitate their career development, while at the same time promoting the diversity of the U.S. workforce. Helping students develop career and life-planning skills would ensure the best future use of their unique and enriching educational experiences in the U.S. This study not only focused on the difficulties these students may experience, but also explored ways students manage to overcome these adjustment difficulties. Results of this study will benefit future international students by providing information about coping strategies identified in the study that might help them achieve positive acculturation experiences.

As briefly outlined in the preceding section, existing research on the population of international students has focused primarily on investigating their cross-cultural adjustment experience, and helping them develop career related skills in order to secure employment in the workplace. Other variables of career development, such as career decision-making styles, career choices and aspirations, and career satisfaction, have not been researched on this population. Further, no research has been conducted that explores the relationship between students' cross-cultural adjustment experiences and their career

development. This study was designed to fill a gap in our knowledge about the impact of acculturation on career development in international students. It will add to the existing literature of career counseling by defining and testing constructs that can be useful for understanding international students' career development needs.

Definition of Terms

Acculturation. Acculturation refers to a process by which individuals understand and incorporate values, beliefs, and behaviors of the host culture in the context of the values, beliefs, and behaviors of the culture of origin (Constantine, Okazaki, & Utsey, 2004).

Affective/Psychological Acculturation. Affective/psychological acculturation is a more complex process, and it involves feelings toward the host culture and the degree of agreement with the defined norms, basic values, ideologies, beliefs, attitudes, and preferences of most of the group (Kegan & Cohen, 1990; Marino et al., 2000).

Behavioral Acculturation. Behavioral acculturation is related to cultural learning and the adoption of the most observable, external aspects of the dominant culture including language, social skills, and the ability to "fit in" or negotiate the new sociocultural reality (Marino et al., 2000).

Cognitive Acculturation. Cognitive acculturation is reflected in language use and knowledge development. For example, fluency in English language may influence cultural adjustment in the United States, especially if the language is perceived as useful for identifying with the culture (Christine, 2003; Christine & Inose, 2003; Kegan & Cohen, 1990; Miranda & Umhoefer, 1998).

Cultural Adjustment. Cultural adjustment is a process of multiple interacting factors

distinguished by various behavioral, cognitive, affective and demographic attributes (Kagan & Cohen, 1990).

Successful Cross-Cultural Adjustment/Acculturation. Successful cross-cultural adjustment/acculturation is a process in which one becomes bicultural, integrating one's original identity with a new identity created in the new culture (Winkelman, 2001).

Individualism. Individualism is defined as a worldview that centralizes the personal – personal goals, personal uniqueness, and personal control, and peripheralizes the social (Williams, 2003).

Collectivism. Collectivism is defined as a worldview based on the assumption that groups bind and mutually obligate individuals, where the individual is simply a component of the social (Williams, 2003).

Self-Efficacy. The concept of self-efficacy refers to one's beliefs in one's capabilities to successfully perform a given behavior or class of behaviors, and is postulated as helping to determine one's choice of activities and environments, as well as one's effort expenditure, persistence, thought patterns, and emotional reactions when confronted by obstacles (Bandura, 1977, 1986).

Career Decision-Making Self-efficacy (CDMSE). Career decision-making self-efficacy refers to a person's belief that she or he can successfully perform the tasks involved in choosing a career. Tasks may include researching careers in a career library or on the World Wide Web, formulating short- and long-term occupational goals, and arranging personal values into a hierarchy (Maples & Luzzo, 2005). As expected, CDMSE is positively related to career decision. Persons with high levels of CDMSE are

more likely to be decided about and committed to a particular career direction (Betz, Klein, & Taylor, 1996).

Organization of the Study

This study is organized into five chapters. Chapter 1 offers a brief introduction to the literature and findings on the need for research on the impact of acculturation on the career self-efficacy of international graduate students. The statement of the problem, need for the study, purpose of the study, research questions, significance of the study, definition of terms, and organization of the study are also described.

Chapter 2 provides a complete review of related literature. The chapter starts with a brief introduction of college student developmental theories, explaining how these theories apply to international graduate students. This is followed by a definition of international students, and a description of distinctive aspects of international students. In section four, cultural characteristics of international students are introduced. Section five examines common adjustment issues faced by international students. Section six describes unique characteristics of international graduate students. Section seven focuses on positive coping strategies used by international students to achieve positive acculturation. Section eight discusses cultural group differences on acculturation experiences. Section nine introduces theory of self-Efficacy, followed by section ten, a review of research studies on career self-efficacy. This section mainly synthesizes the growing body of vocational research on variables impacting individuals' career self-efficacy development within different cultural contexts. Section eleven concludes and summarizes the literature review.

Chapter 3 focuses on the methodological approach of the study. It includes research questions and hypotheses, sample, survey instrument development, data collection procedures, data analysis techniques, pilot study, factor analysis on the *International Student Acculturation Questionnaire*, and discussion and implications for the main study.

Chapter 4 provides a presentation of the results of the study, and Chapter 5 includes a discussion of the findings from the study, limitations of the study, implications for the counseling practice, and future research areas.

CHAPTER II

LITERATURE REIVEW

Introduction

This chapter provides a complete review of related literature. The chapter starts with a brief introduction of college student developmental theories, explaining how these theories apply to international students. This is followed by a definition of international students, and a description of distinctive aspects of international students. In section three, cultural characteristics of international students are introduced. Section four examines common adjustment issues faced by international students. Section five focuses on positive coping strategies used by international students to achieve positive acculturation. Section six discusses cultural group differences on acculturation experiences. Section seven describes unique characteristics of international graduate students. Section eight introduces theory of self-Efficacy, followed by section nine, a review of research studies on career self-efficacy. This section mainly synthesizes the growing body of vocational research on variables impacting individuals' career self-efficacy development within different cultural contexts. Section ten concludes and summarizes the literature review.

Developmental Perspectives

In the field of student development in higher education, theories have been developed to examine college students' developmental process, most notably Chickering's (1993) Theory of Identity Development, Kohlberg's (1976)

Moral Development Theory and Perry's (1970) Theory of Intellectual and Ethical Development. Chickering's Theory of Identity Development is a psychosocial theory that views development as a series of tasks or stages dealing with thinking, feeling, believing, and relating to others. Kohlberg's and Perry's theories focus more on students' cognitive development.

Chickering (1993) proposed seven vectors of development that contribute to the formation of identity: developing competence, managing emotions, moving through autonomy toward interdependence, developing mature interpersonal relationships, establishing identity, developing purpose, and developing integrity. Chickering's theory applies to traditionally aged university students. According to the theory, establishing identity is the key developmental issue that arises for students during the university years.

According to Chickering (1993), students move through these vectors at different rates. Vectors can overlap and interact with each other, and students often find themselves re-examining issues associated with vectors they had previously worked through. Although not rigidly sequential, vectors do build on each other, leading to greater complexity, stability, and greater emphasis on intellectual aspects of development. Chickering's theory was based on traditional-aged students; however, elements can be used with all students. Chickering discussed certain experiences that are central to students' psychosocial development, such as, engaging in decision making in both academic and non-academic settings, interacting with diverse individuals and ideas, solving complex intellectual and social problems, and receiving feedback and making objective self-assessments.

Kohlberg viewed moral development as more than gaining increased knowledge of culturally defined values (Evans, Forney, & Guido-DiBrito 1998). Rather, he saw moral development as representing the transformations that occur in a person's form or structure of thought (Evans et al.). Kohlberg proposed that cognitive conflict would contribute to students' moral development. Cognitive conflict occurs when individuals face situations that arouse internal contradictions in their moral reasoning structures or when they find that their reasoning is different from that of significant others. According to Kohlberg, experiences that require individuals to consider the perspectives of others facilitate development. Kohlberg noted that people who seek out learning opportunities, enjoy intellectually stimulating environments, and find environments that reward these qualities are more likely to demonstrate higher levels of moral development.

Perry's (1970) theory traces the development of college students' ways of making sense of their own experiences. This theoretical scheme describes the steps through which students move from a simplistic, categorical view of the world to a realization of the contingent nature of knowledge and of relative values, and to the formulation and affirmation of their own commitments. Perry proposed four general categories that describe the process of students' intellectual development: dualism, multiplicity, relativism, and commitment.

According to Perry (1970), dualism represents a mode of meaning making that tends to view the world dichotomously: good-bad, right-wrong, black-white. Learning is essentially information exchange because knowledge is seen as quantitative (facts) and authorities (including people and books) are seen as having and dispensing the right

answers. Perry characterized multiplicity as honoring diverse views when the right answers are not yet known. As individuals move through multiplicity, they tend to shift their conception of the role of the student from that of one who learns how to learn and works hard to one who learns to think more independently. The transition to relativism occurs when students recognize that not all opinions appear to be equally valid. Knowledge is now viewed more qualitatively; it is contextually defined, based on evidence and supporting arguments. Relativistic thinkers critically examine the ideas presented by authorities before they adopt them as their own. The rationale for current adherence to the beliefs reflects a more complex process of coming to conclusions, a process that includes some questioning and a contextual basis for the stance taken. The movement from relativism to the process of commitment in relativism involves making choices and decisions in a contextual world.

Perry (1970) believed that the development of an individual's ways of reasoning is the result of the interaction between that individual's experiences and the structure of the environment, and that as students proceed through college, they move from lower levels of reasoning to higher levels.

These two cognitive developmental theories have found empirical support in college student populations of different cultural backgrounds (Zhang & Watkins, 2001). Zhang and Watkins' study demonstrated that exposing students to more opportunities to deal with conflicts in their experience beyond their academic life contributed to their cognitive development. These exposures had provided students with opportunities to deal with different people, to cope with a wider range of problems, and to be exposed to

diverse views, and therefore to be challenged to reason at a higher level of thinking.

Evans et al. (1998) noted that college might foster cognitive development by providing a variety of social, intellectual, and cultural experiences for students. This is also true for international students who pursue education in a new country. In addition to the usual problems of adjustment to university, international students must face the challenges associated with adjusting to a new culture (Grayson, 2008). For graduate international students, these challenges also involve socialization to the values and culture of a profession (Nesheim, Guentzel, Gansemer-Topf, Ross, Turrentine, 2006). The adjustment process to a new educational system and to the host society presents a number of broad challenges for international students, including language and cultural barriers, social isolation, financial hardships, and difficulties finding jobs postgraduation (Hyun, Quinn, Madon, & Lustig, 2007). How students cope with these challenges might impact their study abroad experiences, which provide students with opportunities to establish a new identity, develop critical evaluative skills, independent thinking, and the ability to challenge other points of view. The abilities and skills that students obtained in this cognitive development process would prepare them for the career decision-making.

Definition of International Students

International students are defined as individuals who temporarily reside in a country other than their country of citizenship in order to participate in international educational exchange as students (Lin & Yi, 1997). Although international students and other ethnic minorities, refugees, or immigrants might share some common features regarding cultural heritage and minority status, there are differences as well. Researchers

have summarized the following differences (Jacob, 2001; Yoon & Portman, 2004). First, a critical distinguishing factor is the differences in sociopolitical factors that influence the experiences of international students. Students from Asia may have life and educational experiences that are different from international students from Africa. Second, the acculturation experiences of international students also seem to be substantially different from the experiences of American racial and ethnic minority groups, both collectively and with respect to country of origin. In the process of adjusting to a new cultural environment, international students perceive prejudice more affiliated with their own nationality groups, and use English significantly less than do permanent residents or naturalized citizens in the U.S. International students are also different from refugees and immigrants. International students will only be in the host country temporarily to achieve their academic goal (Khoo & Abu-Rasain, 1994). Refugees and immigrants plan to stay and settle in the host society, and therefore finding full employment is their major career goal (Mace, Atkins, Fletcher, & Carr, 2005). Third, the racial identity of international students may be based more on variables such as religion, language, national group identity, and values as opposed to race and racial variable factors, which may be sociopolitical variables that are more salient for individuals from American minority groups. Fourth, international students experience the change of status from members of a majority to that of a minority by coming to a different country. They experience cultural shock as a result of transition from one culture to another and may have more language problems than their American minority counterparts.

Therefore, it is necessary to achieve a sound understanding of the transition process

that these international students face and the impact it has on their collegiate experience and career development. This literature review provides more information about the background, socialization, concerns, feelings of international students, their cross-cultural adjustment experiences on U.S. campuses, and the role of educational achievement for international students, which subsequently impacts their career development. In addition, the section offers an overview of the specific concerns of graduate international students, and explains how graduate students are different from traditional age international students.

Cultural Characteristics of International Students

Regardless of their diverse cultural, social, religious, and political backgrounds, international students share certain characteristics due to common experiences as international students in a foreign country (Yoon & Portman, 2004). According to Mori (2000), most international students plan to return to their home countries eventually and are in the U.S. only temporarily. They are thus people in transition who choose to live in a foreign academic setting to realize their educational objectives. Researchers found that in addition to dealing with changes in personal growth, international students also have to adjust to a new educational and socio-cultural environment. For example, Khoo and Abu-Rasain (1994) noted that international students encounter a different education system which requires different study skills, and that most prevalent problems reported by international students have to do with language, finances, their studies, homesickness, and adjusting to social customs. Jacob (2001) discussed adjustment concerns of international students in the U.S., pointing out that international students are faced with

challenges of learning the intricacies of daily living and survival in a foreign environment without adequate information and preparation. According to Jacob, these challenges included homesickness and cultural shock in response to the transitions and adjustment to living in a culture that has different values and norms, and varying levels of adjustment difficulties to the American educational system. Olivas and Li (2006) reviewed literature related to the international student population in U.S. universities and colleges, and found that most significant adjustment issues international students faced are related to cultural differences, language challenges, and the U.S. education system.

In examining international graduate students' cross-culture adjustment process, researchers reported similar adjustment concerns. Chen (2004) found that international graduate students' intercultural adjustment experience combined a range of aspects in the areas of career development, the transition to higher education, and cross-cultural adjustment. Poyrazli and Kavanaugh's (2006) study on graduate international students' cross-culture adjustment strains showed that major adjustment difficulties are associated with mastering English proficiency, adjusting to the American educational system, and academic achievement.

In terms of adjusting to a new educational system, international students may need to understand the academic norms or the institutional culture (Lin & Yi, 1997), adapt their approaches to learning and their views of themselves as learners in their new situation (Burnapp, 2006). Students from non-English speaking countries also need to overcome the language barrier (Chen, 1999; Lacina, 2002), and become used to the various accents of instructors along with their different teaching styles (Lin & Yi, 1997).

With regard to the socio-cultural adjustment, international students can experience varying degrees of cultural shock in unfamiliar cultural or subcultural settings (Winkelman, 1994). Jacob (2001) indicated that adjustment issues are related to the degree to which a student's native culture is similar or different in comparison with the host culture. Acculturation options differ among different cultural groups depending on their sociocultural characteristics. For example, European international students often embrace bicultural values, whereas African, Asian, and South Americans tend to prefer the cultural values and practices of their own nationality group. Cheng and Leong (1993) also noted that the different cultures that international students come from are generally very distinct, so that a student from Italy would likely be quite culturally different from a Japanese student. These students would have different life experiences prior to coming to the U.S. that would create differences in their needs, problems, and where they go for help. Furthermore, there are differences in adjustment among students from various countries within the same continent. For instance, there may be unique issues faced by an international student from Japan as opposed to India because of the possibility that there are differential influences of sociopolitical factors (Jacob, 2001).

The literature on adjustment issues experienced by international students as a group also has included the significance and influence of socialization. Individual coping styles and social networks play significant roles in the social support systems of international students. International students usually turn to their fellow-nationals in the same university for help since their family, relatives, and friends are far away, and often cannot truly appreciate the students' experience in the U.S. (Khoo & Abu-Rasain, 1994; Mori,

2000). Thus, international students frequently tend to create a subculture of fellow-nationals as their primary support system. Hayes and Lin (1994) suggested that the positive functions of this cultural subgroup provide a place where international students can establish new primary relations, thereby developing a sense of belonging and a place to share familiar traditional values and belief systems. This social support system validates international students' sense of self-concept and self-esteem, and provides emotional support as it is easier for them to share their emotional difficulties with fellow nationals because of language and cultural similarities.

Studies conducted on international students suggested that they have different values and worldviews, which are theorized to mediate the psychological variables of self-concept, well-being, expression of emotion, attribution style and relationality (Williams, 2003). Markus and Kitayama (1991) noted that people in different cultures have strikingly different constructions of the self, of others, and of the interdependence of the two. They proposed that these self-concepts can influence, and in many cases determine, the very nature of individual experience, including cognition, emotion, and motivation. According to Williams (2003), students from individualistic cultural backgrounds believe that personal success is more important for self-esteem than family life, and that their self-concept is associated more often with an inflated sense of one's abilities and a higher degree of optimism. They usually identify with an independent self-construct which values autonomy. International students from collectivistic cultures, however, may encounter fundamental cross-cultural differences in notions of self because collectivism is associated with the need for affiliation, and with the notion that an

individual will place the needs of one's group above one's personal needs. Thus, collectivism encourages and values a view of the individual in interdependent relationships with others. Yeh and Inose (2003) found that for international students from interdependent cultures, connectedness to others and the quality of those connections are essential aspects of their self-identity, values, and ways of interacting as a person. They indicated that for international students experiencing difficulties with adjusting to a new cultural setting, close connections and social support networks can be critical ways of coping and dealing with stress and mental health concerns, especially when they are far away from their families. Their research has demonstrated that cross-cultural differences in self-concept can contribute to the process of adjustment of international students.

Williams (2003) noted that for individuals who endorsed individualism, a sense of personal control was related to less depression, and that the need for freedom and satisfaction with self more reliably predicted overall well-being. They were more likely to attribute the causes of events or behaviors to dispositional factors. However, for individuals who endorsed collectivism, personal control was not related to depression (Williams). Rather, individuals from collectivist cultures tended to attribute causes of events to situational factors, and were found to be more sensitive to embarrassment than people from individualistic cultural backgrounds. Thus, Williams proposed that collectivism is related to socially contextualized or high-context emotions.

Cultures also differ in terms of styles of interpersonal communication. Khoo and Abu-Rasain (1994) noted that international students from different cultural groups may differ in terms of vocal volume, use of eye contact, turn taking in conversation and degree

of directness as well as differing persuasive argument styles. Leong (1993) and Williams (2003) discussed the use of different communication styles in relation to different cultural contexts. For example, people in individualistic or low-context cultures generally prefer goal-oriented and direct communication. In these cultures, confrontation and arbitration often are used for conflict resolution. In contrast, members of collectivistic or high-context cultures tend to prefer indirect communication, relying less on verbal communication than on understanding through shared experience, history, and implicit messages. People in collectivist cultures tend to speak fewer words and place less emphasis upon verbal interactions. Thus, members of these high-context cultures are more attuned to nonverbal cues and messages and prefer accommodation and negotiation in conflict situations. Leong also pointed out that Asian, Native American, Arab, Latino, and African American are examples of high context cultures in which meaning does not have to be communicated through words.

Common Adjustment Issues Faced by International Students

Because they share some characteristics as a group, international students typically encounter academic, personal, and social problems that are directly related to their efforts to adjust to their new culture (Hayes & Lin, 1994). Most significant adjustment issues for the majority of international students are related to language challenges, and adjusting to the U.S. educational system, cultural differences, social interaction, and career development (Olivas & Li, 2006; Wan, 2001).

Language Challenges

One key variable associated with many stressors in educational and sociocultural

domains for international students is overcoming language barriers for those whose first language is not English (Chen, 1999; Mori, 2000). English proficiency has been found to be an important factor in social interaction and adjustment among international students (Hayes & Lin, 1994) as it is a basic and necessary requirement for simple daily living as well as for more complex technical and academic activities, such as working and studying in higher education institutions. Mori indicated that the Test of English as a Foreign Language (TOEFL) is not as accurate a measure of oral comprehension and communication skills as it is of reading skills, and that achieving the minimum TOEFL score for college admission by no means will guarantee sufficient English competency of international students to succeed in U.S. colleges and universities. Mori noted that in educational settings, the lack of proficiency with the English language often has direct negative implications for the academic performance of students and for the teaching performance of graduate teaching assistants. For instance, non-native English speakers may have difficulty understanding class lectures, taking notes, and orally expressing their opinions and asking questions in classes, making them feel reluctant to participate in class discussions. Their classroom behavior may be perceived as passive and shy. Moreover, they often require extra time to complete reading assignments. Lin and Yi (1997) also noted that students who have English as a second language might have difficulty in articulating their knowledge on essay exams or research papers due to their limited vocabulary. It is not surprising that language competency is a critical factor that affects self-concept and self-efficacy in work and study performance (Chen, 1999). International students' ability to develop confidence with their oral and written

communication skills in English is important to curriculum adjustment within the collegiate experience.

International students not only need to acquire academic English to function successfully in their college classrooms, but also must become familiar with idioms and slang that will help them with social interaction (Lacina, 2002). Hayes and Lin (1994) suggested that in social interaction, the inability to speak the host language fluently is a primary inhibitor for international students to becoming socially involved in the host society. In their study, those international students who reported that their use of English was adequate on arrival in the U.S. were significantly better adapted than those who did not. Heggins and Jackson (2003) reported that students with better language competence experienced less discomfort than did students with poor language competence. Similarly, Chen (1999) found that language difficulty not only contributes to inconvenient and awkward situations in daily routines but also may inhibit international students' capacity for social interaction. Studies such as these have demonstrated that lack of competence in the language of the dominant culture can help to create insecurity, confusion, and decreased motivation to communicate with others. Of course, the less international students interact with others, the poorer their social and language skills are likely to become, and the more disconfirmed they feel, all of which creates a negative cycle.

Thus, the more competent international students are in using English, the more confident they may feel in dealing with challenges, the fewer harmful and threatening circumstances they may perceive, and the fewer stressors they may experience in academic pursuit and sociocultural adjustments (Chen, 1999).

Adjusting to a New Educational System

International students can find themselves becoming confused and frustrated as they confront the demands of a new and unfamiliar educational system (Chen, 1999; Heggins & Jackson, 2003; Jacob, 2001; Mori, 2000; Poyrazli & Grahame, 2007). Adjustment difficulties to the American educational systems often are complicated with differences in learning styles and educational objectives (Jacob, 2001). Wan (2001) noted that learning styles are one component of cultural behavioral styles, the habits, values predispositions, and references that develop during an individual's cultural socialization process in childhood. Students with different home cultural backgrounds may have diverse preferences for teaching and learning styles, and therefore may have different perceptions of interactions between professor and students. For example, Poyrazli and Grahame noted that some international students complained about the format of group work used in classroom teaching, believing that it indicated the professors' lack of motivation for teaching. These students also thought that professors were not treated with enough respect by their students based on the way professors and students interacted with one another.

American culture values individuality, competition, independence, and self-expression (Wan, 2001), values that are reflected in the educational system. For example, students are required to engage in independent research and active participation in informal class discussion. Students from more individualistic cultures may not find it difficult to become accustomed to various components of the American educational system. These differences in teaching methodology, however, may affect students from

more collectivistic cultures. Chen (1999) stated that there are values-oriented elements involved in classroom instruction. For example, Asian international students' criticisms of the informality of many American classrooms may suggest some very basic differences in philosophy of education and interpersonal relationships. Contrary to more open and relaxed ways of classroom teaching and learning on North American campuses, Asian educational systems usually follow a professor-providing and student-receiving model. Accordingly, Asian students may feel challenged when they face frequent classroom discussions and student presentations, as many of them have not had the opportunity to develop those skills in a foreign language.

Philosophical and pedagogical differences such as those just described, could influence both international students' adjustment to the learning system and their expectations for success (Chen, 1999). Wan (2001) noted that international students are more likely to have positive academic experiences, however, if they can adapt their learning styles to meet the requirements of the host educational system. Because education is closely related to career development (Ryken, 2006; Thomas, 1993; Wolniak & Pascarella, 2007), it can be assumed that students with positive cross-cultural college experiences would be expected to have positive attitudes toward their career development.

Sociocultural Adjustment

Cultural differences also may play a role in international students' social interactions with the local community outside the campus. Without prior and proper knowledge of the host culture, they may experience varying degrees of cultural shock. For example, Lacina (2002) noted that simple statements such as "Let's get together" and

"How are you doing today?" often are misunderstood and misinterpreted by international students. Although for many Americans, these statements are just a polite way of ending a conversation or greeting another person, miscommunication can result when international students interpret such statements literally, and perceive the lack of follow-up statements as being insincere and superficial. For another example, local residents might perceive international students' showing humility and being modest as unassertiveness or incompetence (Chen, 1999). These kinds of differences in values and lifestyles may help create a "lack of fit" experience for international students in the host society. Prejudices and stereotypes held by members of the host society about students' home countries also might challenge international students' self-identity and self-esteem. For example, Rahman and Rollock (2004) found that perceived prejudice was a significant predictor of depressive symptoms among South Asian international students. As Chen (1999) noted the cross-cultural adjustment process may involve many unknowns and conflicts, and how international students cope with and respond to these culture-shock-related events can impact their daily adaptation to the new sociocultural environment.

Khoo and Abu-Rasain (1994) defined cultural adjustment as a psychological process that focuses on the attitudinal and emotional adjustment of the individuals to the new environment. According to these authors, the adjustment process usually involves three stages. In the first stage, individuals experience the excitement of being in a new and different cultural environment. The second stage is characterized by intense culture shock and confusion as new values, behaviors, beliefs, and lifestyles are encountered. The third stage is the recovery stage when individuals begin to understand, appreciate,

and function more effectively in the new culture.

In studying the cross-cultural adjustment of international students and immigrants, researchers have emphasized the concept of "bicultural competence" as the possible and ideal state of acculturation, where an individual is able to gain competence within two different cultures without losing his or her cultural identity or having to choose one culture over the other (Burnapp, 2006; LaFromboise, Coleman, & Gerton, 1993; Miranda & Umhoefer, 1998; Yeh, 2003; Yoon & Portman, 2004). Researchers such as Miranda and Umhoefer (1998) have found that individuals who maintain their culture and are able to incorporate functional skills from the host culture have psychological resiliency, fit better in the new environment, and accordingly experience less psychological distress. LaFromboise et al. (1993) argued that it is possible for an individual to have a sense of belonging in two cultures without compromising his or her sense of cultural identity. They emphasized the importance of individual characteristics such as self-awareness and the ability to analyze social behavior in the development of bicultural competence. Based on these research findings, it can be inferred that holding positive attitudes toward learning a different culture and becoming actively involved in the host society would enhance individuals' cross-cultural adjustment and result in a lower level of acculturative stress.

Career Development

International students place greater importance on vocational matters (Spencer-Rodgers, 2000). A few studies have been conducted on the career developmental needs of international students. In these studies, researchers mainly examined international

students' career development concerns such as overcoming interview barriers (especially language and cultural barriers), obtaining working experience, dealing with legal requirements, and developing job-search skills. Based on these findings, researchers recommended behavioral interventions and strategies for helping students acquire career related skills to secure employment in the workplace (Bikos & Furry, 1999; Spencer-Rodgers, 2000; Yang et al., 2002).

One important influence on international students' career development is their residency plan. Khoo and Abu-Rasain (1994) stated that at the conclusion of their studies, international students have to decide where to live after their graduation, either in their home countries or in the host country. They have to weigh the pros and cons carefully before making a final decision. Mori (2000) reported that the decision-making process tends to be complicated because it involves not only the students' future career plans but also their sense of identity. The changes that international students have experienced in their social roles and positions and interpersonal relations during their studies in the U.S. have inevitably affected, to varying degrees, their self-concepts as well as their worldviews. Reentry into their home countries may cause "reverse culture shock" for these students as their families and friends typically expect them to be the same as when they left. Helping students develop career and life-planning skills for adjusting to the work environment in either culture will ensure the best future use of their unique and enriching educational experiences in the U.S.

International Graduate Students

The statistics from the Institute of International Education (2007) shows that 45.4%

of international students in the U.S. were enrolled at the graduate level, which was the highest percentage rate among all international enrollments by academic level in the 2006-07 academic year. Trice (2003) noted that a majority of international students at 4-year institutions study at the graduate level, and faculty members generally spend far more time with these students than with undergraduates as they work with them on research projects and teach them in smaller classes. International graduate students generally report greater academic and greater general satisfaction than do undergraduate international students (Hanassab & Tidwell, 2002; Yi, Lin, & Kishimoto, 2003). Like undergraduate international students, international graduate students also need to function in English, cope with a different educational system, adjust culturally, and integrate with American students (Hanassab & Tidwell, 2002; Trice, 2008), and they perceive their main goal as succeeding in academics and future careers (Hanassab & Tidwell).

One issue typically found among international graduate students is their concern over the relevance of the course work to their home country and their future career, and this is especially true with students enrolled in "sociotechnical" disciplines (e.g., public health, social work; Rai, 2002; Trice, 2003; Trice, 2005). Trice (2003, 2005) argued that technical knowledge cannot be fully understood apart from the society in which it will be used. For example, some sociotechnical programs such as public health and architecture include cultural components (e.g., public health policy, architecture design), In Trice's study, international graduate students enrolled in these two programs were found to have concern about whether they would have achieved all of their academic goals when they graduated from the program. Because components of the curricula in these programs

were context specific rather than universal, international students might not be able to easily adapt all they had learned in the U.S. to their foreign work environment. In Rai's (2002) study, international graduate students enrolled in the social work program reported difficulty transferring their learning to the circumstances of their home countries, such as applying the concepts, theories, models and strategies they learned in the U.S. to the societal context of their home country. Students in this study expressed a need for modification in the human behavior sequence, a special course in comparative social welfare policy and a selection of problems in research courses relevant to foreign students.

The above studies indicated that international graduate students are more career oriented. Rose (2005) noted that international graduate students anticipate the need for continued contact with professional colleagues after returning home, and this need reflects not only the desire for intellectual fulfillment but also the practical need for career promotion and enhancement. Thus, it is important to examine how the cross-cultural educational and adjustment experiences would impact their career development.

Positive Coping Strategies

Development of career and life-planning skills involves not only concrete job-search strategies, however, but also the utilization of individual attributes such as self-awareness and a sense of self-efficacy. In one study of international graduate students from non-Western cultures (i.e., Asia, Africa, and South America), Chen (2004) proposed that one's career experiences always co-exist with life experiences. In this sense, career is life, and vice versa. International students' experiences of securing educational and

vocational training in the U.S. also demonstrated the developmental and transformative nature of career. Chen found that an essential component regulating this transitional experience was a sense of individual agency, meaning that international graduate students took ownership of their lives, designed their life career blueprints, and took concrete actions to implement their plans. The most important resource was their high level of self-awareness and a sense of self-efficacy. These two major facets of 'the self,' in combination with other environmental factors such as learning climate can help international graduate students make sense of events and experiences during the cross-cultural adjustment process.

Self-efficacy, including social self-efficacy, was found to be related to international students' adjustment. In a study conducted in Australian universities, Fan and Max (1998) found that international college students reported a lower level of social self-efficacy than Australia-born students. Similarly, international students experienced higher levels of social difficulties and fewer shared interests with people from the host culture compared to Australia-born students.

Leung's (2001) comparison study on the psychological adaptation between internationals and Australian-born students also highlighted the importance of a personal sense of competence and social relationships in students' psychological acculturation and academic satisfaction. These two studies generally indicated that students with higher levels of self-confidence and self-efficacy experienced reduced levels of stress and increased levels of adjustment. However, Constantine, Okazaki, and Utsey (2004) failed to find social self-efficacy as a variable mediating the relationship between acculturative

stress and depression among African, Asian, and Latin American international college students in the U.S. These researchers noted that social self-efficacy, as assessed by an instrument devised and validated on American populations, might be interpreted differently by those students from cultures with a more collectivist orientation.

Given the role of individual agency in the development of international students, it is important to investigate how personal characteristics such as self-motivation and self-awareness affect one's style and quality of coping in the cross-cultural adjustment process.

Khoo and Abu-Rasain (1994) suggested that different personalities would respond differently to new cultures, a view also was taken by other researchers in their studies of international students. According to Poyrazli and Grahame (2007), a students' home culture, perceptions of prejudice and discrimination in the host culture, personality attributes, communication skills in the host language, and positive approach to forming social relationships with the host community are variables relating to their attitudes toward the new culture. These individual attributes made people adopt different adjustment strategies that ultimately result in different adjustment outcomes. Poyrazli and Grahame found that upon arrival to the new country, individual reactions to the host country and culture might vary. While some may perceive it as a challenge to be overcome, and become involved in the new culture, others may feel negative and become hostile and distant or shrink into their shells. Chen (2004) indicated that attributes such as a sense of humor, a sense of humility, an easy-going and open communication manner, and the ability to put things into perspective have assisted international graduate students' adjustment in new environments.

With regard to coping strategies, cognitive and behavioral strategies have been demonstrated by researchers to be effective in dealing with adjustment and other culture-related stress (Kariv & Heiman, 2005; Tseng & Newton, 2002; Winkelman, 1994). Kariv and Heiman (2005) defined coping as constantly changing cognitive and behavioral efforts to manage specific external or internal demands. The authors noted that coping strategies have two primary functions: managing the problem causing stress and governing emotions relating to those stressors. They proposed two proactive coping strategies, namely the task-oriented and emotion-oriented approaches, which have been found to be associated with better adjustment, as reflected in higher self-rated coping effectiveness and less depression. The task-oriented strategy is problem-focused, which involves taking direct action to alter the situation itself and reduce the amount of stress it evokes (e.g., asking for help to handle the problem). In the emotion-oriented strategy, efforts are directed at altering emotional responses to stressors. It also includes attempts to reframe the problem in such a way that it no longer evokes a negative emotional response and elicits less stress (e.g., seeing prejudice from the host society as an opportunity to clarify misunderstandings or stereotypes about ones' home country).

Tseng and Newton (2002) reported that international students used proactive behavioral coping strategies for positive adjustment and maintaining positive well-being. These strategies included making friends and building relationships, asking for help, developing cultural and social contacts, participating in activities to get to know host people and the culture, establishing relationships with advisors and instructors, and improving English proficiency. In this study, students also used cognitive emotion-related

strategies, such as positive reconceptualization of stress-inducing events, to cope with stress. For example, understanding the similarities and differences between one's own culture and the host culture is a significant step toward making the adjustment to study abroad life. Tseng and Newton found that students perceived studying abroad as an experience of expanding individuals' worldview as well as promoting their professional career development for the future. International students in this study also learned to use the tactic of "letting go;" that is, letting a problem or concern go helped them lessen stress and gain well-being.

Winkelman (1994) recommended a social-learning-theory approach that combines cognitive and behavioral strategies as a way of addressing the challenges of culture change. Winkelman noted that although some aspects of culture shock adaptation vary as a function of individuals' characteristics, their intents and needs, and cultural and social contexts of adaptation, there are some universal features of culture shock that require adjustments based on an awareness of the experience, the use of skills for resolving crises, and acceptance that some personal change and behavioral adjustment is fundamental to culture shock resolution and adaptation. According to Winkelman, Adaptation involves understanding the local culture and suspending at least some culturally based reactions to become more tolerant of local culture. This does not require giving up one's identity, values, or culture, but rather that one become bicultural, integrating one's original identity with a new identity created in the context of the new culture.

Other researchers also emphasized positive cognitive and behavioral strategies for international students to achieve successful cross-cultural adjustment. Sun and Chen

(1997) noted that personal attributes, cultural awareness, orientation to knowledge, display of respect, empathy, tolerance of ambiguity, interaction posture and management, and role behavior contribute to intercultural competence. Milhouse (1996) posited that appropriate cross-cultural knowledge (e.g., knowledge of interaction rules, culture-general and culture-specific knowledge, and linguistic aspects), ways of handling emotional challenges (e.g., positive regard, open mindedness) and behavioral skills (i.e., actual behaviors carried out during interpersonal interactions) significantly influence impressions of intercultural communication competence.

In summary, one's attitudes about the new culture and willingness to change are vital for adjustment (Winkelman, 1994). From this review of the literature related to international students and cultural adjustment, it can be concluded that international students who acknowledge the benefits of living in a different culture and have a positive attitude about the learning experiences will demonstrate an awareness of cultural differences and empathy for the culture. To be successful, these international students would make efforts to learn appropriate social behaviors, develop the ability to establish interpersonal relationships, and enhance their language competency in order to communicate effectively with the host community. They also would display understanding of and respect for the host country's cultural norms, basic values, and beliefs. Accordingly, these students may undergo substantial personal changes through cultural adaptation, development of a bicultural identity, and the integration of new cultural aspects into their previous self-concept. These personal changes may involve behavioral transformation (e.g., changing behavior as required by the cultural

context), cognitive development (e.g., acquisition of new knowledge and developing the competency of using that new knowledge), and finally psychological adaptation (e.g., openness to new ideas, beliefs, and experiences and the ability to accept these new conditions). As Winkelman indicated, successful and positive adjustment requires flexibility in dealing with different social systems, which involves learning styles of relating, communicating, reasoning, managing, and negotiating in the host culture.

Effect of Cultural Differences on Acculturation Experiences

Coping practices may be informed or influenced by culturally based worldviews, values, and practices that are rooted in aspects of collectivism and interdependence or individualism and independence (Moore & Constantine, 2005). These cultural values can affect international students' adjustment process (Milhouse, 1996). Researchers show that students who have a predisposition for collectivist values have more difficulty adapting to American culture than students with a predisposition for individualistic values due to the dissimilarity of basic values to the host society (Poyrazli, Kavanaugh, Baker, & Al-Timimi, 2004; Yeh & Inose, 2003).

In assessing variables predicting international students' acculturative stress, Yeh and Inose (2003) reported that lower levels of English fluency, social support satisfaction, and social connectedness were all significant predictors of acculturative stress. In their study, international students from Europe were found to experience less acculturative stress than their counterparts from Asia, Central/Latin America, and Africa. In another study, Poyrazli et al. (2004) found that compared with Europeans, Asian students reported greater acculturative stress. In both studies, researchers attributed results to cultural value

differences among different international student groups. Yeh and Inose noted that because American cultural values have their roots in European norms, international students from Europe may have experienced less of a contrast in cultural patterns of behavior and value systems, thus, allowing for a smoother adjustment in their daily interactions. While European students certainly experienced some differences in terms of cultural values, they may not have been as different as those students from other geographic regions.

Poyrazli et al. (2004) argued that European and American societies encourage independence and individual expression and, thus are fundamentally similar. This similarity of basic values and characteristics is likely to result in European students experiencing a less stressful acculturation process. Conversely, other ethnic groups (e.g., Asian, Latin American, and African) typically hold relatively more communal or collectivistic values (Constantine, Okazaki, & Utsey, 2004). These values are usually considered dissimilar to American and other Western cultures, and that is why students from such societies have been found to experience more acculturative stress due to stark differences in fundamental cultural values (Poyrazli et al., 2004; Yeh & Inose, 2003).

In addition to cultural value differences, researchers found other variables that were related to students' acculturative distress. One example is Poyrazli and Kavanaugh's (2006) study on marital status, ethnicity, academic achievement and adjustment strains among graduate international students. In this study, Asian students were found to experience more overall adjustment strain, more specific strains related to their education and English, and lower levels of English proficiency than European students. Findings

also indicated that students with lower levels of academic achievement reported lower levels of English proficiency and more overall adjustment strain. Other results showed that master's level students reported more strain related to English proficiency and education than doctoral students. Results of this study suggest that English language competency and educational achievement also contribute to better cross-cultural adjustment.

Theory of Self-Efficacy

Bandura (1977, 1986) defined self-efficacy as a person's beliefs regarding her or his ability to successfully perform a particular task. These beliefs are seen as constituting the most central and pervasive mechanism of personal agency (Bandura, 1989). In particular, self-efficacy constructs are postulated as helping to determine one's choice of activities and environments, as well as one's effort expenditure, persistence, thought patterns, and emotional reactions when confronted by obstacles. (Lent, Brown, & Hackett, 1994). Introduced into the career literature by Hackett and Betz (1981), self-efficacy has been found to be predictive of academic and career-related choice and performance indices (Lent et al.). The following descriptions of major theoretical constructs are based on the social cognitive career theory proposed by Lent et al.

Learning Experiences and Self-Efficacy

From a social cognitive view (Lent et al., 1994), self-efficacy is not a passive, static trait, but rather is seen as a dynamic set of self-beliefs that are specific to particular performance domains and that interact complexly with other personal, behavioral, and contextual factors. Lent et al. proposed that self-efficacy beliefs regarding particular

career/academic activities have been found to be related positively to individuals' perceived amount of (a) personal success experiences, (b) exposure to successful models, (c) favorable social-persuasory communications, and (d) positive physiological reactions (e.g., relaxed state) during task performance. Of these four elements, direct, personal performance experiences have been found to account for more variance in self-efficacy beliefs than vicarious, social persuasion, or physiological reaction experiences (Lent et al.). However, the relative effects of the four sources on one's self-efficacy beliefs may depend on how they are patterned within a given learning context. These four types of learning experiences also can form the basis for efficacy-enhancing interventions (Gainor, 2006).

According to Lent et al. (1994), an individual's personal success experiences with a given task tend to raise efficacy estimates, while repeated failures lower them. Lent et al. argued that the actual effect of personal performance experience on self-efficacy depends on several factors, however, such as the variety of conditions under which a task was performed, and the consequences of task performance. For example, stronger self-efficacy beliefs are likely to result from repeated successful task experiences that have been reinforced and performed under conditions of varying challenge (Lent et al.).

Observing similar others' success or failure at a particular activity (vicarious learning) also may affect one's sense of self-efficacy, especially if the individual has had little direct experience upon which to estimate personal competence. Social persuasion can be useful in getting people to attempt or sustain certain behaviors. Physiological state when performing a task may also inform efficacy judgments. For example, feelings of

anxiety, fatigue, or depression during task performance may diminish inferred self-efficacy, whereas feelings of composure, stamina, or exhilaration may enhance perceived task proficiency (Lent et al., 1994).

Personal Factors and Self-Efficacy

Regarding the influence of individual difference variables on self-efficacy beliefs, Lent et al., (1994) proposed that gender and racial/ethnic differences in self-efficacy beliefs are mediated largely by differential access to sources of efficacy information and differential rates of reinforcement for performance accomplishments. Such group differences are reduced when differences in efficacy source experiences and reinforcement are controlled.

Lent et al. (1994) noted that some psychosocial processes might help dictate the development of career-related self-efficacy in persons belonging to particular racial/ethnic groups. First, educational access issues can influence the quality and types of learning experiences one receives, and certain cultures may selectively reinforce particular occupationally relevant activities. For example, Leung, Ivey, and Suzuki's (1994) study on factors affecting the career aspirations of Asian American college students showed that Asian students are encouraged to pursue occupations with high prestige and social recognition as a result of parental and family expectations. Asian American college students are more likely to choose science, engineering, and technical occupations, which are highly valued in the U.S. society with many job opportunities. Second, personal expectations and performance standards, forged through learning experiences, also may blend with social realities to enhance or restrict academic/career

options. Thus, Lent et al. suggested that impediments to career development might stem both from environmental factors (e.g., differential socialization processes may foster differential self-efficacy beliefs in career choice-relevant domains, such as care-giving versus enterprising activities) and from the internalization of these factors. Conversely, beneficial social conditions (e.g., exposure to a wide range of successful role models) can facilitate self-efficacy beliefs in targeted career areas.

Contextual Determinants and Self-Efficacy

Fundamental to the concept of self-efficacy is the importance of environmental or contextual inputs in its development (Lindley, 2006). Lent et al. (1994) postulated that environmental factors influence people's career development. First, environmental features help shape individuals' learning experiences that fuel personal interests and self-cognitions. These features would include, for example, differential opportunities for task and role model exposure; emotional and financial support for engaging in particular activities; and, cultural and gender role socialization processes. Second, environmental influences also play a role when it comes to career decision-making. These environmental influences would include factors such as personal career network contacts and structural barriers, such as discriminatory hiring practices.

In Lent et al.'s (1994) social cognitive theory, both objective environmental features and people's appraisal of those environmental features are important to academic and career behavior. For example, gender role stereotyping may affect a person's career choice goals and their implementation, whether or not this stereotyping is actively perceived by the individual. However, the effect of a particular contextual factor on

career choice behavior also depends on the individual's perceptions of that factor. A study on the career consideration of Hispanic women (Rivera, Chen, Flores, Blumberg, & Ponterotto, 2007) showed that the greater the perceived career barriers (e.g., gender role stereotyping) by Hispanic women, the more likely they are to select female-dominated occupations. Because opportunities, supports, and barriers lie partly in the eye of the beholder, this theory emphasizes a person's active, phenomenological role as the interpreter of contextual inputs.

Self-Efficacy in Cultural Context

Bandura (2002) noted that self-efficacy beliefs regulate human functioning through cognitive, motivational, affective, and decisional processes in different cultural contexts. People's efforts to manage their everyday lives cannot be reduced to polarities that arbitrarily partition human agency into individual and collective forms. Different cultures place emphasis on the modes of human agency rather than exclusively focus on individualism or collectivism.

Bandura (2002) identified three modes of human agency that are important in guiding people's behaviors: 1) personal agency exercised individually, in which people are able to directly affect their own behaviors and environment in managing their lives; 2) proxy agency, in which people secure desired outcomes by influencing others to act on their behalf; and, 3) collective agency, in which people act in concert to shape their future. According to Bandura, these mechanisms of human agency may be emphasized differently in different social systems. For example, an individualistically oriented social system such as U.S. and other European countries emphasize a high sense of personal

efficacy. On the contrary, a collectivistic society such as China and Japan may place an emphasis on the collective efficacy. Beliefs of personal efficacy are the most central and pervasive among these mechanisms of human agency, however, and are valued both in individualistic and collectivistic societies (Bandura).

Bandura (2002) argued personal efficacy and collective efficacy are not antithetical to each other. A sense of personal efficacy is just as important to group-directedness as to self-directedness. Group pursuits are no less demanding of personal efficacy than individual pursuits. Nor do people who work interdependently in collectivistic societies have less need or desire to be efficacious in the particular roles they perform than those in individualistic societies. Personal efficacy is valued, not because of reverence for individualism, but because a strong sense of personal efficacy is vital for success regardless of whether it is achieved individually or by group members putting their personal capabilities to the best collective use. According to Bandura, perceived self-efficacy does not come with a built-in individualistic value system. Therefore, a sense of efficacy does not necessarily spawn an individualistic lifestyle, identity, or morality. If belief in the power to produce effects is put to social purposes, it fosters a communal life rather than erodes it. People with resilient efficacy and strong prosocial purpose often subordinate self-interest to the benefit of others. Bandura held that a sense of collective efficacy is not disembodied from perceived personal efficacy. A collectivistic culture with members plagued by self-doubts about their capabilities to perform their roles would achieve little. Thus, a strong sense of personal efficacy to manage one' life circumstances and to have a hand in effecting societal changes contributes to perceived collective

efficacy to shape their society' social future.

Bandura's (2002) discussion of efficacy beliefs in different cultural contexts indicated the cross-cultural applicability of self-efficacy theory. Indeed, self-efficacy is a construct that has been applied in understanding career development across various populations and environmental contexts (Gainor, 2006). The following review synthesizes the growing body of career development research on variables impacting individuals' career self-efficacy development within different cultural contexts.

Research Studies on Career Self-Efficacy

Gender and Career Self-Efficacy

Gender differences typically have not been found in career decision-making self-efficacy (Arnold & Bye, 1989; Betz et al., 1996; Chung, 2002; Creed et al., 2002; Hampton, 2006; Lindley, 2006). However, Mau (2000) found that among Taiwanese undergraduates, women had lower career decision-making self-efficacy than men. This finding suggests that there might be the interaction effect between gender and culture with regard to career decision-making self-efficacy.

Age and Career Self-Efficacy

Age is another variable that has been found to impact students' career self-efficacy. Creed, Patton, and Watson (2002) reported that significant mean differences of career decision-making self-efficacy existed among Australian high school students, with higher-grade students scored higher on CDMSE-SF (Betz, Klein, & Taylor, 1996) than lower graders did. The differences across school grade among the Australian sample are consistent with the expectations that career decision-making self-efficacy develops as the

child becomes older. In relation to the cross-national comparison, the South African students scored consistently higher than their Australian counterparts. Creed et al. attributed the cross-national differences to the fact that South African students commence school later than Australian students and that the cross-national differences reflect age differences.

Mau (2004) compared career decision-making difficulties experienced by university students with those experienced by high school students. He found that university students reported considerably fewer difficulties in career decision-making than high school students, regardless of race and ethnicity, and suggested that this was a result of career maturity. Because career-related self-efficacy is related to success and satisfaction in making vocational decisions and is predictive of occupational satisfaction (O'Brien, 2003), students experiencing more decision-making difficulties would be expected to report lower career self-efficacy. Thus, it can be assumed that older students with established career maturity should have higher career decision-making self-efficacy than younger students.

Chaney et al.'s (2007) study focused on the use of the Career Decision-Making Self-Efficacy Scale (Betz et al., 1996) with African American college students. This study produced different results regarding the mean differences of career self-efficacy scores between African American and Caucasian college students as compared to previous studies. However, Chaney et al.'s sample also included some nontraditional students who were employed and older than the traditional-age college students. Chaney et al. cautioned that because age might play a role in influencing students' self-efficacy

perceptions, their finding that African American college students had higher career self-efficacy than a previous sample should be considered in the context of this limitation.

Length of Residence and Career Self-Efficacy

Normally, students from higher degree levels are relatively older than those from lower degree levels. For example, Zhou and Santos (2007) found that Ph.D. students experienced significantly fewer career decision-making difficulties than either undergraduates or master's students in a British university sample. Poyrazli and Kavanaugh (2006) noted that international students with lower levels of academic achievement reported lower levels of English proficiency and more overall adjustment strain in the U.S., and that master's level students experienced more strain related to education and English than doctoral students. Poyrazli and Kavanaugh explained that this could be because some doctoral students might have completed their master's degree in the U.S. first and then proceeded into a doctoral program. Therefore, their English might be better, and they might be more familiar with the American educational system and know better how to survive within that system. Shim and Schwartz's (2007) study on adjustment difficulties among Korean immigrants also revealed that as years of living and being educated in the host society increased, cultural adjustment difficulties were less pronounced among this group. Similarly, Miranda and Matheny (2000) observed that longer residence in the U.S. appeared to buffer Latinos against acculturative stress. They argued that time of exposure to a non-native culture leads to increases in the assimilation of skills that are useful in negotiating the requirements of that culture. It is possible that prolonged exposure to non-native cultural practices demystifies them and allows

individuals to assimilate a repertoire of functional behaviors, cognition, and affects (emotions) practiced by the host culture.

Heggins and Jackson (2003) proposed that student learning is connected to the adjustment of the student and his or her overall development, and that international students' collegiate experiences were based on their transition process and their adjustment or development as international students. In Heggins et al.'s study, first and second year international students experienced more difficulties adjusting to collegiate life and communicating with professors than did senior international students. Because college experience has been shown to impact later career development (Ryken, 2006; Thomas, 1993; Wolniak & Pascarella, 2007), it is reasonable to assume that international graduate students with longer residence and positive collegiate adjustment experience would display higher career decision self-efficacy than those with shorter residence and negative collegiate experience.

Residency Plan and Career Self-Efficacy

In discussing the vocational situations of international students, Spencer-Rodgers (2000) noted that international students' career development needs were related to their residency plans (i.e., whether they want to secure employment in the U.S. or in their home countries after they graduate). U.S. focused students had significantly different vocational challenges from return-focused students.

In a study designed to examine the career decision-making of Asian international students studying in Australia, Singer (1993) found that the self-efficacy expectations of male Asian international students were a significant determinant of their desire either to

return to their home country to start their career or to remain in the host society. In this study, students who wanted to pursue employment in their home countries were more influenced by their self-efficacy for achieving career success in their home countries. In contrast, those who intended to work in Australia had greater self-efficacy for functioning in that cultural context. Singer noted that as a result of their socialization experiences with both host and home cultures, Asian international students were likely to attach different values to, as well as form different outcome expectations about, working in the two cultures.

The above research findings suggested that international students' vocational challenges are associated with their residency plans, and that their self-efficacy expectations are predictive of their intercultural career choices. If the cross-cultural adjustment experience is conceptualized as a process of international students overcoming cultural barriers and developing intercultural competence, international students' intentions of working in the host country or in their home countries might reflect their confidence level in handling barriers and challenges in these two different cultures. In addition, their post-graduation career plans might reflect their self-efficacy beliefs about their capabilities in successfully performing career related tasks in either host or home cultures.

Acculturation and Career Self-Efficacy

According to SCCT (Lent et al., 1994), contextual variables (e.g., environmental situation, socialization experiences, acculturation, perceived barriers, role models) can indirectly influence self-efficacy and goals as background variables, as well as directly

influence how decisions are made as proximal variables. In other words, contextual variables influence the formation of individuals' self-efficacy beliefs and their career considerations. Acculturation is one of the most important contextual variables that has been examined in explaining immigrants' vocational behaviors (Black & Stephens, 1989; Hardin, Leong, & Osipow, 2000; Mace, Fletcher, & Carr, 2005; Mau, 2001; Miranda & Umhoefer, 1998; Rivera, Chen, Flores, Blumberg, & Ponterotto, 2007; Smart & Smart, 1995; Tang, Fouad, & Smith, 1999; Zhou & Santos, 2007). The terms acculturation and cross-cultural adjustment sometimes are used interchangeably, due to their overlap (Kagan & Cohen, 1990; Zhou & Santos, 2007). Accordingly, in this study, the terms cultural adjustment and acculturation are used interchangeably to refer to changes in behaviors, cognition, and affect when describing research related to international students' experiences in the host society, and are investigated to determine their possible impact on international students' career decision-making self-efficacy.

Smart and Smart (1995) noted that acculturative stress affects Hispanic immigrants' decision making and their occupational functioning. According to the researchers, people who experience high levels of stress and anxiety during the cross-cultural adjustment tend to see their environment as demanding, frustrating, and challenging, and they tend to narrow the range of options that they perceive as viable. Consequently, acculturative stress may decrease immigrants' ability to cope effectively, and impair their capacity for making decisions with clarity and resolution and carrying them out effectively. Smart and Smart noted that improved psychological functioning has been correlated with improved vocational functioning.

Mace et al.'s (2005) New Zealand study demonstrated that integration acculturation style (i.e., the ability to maintain original cultural identity and characteristics and positive relationships with the host culture) contributed to immigrants' proximity to full employment (i.e., finding a job that matches one's qualifications and experience) and occupational satisfaction. Black and Stephens (1989) also found that positive cross-cultural adjustment experiences were related to American expatriate managers' intention to continue with their overseas assignments. Individuals' affective responses to the international assignment were reflected in their cross-cultural adjustment experiences. Thus, the more these individuals were in favor of the overseas assignment, the better they adjusted to the local culture, and the more they committed to their overseas assignment.

The process of acculturation also affects individuals' self-concept, which is reflected in their career choice, decision-making styles and self-efficacy. Hardin, Leong, and Osipow (2001) argued that acculturation affected how individuals see themselves in relation to others, and that whether individuals adopted an independent self-concept or interdependent self-concept would impact their career choice attitudes. In Hardin et al.'s study, Asian Americans as a group exhibited less mature career choice attitudes than European Americans. However, high acculturation Asian Americans and those with lower interdependence self-concepts did not differ from European Americans in career choice attitudes. These results suggest that acculturation to Western culture is associated not with an increase in independence (or individualistic orientation), but rather with a decrease in interdependence (or collectivistic orientation). Hardin et al.'s study demonstrated that the process of acculturation impacts individuals' self-concept in their vocational development.

In examining the influence of culture on individuals' career decision making, Mau (2000, 2001, & 2004) found significant differences in career decision-making style, career decision-making difficulties, and self-efficacy between U.S. and Taiwanese students, and between Asian American students and students from other ethnic groups in the U.S. In general, Asian American students and Taiwanese students reported greater career decision-making difficulties and lower decision-making self-efficacy than Caucasian American students and students from other U.S. ethnic groups. Mau attributed these results to the differences in cultural value orientation (collectivistic vs. individualistic), which results in different attribution styles. For example, Taiwanese and Asian American students tended to self-criticize and attribute their success to their efforts. This modest thinking might have caused them to give lower ratings on the statements about their ability to perform a given decision-making task. Moreover, they included family and societal expectations in their career considerations, and reported more difficulties with responding to career decision-making questions that focused on individual needs and aspirations. Because career decision-making self-efficacy is positively related to career decidedness, commitment, and vocational identity (Betz et al., 1996; Maples & Luzzo, 2005), greater career decision-making difficulties would be associated with lower self-efficacy in that area. American students, however, who are the products of individual-oriented culture, tended to take credit for their accomplishments and attribute their success to their abilities and talents. Because an individual-oriented culture is more conducive to fostering self-efficacy, American students had a higher decision-making self-efficacy rating. Mau's studies indicated that cultural influences have

social and psychological consequences in the career domain.

When investigating factors influencing Asian Americans' career choices, Tang, Fouad, and Smith (1999) focused on variables of level of acculturation, family socio-economic status (SES), family involvement, occupational interests, and career self-efficacy. The study results supported the propositions that acculturation impacted Asian American college students' self-efficacy, interest, and career choice. In the same study, self-efficacy also was found to be a significant determinant of both career choice and career interests. Interest, however, was not correlated with Asian American students' career choice. Family SES and involvement did not influence students' career self-efficacy.

The impact of acculturation on career self-efficacy also has been examined among Hispanic immigrants. Miranda and Umhoefer (1998) explored acculturation, language use, and a number of demographic variables (e.g., country of origin, years of residence in the U.S., and educational level) as predictors of career self-efficacy in Latino adults. Findings indicated that the best predictors of career self-efficacy for Latinos were acculturation and language use. In other words, results indicated that higher levels of acculturation and greater use of the English language by Latinos may contribute to increased belief in their competence to perform jobs desired, regardless of their educational level, length of residence in the U.S., or age.

Rivera et al. (2007) found that perceived barriers, influence of role models, and acculturation had differential effects on career self-efficacy and career consideration among Hispanic female college students. Perceived barriers were found to be directly

associated with female-dominated career considerations (i.e., consider careers in traditionally female-dominated occupations such as registered nurse, secretary), but seemed to have had no effect on male- or female-dominated career self-efficacy or on male-dominated career consideration (i.e., consider careers in traditionally male-dominated occupations such as airline pilot, chemist). In this study, role model influence was not related to either male- or female-dominated career considerations. However, identifying with the host culture accounted for a significant amount of variance with female-dominated career self-efficacy but not with male-dominated career self-efficacy. These findings suggest that the greater the perceived barriers to certain career by Hispanic women, the more likely they are to select female-dominated occupations. Thus, acculturation factors may differentially influence the self-efficacy for and selection of male- and female-dominated careers for Hispanic women.

The above review of career development research provides support for the argument that acculturation as a contextual factor influences individuals' career self-efficacy. Given that individuals' acculturation process takes place along three dimensions (behavioral, cognitive and affective/psychological (Kagan & Cohen, 1990; Marino, Stuart, & Minas, 2000), it is important to examine the impact of each of these three dimensions on individuals' career self-efficacy. An individual's engagement in the acculturative process and status will affect their attitudes, values, and beliefs in different ways (Rivera et al., 2007). Changes in identity, values, behaviors, cognitions, and attitudes in the acculturation process often engender acculturative stress (Miranda & Matheny, 2000). How individuals handle changes in behavior, cognition, and emotion

would be expected to affect their acculturation outcome, which, in turn, would impact their career self-efficacy.

Personal Changes in Acculturation

Social cognitive theory (Lent et al., 1994) postulated that personal mastery experiences and some psychosocial processes dictate the development of career-related self-efficacy in persons of particular racial/ethnic groups. Acculturation is a process of culture learning and behavioral adaptation that takes place when individuals are exposed to a new culture (Miranda & Umhoefer, 1998). Previous studies demonstrated that successful acculturation experiences result when individuals are actively engaged in the cultural learning process and use positive cognitive and behavioral strategies to maintain positive well-being (Milhouse, 1996; Sun & Chen, 1997; Tseng & Newton, 2002; Winkelman, 1994). These cultural learning experiences usually involve cognitive, behavioral, and emotional changes (Winkelman). Because the process of acculturation influences individuals' career self-efficacy (Miranda & Umhoefer, 1998; Rivera et al., 2007; Tang et al., 1999), their personal learning experiences in this process, together with changes in behavior, cognition, and emotion associated with their learning, also will impact their self-perception in career development.

Behavioral adaptation. In investigating the experience of international graduate students from non-Western cultures pursuing counseling degrees in Canada, Chen (2004) found that students' initial living and working experiences appeared to have an impact on students' career decision-making process. Students' willingness and flexibility to accept change and their proactive efforts to engage in and adapt to their professional learning

experience in a cross-cultural context contributed to their growth in general, and the enhancement of self-awareness regarding their life career direction in particular. These results supported one of the study's theoretical perspectives of career development, which is that one's career experiences always co-exist with life experiences.

In their examination of international student teaching experiences, Mahon and Cushner (2002) noted that successfully overcoming barriers and developing functional skills that enabled international students to live and work effectively in a new and different cultural setting enhanced students' self-efficacy in dealing with life adjustment, and in developing their future careers as teachers. The more that students involved themselves in the traditions, government, and way of doing things in the new culture, the more they learned. In the study, the overseas teaching experiences had given students an opportunity to face their personal anxieties and test their own limitations. Students reported the growth of self-confidence and esteem, increased adaptability, resourcefulness, independence, and persistence. The new learning experience also caused some cognitive changes in these international student teachers as they changed their beliefs about self and others, and became more tolerant of differences.

Cognitive development. Studies have demonstrated the benefits of cognitive development as a result of positive cross-cultural adjustment experience (Mahon & Cushner, 2002). Chen (2004) identified several cognitive factors such as internal development of self-awareness and self-understanding, and sense of personal drive as essential in international students' career decision-making processes. For example, the acquisition of professional knowledge and skills in counseling among international

graduate counseling students went hand-in-hand with the enhancement of their language capacity in English, which became one of the key issues in their life career development (Chen, 2004). Increased language proficiency not only contributed to fewer communication difficulties and improved interpersonal interactions, but also was associated with fewer acculturative stressors among Eastern Asian immigrant youths (Yeh, 2003). Shim and Schwartz's (2007) study showed that the number of years of education in the host society influenced Korean immigrants' cognitions, perceptions, worldviews, and values in addition to their behaviors. As these international students had more contact with Western educational systems, their degree of adjustment difficulties decreased.

These studies have demonstrated that the development of language skills and cultural knowledge contributed to international students' and immigrants' bicultural competence (Yeh, 2003), and enabled them to operate more effectively in the host culture. Bandura (1993) noted that self-efficacy is influenced by acquisition of skills, and that a major goal of formal education is to equip students with the intellectual tools, self-beliefs, and self-regulatory capabilities to educate themselves throughout their lifetime. Because education will influence career development (Ryken, 2006; Thomas, 1993; Wolniak & Pascarella, 2007), international graduate students' expansion of knowledge and competencies should also positively impact their career self-efficacy.

Psychological functioning. Brown, George-Curran, and Smith (2003) proposed that career commitment and decision-making might be more than just a cognitive exercise. They argued that affect, in addition to cognition, is a critical determinant in career choice

and behavior. In examining the role of affective tendencies and capabilities in the development of career decision-making self-efficacy in U.S. college students, Brown et al. found that students who indicated greater ability to understand other people, to express their emotions, and to self-regulate their feelings were more likely to report greater confidence in their ability to handle career decision-making tasks. These findings suggest that level of psychological functioning is an important factor in college students' career development.

Arnold and Bye (1989) found that some psychological self-concepts (e.g., sex-role self-concept) were important in increasing career decision-making self-efficacy among British undergraduate students. These psychological self-concepts are those associated with individuals' psychological functioning. Students with healthy psychological functioning achieved higher scores on the Career Decision-Making Self-Efficacy (CDMSE) scale, whereas students with dysfunctional self-concepts scored lower on the CDMSE (Betz et al., 1996).

In exploring career uncertainty perceived by college students in Taiwan, Tien, Lin, and Chen (2005) emphasized the importance of psychological adjustment in helping students deal with career barriers and uncertainties. In their study, psychological types of adjustment included increasing cognitive awareness and task approach skill exploration. Students were found to benefit from developing positive psychological attitudes such as tolerance for ambiguity, resilience, and openness toward new experiences. Because greater certainty about one's choice and outlook regarding one's vocational future is associated with greater confidence in ability to complete career decision-making tasks

(Brown et al., 2003), improving students' psychological adjustment would seem to better prepare them to cope with career-related barriers and uncertainties, and therefore, enhance their career self-efficacy. It seems reasonable then that students who maintain psychological resiliency and achieve a positive psychological adjustment in the acculturation process would be expected to score higher on measures of career decision-making self-efficacy.

In examining how behavioral and values acculturation affected cultural adjustment problems among Korean immigrants living in a Western host country, Shim and Schwartz (2007) found that a combination of variables such as behavioral and values acculturation, together with years of living and being educated in the host country, significantly predicted immigrants' increased cultural adjustment difficulties. Values acculturation was found to be the most influential variable impacting cultural adjustment difficulties. When controlling for the influence of the other factors, however, behavioral acculturation alone was not significantly correlated with adjustment difficulties. These findings indicate that acquiring new functional skills (i.e., behavioral acculturation) in order to succeed in the dominant society might not adequately reduce Korean immigrants' adjustment problems. Results of this study supported the contention made by prior researchers (Marino et al., 2000) that behavioral and values dimensions are separate aspects of the acculturation experience. Results also implied that a model combining all dimensions of acculturation (behavioral, cognitive, and psychological) might more accurately describe individuals' cross-cultural adjustment experience, and that identifying with the host culture' s value system (i.e., psychological acculturation) will be more influential in predicting

individuals' adjustment outcomes than other acculturation dimensions. Therefore, it is important to assess all dimensions of acculturation simultaneously when studying international graduate students' adjustment processes.

Summary

The preceding review of literature indicated that no research has been conducted that investigates the influence of international graduate students' acculturation experiences on their career decision-making self-efficacy. This study intends to fill this gap in the literature. Because acculturation experiences have been found to impact individuals' career self-efficacy, and there are cultural group differences (i.e., individualistic vs. collectivistic) on cross-cultural adjustment experiences, it is expected that there will be differences in levels of career self-efficacy among different cultural groups. Students with positive acculturation experiences should report higher career decision-making self-efficacy, while students experiencing acculturative stress would be expected to have lower career decision-making self-efficacy. Based on previous research, age and length of residence of international graduate students would also seem like critical variables to examine in terms of their impact on career self-efficacy. In addition, variables such as students' gender, residency plan, and academic major will be examined to see whether they have any relationship with international graduate students' career self-efficacy. The study also will address the roles that overall acculturation, as well as behavioral, cognitive, psychological acculturation individually play in predicting international graduate students' career decision-making self-efficacy, and investigate the differences on international graduate students' Behavioral, Cognitive, and Psychological

Acculturation experiences (i.e., each of the three subscales of ISAQ) across the gender (i.e., male and female) and cultural groups (i.e., individualistic vs. collectivistic).

CHAPTER III

METHODOLOGY

This methodology section is divided into the following subsections: (1) Research Questions and Hypotheses; (2) Sample; (3) Instrumentation; (4) Procedures; (5) Data Analysis, (6) Pilot Study, (7) factor analysis of ISAQ, and (8) Discussion and Implications for the Main Study.

Research Questions and Hypotheses

In order to investigate the impact of the cross-cultural adjustment experiences of international graduate students on their career decision-making self-efficacy, three hypotheses were tested. These hypotheses are grounded in previous cross-cultural studies.

Research Question 1: Is there a significant mean difference in career decision-making self-efficacy (as measured by total scores on the CDMSES - SF) among international graduate students from different cultural groups?

Hypothesis 1: International graduate students from individualistic cultures will have higher mean total scores on the CDMSE - SF than students from collectivistic cultures.

Research Question 2: Is there a significant mean difference in overall acculturation experiences (as measured by total scores on the ISAQ) among international graduate students from different cultural groups, and between male and female students?

Hypothesis 2: International graduate students from individualistic cultures will have higher mean total scores on the ISAQ than students from collectivistic cultures, and no

gender differences will be found on students' overall acculturation experiences.

Research Question 3: Do international graduate students' age and overall acculturation experiences significantly predict their career decision-making self-efficacy (as measured by the CDMSES - SF)?

Hypothesis 3: International graduate students' age and overall acculturation experiences will be significantly positively predictive of their overall career decision-making self-efficacy (as measured by the CDMSE – SF). Specifically positive overall cross-cultural adjustment experiences are predicted to be related to higher career decision-making self-efficacy, and older students will report higher career decision-making self-efficacy than younger students.

No specific hypotheses were generated regarding the relationships between students' demographic variables such as gender, length of residence, residency plan, academic majors, cultural group and career decision-making self-efficacy due to inconsistent findings or lack of such research in prior studies. Rather, the following research question was addressed:

Research Question 4:What are the relationships between students' gender, length of residence, residency plans, academic majors, cultural group and their overall career decision-making self-efficacy?

Sample

The target population for this study included international graduate students pursuing graduate degrees in the U.S. Participants were international graduate students who held student visas and were enrolled in the researcher's university. The number of

participants needed for this study was determined by comparing this study's sample size to past sample sizes used in similar research studies, which have typically ranged from 95 to 197. Among research studies whose sample sizes were compared included studies that (a) examined career decision-making difficulties of British and Chinese international university students (Zhou & Santos, 2007; N= 195); (b) investigated acculturation, language use, and demographic variables as predictors of the career self-efficacy of Latino adults (Miranda & Umhoefer, 1998; N= 95); (c) predicted the acculturative stress experienced by Latino adults from socio-psychological factors (Miranda & Matheny, 2000; N= 197); (d) explored the effects of perceived barriers, role models, and acculturation on the career self-efficacy and career consideration of Hispanic women (Rivera, Chen, Flores, Blumberg, & Ponterotto, 2007; N= 131), and (e) examined how levels of acculturation, family background, and self-efficacy influenced Asian Americans' career choices (Tang, Fouad, & Smith, 1999; N= 187).

Given the sample sizes in the comparative studies above, it appears that a sample size of 150 to 200 would provide sufficient power to test the current hypotheses. To confirm the necessary sample size to test research hypotheses, a preliminary power analysis using the software *GPower 3.0* (Faul, Erdfelder, Lang, A & Buchner, 2007) was calculated. The analysis indicated that 150 to 200 participants are needed for a moderate effect size in order to attain an adequate power level of .80 for a two-way ANOVA analysis with two independent variables, each with two levels, and for a linear regression analysis with six predictor variables.

Instrumentation

A questionnaire package was distributed to students enrolled in the researcher's university. The questionnaires were offered in electronic version through an online survey database. The package consisted of three sections.

Demographics. The first section is a demographics section, where participants were asked to indicate their age group, gender, visa type, nationality, length of residence in the U.S., academic major, degree level, and their residency plan (i.e., whether they plan to secure employment in the U.S. or in their home countries after graduation).

International Students Acculturation Questionnaire (ISAQ) was created for this study to measure international graduate students' level of cross-cultural adjustment to the U.S. culture. Three dimensions of acculturation (i.e., behavior, cognitive, affective) are reflected in the questionnaire. In order to develop items, previous studies on this topic were examined. For example, Kagan and Cohen (1990) created a 15-item *The Acculturation Questionnaire* to assess the level of cultural adjustment of international students to the host culture on three separate dimensions: (a) behavioral, (b) cognitive, and (c) affective. The reliability coefficient alpha for the total questionnaire was .49 (n=155). Items were written based on a "native-extinction, host-association model" of cultural adjustment. According to Kagan and Cohen, international students managed either by maintaining or letting go of their national culture in light of conflicting cultural values.

The proposed study was based on the multidimensional models of acculturation (Rahman et al., 2004). However, the focus here is on developing competence to function

in the host culture rather than the extinction of the native culture. From this theoretical perspective, international students function within the host culture and within their culture of origin, requiring them to gain bicultural competence (Burnapp, 2006; LaFromboise et al, 1993; Miranda et al., 1998; Yeh, 2003; Yoon et al., 2004). Ten items were written for each dimension (i.e., Behavioral Acculturation, Cognitive Acculturation, Affective/Psychological Acculturation) to assist in developing internal consistency reliability. Responses are obtained using a 5-point Likert-type scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Scale scores are computed by summing responses to each scale's items, with the total score being the sum of the three subscale scores. Each subscale yields a score ranging from 10 to 50. Higher scores on the total scale and on each individual subscale correspond with positive global cross-cultural adjustment experience, and positive acculturation experiences in each different area.

Behavioral Acculturation is related to cultural learning and the adoption of the most observable, external aspects of the dominant culture including language, social skills, and the ability to "fit in" or negotiate the new sociocultural reality (Marino, Stuart, & Minas, 2000). These questions tend to examine whether students are engaged actively in cultural learning activities. Examples of items on this scale include "I am very involved with social activities in college," and "I watch American TV shows and movies." Cognitive Adjustment is represented by language use and knowledge development. These items investigate students' cognitive change as a result of being engaged in cultural learning behaviors. Examples of items include "I can express myself well in English" and "I have learned professional knowledge and skills from studying in my

academic programs in the U.S." Affective Acculturation is a more complex process, and it involves feelings toward the host culture and the degree of agreement with the defined norms, basic values, ideologies, beliefs, attitudes, and preferences of most of the group. These items explore students' degree of acceptance of American values and beliefs. Sample items include "I have become used to American ways of communication" and "I have become used to enjoying the American holidays." In this study, both the overall score and scores on each of three subscales were used to analyze international graduate students' cross-cultural adjustment experiences.

Reliability analyses were conducted on the ISAQ for the overall scale and three individual subscales using SPSS. A point-biserial correlation was calculated to assess the consistency of measurement among items within each construct (e.g., behavioral construct).

Career Decision-Making Self-Efficacy Scale – Short Form (CDMSE – SF). This instrument measures individuals' confidence in their ability to successfully complete tasks related to making career decisions (Betz, Klein, & Taylor, 1996). The CDMSE – SF contains 25 items that cover five domains of career choice competence proposed by Crites (1961). These five domains (subscales) include Self-Appraisal (SA), Occupational Information (OI), Goal Setting (GS), Planning (PL), and Problem Solving (PS). Each subscale consists of 5 items that are rated on a Likert-type confidence scale, ranging from 1 (no confidence at all) to 5 (complete confidence). Scale scores are computed by summing the responses to each scale's items, and the total score is the sum of the five scale scores. Higher total scores correspond with higher self-efficacy expectations with

regard to career decision-making tasks.

Validity of the CDMSE-SF was evaluated initially using American college students (Betz et al., 1996). It was found to be negatively correlated with the Career Decision Scale (CDS) that measures career indecision, and positively correlated with My Vocational Situation (MVS) that measures individuals' vocational identity with higher scores indicating clear vocational identity. Correlations were statistically significant and of moderate size. When the CDS Indecision scale was compared to the CDMSE-SF, correlations were -.63 for females (n= 103) and -.48 for males (n=81); and for the MVS Identity scale, correlations were .63 for females (n=103) and .48 for males (n=81). The significance level was .001. This validity study demonstrated that the CDMSE-SF does measure the construct of career decision-making self-efficacy.

Several studies have supported the reliability of the CDMSE -SF. Betz et al. (1996) found the alpha for the 25-item total CDMSE - SF was .94. Results of several additional studies have indicated that the CDMSE-SF is a reliable instrument when used with American college students (Betz & Voyten, 1997; Brown, George-Curran, & Smith, 2003; Chaney et al., 2007; Chung, 2002), and with college students and adults in mainland China (Hampton, 2005), England (Arnold & Bye, 1989), Israel (Gati et al., 1994), and Taiwan (Mau, 2000). When the instrument was administered in countries where English is not the official language, it was translated into the official native language used in these countries such as Chinese (Hampton, 2005; Mau, 2000) and Hebrew (Gati et al., 1994). Coefficient alphas for the 25-item total CDMSE –SF ranged from .91 to .94 across these studies. Thus, the validity and reliability results from several studies with different

populations support psychometric adequacy of the short-form of the CDMSE.

In addition, the CDMSE - SF has been used with international students in the U.S. and found to have high levels of internal consistency with Chronbach's alphas ranging from .94 at pretest to .82 at posttest (Bikos & Furry, 1999). Taken together all of the aforementioned study results indicated that the CDMSE - SF, as a total scale, is a valid and reliable instrument in measuring career self-efficacy of college students from different cultures.

Values of internal consistency reliability coefficient Cronbach's alpha were reported by Betz et al. (1996) as .73, .78, .83, .81, and .75 for Self-Appraisal (SA), Occupational Information (OI), Goal Setting (GS), Planning (PL), and Problem Solving (PS), respectively. In subsequent studies, however, researchers failed to find the five distinct theorized factors with college and high school samples in the U.S. and other countries (Chaney, Hammond, Betz, & Multon, 2007; Creed, Patton, & Watson, 2002; Gati, Osipow, & Fassa, 1994; Hampton, 2005; Hampton, 2006). Many items in the instrument had high loadings on several factors, indicating that the CDMSE - SF might be most appropriately used as a generalized measure of self-efficacy for career decision-making. Accordingly, in the current study, only the overall CDMSE – SF score was used.

Procedures

Participants were recruited through international students' e-mail listserv at the researcher's university. The researcher contacted the Office of International Students on campus and asked them to forward email messages and online survey web address to international graduate students on the campus.

The study was announced in an electronic mail (e-mail) message, which briefly explained the purpose of the study and assured participants of the confidentiality and anonymity of their responses. Individuals interested in participating were directed to an address on the World Wide Web (www) where they could access the online survey.

Participants were shown informed consent information on the first page of the website that explains that participation in this research study is entirely voluntary and confidential. No identifying information is collected. Completion of the online materials indicates their consent to participate. Participants were informed that they might download or print a copy of the consent form to keep.

All questionnaires were written in English. Items on the ISAQ were specifically developed for international students whose native languages are not English. Items were written in such a way that non-native English speakers, who possess appropriate levels of English proficiency to study at graduate schools in the U.S., would be able to appreciate the meaning of the items. The CDMSE – SF had been used with international students in the U.S., and had demonstrated high levels of internal consistency (Bikos & Furry, 1999). All participants were officially enrolled at graduate schools in the U.S., which only accept students with appropriate levels of English ability. Thus, administering questionnaires in English appeared to be adequate and appropriate for the participants in the current study.

Duplicate online surveys were identified using the date, time, origin of submission, and inspection of the survey data for identical responses (Heppner & Heppner, 2004). Data that was complete and marked as a second set from each pair of duplicate online

surveys was eliminated from the data set. A “validity check” item was included in the online surveys to reduce the chances of including incorrect data in the final analyses. The item “Please do not respond to this item” was added to survey questions to identify individuals who were either inattentive or randomly responding to survey items. Data from participants who incorrectly responded to this item were not analyzed.

Data Analysis

For hypothesis 1, an independent sample t-test was used to examine cultural group differences of career decision-making self-efficacy (CDMSE - SF). Independent variables were students’ cultural groups (e.g., individualistic vs. collectivistic). Dependent variable was students’ overall scores on the CDMSE – SF. For hypotheses 2, two-way ANOVA analysis was conducted to examine cultural group and gender differences of overall acculturation experiences (ISAQ). Independent variables were students’ cultural groups (e.g., individualistic vs. collectivistic) and gender. Dependent variable was students’ overall scores on the ISAQ. For hypotheses 3 and research question 4, first, correlation analysis was conducted to see the relationship between students’ length of residency and their overall career decision-making self-efficacy score (CDMSE -SF). Second, one multiple regression analysis was computed to explore if students’ age, gender, major, residency plan, students’ overall acculturation, and cultural group were significantly positively predictive of their CDMSE – SF scores. Students’ age, gender, major, residency plan, overall ISAQ scores, and cultural group were predictor variables, and their overall CDMSE - SF score was the criterion variable. The multiple regression analysis also demonstrated which variable might be the most important variable out of all

six variables in predicting international graduate students' overall career decision-making self-efficacy.

The research questions, hypotheses, variables of interest, and analyses are presented in *Table 1* below:

Table 1
Research Questions, Hypotheses, Variables of Interest, Data Analysis

Hypothesis	**Variables**	**Analysis**
Research Question 1: Is there a significant mean difference in career decision-making self-efficacy (as measured by total scores on the CDMSES - SF) among international graduate students from different cultural groups?		
Hypothesis 1: International graduate students from individualistic cultures will have higher mean total scores on the CDMSE - SF than students from collectivistic cultures.	**Independent:** Cultural groups **Dependent:** CDMSE total score	Independent Sample T-Test
Research Question 2: Is there a significant mean difference in overall acculturation experiences (as measured by total scores on the ISAQ) among international graduate students from different cultural groups, and between male and female students?		
Hypothesis 2: International graduate students from individualistic cultures will have higher mean total scores on the ISAQ than students from collectivistic cultures, and no gender differences will be found on students' overall acculturation experiences.	**Independent:** Gender Cultural groups **Dependent:** ISAQ total score	Two way ANOVA
Research Question 3: Do international graduate students' age and overall acculturation experiences significantly predict their career decision-making self-efficacy (as measured by the CDMSES - SF)?		

Continued

Research Question 4: What are the relationships between students' gender, academic majors, length of residence, residency plans, cultural group and their overall career decision-making self-efficacy?		
Hypothesis 3: International graduate students' age and overall acculturation experiences will be significantly positively predictive of their overall career decision-making self-efficacy (as measured by the CDMSE – SF). Specifically positive overall cross-cultural adjustment experiences are predicted to be related to higher career decision-making self-efficacy, and older students will report higher career decision-making self-efficacy than younger students.	Length of residence (ratio) CDMSE total score (ratio) **Predictor:** age, gender major residency plan ISAQ total score Cultural Group **Criterion:** CDMSE total score	Correlation analysis Multiple regression analysis

Pilot Study

Pilot study participants were solicited through contacting international graduate students using a listserv at the researcher's university. The purpose of the pilot study was to investigate readability and reliability for instruments used in this study, and to identify any issues with items written on the *International Students Acculturation Questionnaire*. Forty international graduate students participated in the pilot study. Among these 40 students, 18 were males, and 22 were females. The mean age of the pilot group was 28. 24 students were enrolled in master's programs. 15 students were enrolled in Ph.D. programs, and 1 person was in a post-doctoral research program. 80% of the pilot participants were from Asia, followed by European 15%, and Africa 5%. The demographic description of the pilot study sample is presented in *Table 2*.

Table 2
Demographic Description of the Pilot Study Sample (N = 40)

Variable	Mean	N	%
Age	28		
Gender			
Female		22	55
Male		18	15
Place of Origin			
Bosnia		2	
China		22	
France		1	
Japan		1	
Kenya		2	
Norway		1	
South Korea		2	
Taiwan		6	
Turkey		2	
Vietnam		1	
Asia		32	80
Europe		6	15
Africa		2	5
Degree Level			
Master		24	60
Ph. D.		15	37.5
Post Doctoral		1	2.5

The SPSS analysis results demonstrated moderate to higher reliability for the *International Student Acculturation Questionnaire* (ISAQ) with Alpha = .94, Standardized item alpha = .95. The mean of item variances was .66, indicating moderate item discriminating ability. The estimated reliability coefficient for the behavioral scale was α = .85, for cognitive scale was α = .92, and α = .80 for the affective scale. The correlation between the behavioral scale and cognitive scale was 0.64, between behavioral and affective scales 0.54, and between cognitive and affective scales 0.77.

The point-biserial correlation (i.e., corrected item total correlation) for each item

ranged from .26 (item 26) to .75 (item 12). The inter-item correlation within behavioral scale was $\overline{r_1} = .37$, within cognitive scale was $\overline{r_2} = .55$, and within affective scale was $\overline{r_3} = .32$. These results demonstrate that the entire instrument is appropriately measuring international students' acculturation experiences.

The SPSS analysis results also showed higher reliability for *Career Decision Making Self-Efficacy - SF* (CDMSE - SF) with Alpha = .95, Standardized item Alpha = .96. *Table 3* and *4* present the pilot study instrument descriptive statistics and reliability coefficients. *Table 5* presents the ISAQ subscale reliability coefficients and correlations among the three subscales.

Table 3
Pilot Study Instrument Descriptive Statistics (N = 40)

Instrument	M	SD	# of items
International Student Acculturation Questionnaire (ISAQ)	3.99	.87	30
Career Decision-Making Self-Efficacy Short-Form (CDMSE - SF)	3.94	.84	25

Table 4
Pilot Study Instrument Reliability Coefficients (N = 40)

Instrument	Alpha	Standard Alpha	Mean of Item Variances
ISAQ	.94	.95	.66
CDMSE - SF	.95	.96	.69

Table 5
ISAQ Subscale Reliability Coefficients (N= 40)

	Behavioral	Cognitive	Psychological/Affective
Behavioral	.85		
Cognitive	.64**	.92	
Psychological/Affective	.54**	.77**	.80

* Reliability coefficients for each subscale on the diagonal.
** Correlation is significant at the 0.01 level (2-tailed).

Factor Analysis of ISAQ

A principle component analysis was conducted to examine the components underlying the 30 items on the ISAQ. SPSS analysis results indicate 7 components with eigenvalues of 1.0 or higher were extracted. These 7 components explain 75% of variance in all the items on the instruments. A varimax rotation was used to minimize the number of variables which have high loadings on each of the 7 components, and therefore to improve the interpretability of the components. The rotated component matrix (see *Table 6*) exhibits four interpretable components.

Component 1, accounting for 40.7% of the total variance, mainly measures students' cognitive development as a result of their study abroad experience. This component included item 16 "I am able to express different opinions," item 15 "I have learned professional knowledge and skills from studying in my academic programs in the U.S.," item 12 "I understand English very well," item17 "I can understand American jokes," item 13 "I can express myself well in English in conversation," item 28 "I am willing to understand others' points when there is miscommunication," item19 "I am able to identify differences between values of my home country and American cultural values," item 18 "I understand American cultural values," item 25 "I am respectful of the religions in the U.S," item 24 "I have become used to American ways of communication," item 20 "I can identify cultural limitations of my worldview as a result of my study-abroad (i.e.,

study in the U.S.) experiences," and item 8 "I read English newspaper, magazines and/or books."

Component 2 investigates students' social interaction with the host culture, and whether they are engaged in the cultural learning process (8.6% of the total variance). It comprised item 4 "I am very involved with social activities in college," item 2 "I socialize with Americans," item 5 "I participate in social activities organized by the local community and/or other organizations," item 3 "I make friends with Americans," and item 1 "I meet as many people, and make as many friends as I want to."

Component 3 seems to measure students' attitudes toward the host culture, and norms (6.6% of the total variance). It comprised item 7 "I watch American TV shows and movies," item 29 "I enjoy the cultural learning opportunities that my study abroad experience has provided," item 30 "I am comfortable to 'trying on' other points of views with the increase in cultural awareness, "and item 22 "I am comfortable with the dress code (e.g., how people dress in different situations) emphasized in this country."

Component 4 mainly asks about whether students are actively participating in the educational experiences (5.7% of the total variance). This component included item 6 "I attend classes regularly," item 11 "I am motivated to learn new knowledge and skills," item 10 "I work hard at my course work," and item 9 "I participate in class discussions."

With four components and 25 items (after deleting items 21, 14, 23, 26, and 27), SPSS analysis still exhibits high reliability coefficient Alpha = .94, Standardized item Alpha = .95 for the sample size of 40.

Table 6
Items, Component Loading, Communality Estimates for International Students Acculturation Questionnaire (N= 40)

Item	Component Loading	Communalities h^2
Component 1: cognitive development (12 items)		
ISAQ16.I am able to express different opinions.	.773	.742
ISAQ15 I have learned professional knowledge and skills from studying in my academic programs in the U.S.	.735	.834
ISAQ12.I understand English very well.	.715	.867
ISAQ17 I can understand American jokes.	.670	.759
ISAQ13 I can express myself well in English in conversation.	.655	.755
ISAQ28 I am willing to understand others' points when there is miscommunication.	.625	.764
ISAQ19 I am able to identify differences between values of my home country and American cultural values.	.601	.677
ISAQ18. I understand American cultural values.	.568	.641
ISAQ25. I am respectful of the religions in the U.S.	.555	.605
ISAQ24. I have become used to American ways of communication.	.545	.608
ISAQ20 I can identify cultural limitations of my worldview as a result of my study-abroad (i.e., study in the U.S.) experiences.	.538	.745
ISAQ8 I read English newspaper, magazines and/or books.	.538	.708
Component 2: behavioral learning, social interaction with the host culture (5 items)		
ISAQ4 I am very involved with social activities in college.	.844	.828
ISAQ2. I socialize with Americans.	.703	.761
ISAQ5. I participate in social activities organized by the local community and/or other organizations.	.700	.668
ISAQ3. I make friends with Americans.	.699	.717
ISAQ1. I meet as many people, and make as many friends as I want to.	.681	.783
Component 3: attitude toward host culture (4 items)		
ISAQ7. I watch American TV shows and movies.	.810	.745
ISAQ29. I enjoy the cultural learning opportunities that my study abroad experience has provided.	.753	.732
ISAQ30. I am comfortable to "trying on" other points of views with the increase in cultural awareness.	.509	.722
ISAQ22. I am comfortable with the dress code (e.g., how people dress in different situations) emphasized in this country.	.504	.676

Continued

Component 4: education experiences (4 items)		
ISAQ6. I attend classes regularly.	.846	.836
ISAQ11. I am motivated to learn new knowledge and skills.	.736	.802
ISAQ10. I work hard at my course work.	.695	.719
ISAQ9. I participate in class discussions.	.516	.775

Discussion and Implications for the Main Study

Data obtained from the pilot study suggested that the *International Students Acculturation Questionnaire* and *Career Decision-Making Self-Efficacy Short- Form* are appropriate measures

of the constructs examined in the study, and could be used in the main study to examine international graduate students' cross cultural adjustment experiences and their impact on their self-efficacy in making career related decisions.

The results from the reliability analysis on the *International Students Acculturation Questionnaire* did not show the clear pattern of three separate subscales. The data indicated that three construct-based scales have high correlations with one another, while the inter-item correlations among items within each construct are relatively low. These results indicated that the instrument might be appropriately used as a generalized measure of international graduate students' cross culture adjustment experiences.

The findings from the principle component factor analysis on the instrument of *International Students Acculturation Questionnaire* demonstrated four interpretable components. However, item loadings on these four components did not correspond to the hypothesized three-factor item loadings. For the main study, 25 items were used to investigate students' acculturation experiences as they had high and interpretable loadings

on the respective four components.

CHAPTER IV

RESULTS

The purpose of this study was to explore the impact of international graduate students' cross cultural adjustment experiences on their career decision-making self-efficacy. In this chapter, the results of the study are presented. Demographic data describing the sample, descriptive statistics, and reliability coefficients for all the instruments are provided. Finally, results of the analyses used to examine the research questions and hypotheses are presented.

Description of the Sample

Participants were recruited through international student listserv at the researcher's university. In order to obtain adequate response rates, three email announcements were sent out by the International Students Office. A total of 213 students participated in the study. Among these 213 participants, 2 students did not finish the survey, 18 were enrolled in the undergraduate programs, 1 person was enrolled in the short-term research program, 1 person was post-doctoral research fellow, and 1 person did not indicate the degree level. All other participants were enrolled at graduate level. Thus, 190 surveys were used in final analyses. Among these 190 students, 95 (50%) were males, and 95 (50%) were females. In terms of the degree level, 108 (56.8%) students were enrolled in master's programs, and 82 (43.2%) students were enrolled in Ph.D. programs. As for the place of origin, 163 (85.8%) of the participants are from Asia, followed by Africa 13

(6.8%), European 6 (3.2%), Latin America 5 (2.6%), Middle East 1 (0.5%), and Oceania 1 (0.5%). Thus, 182 of the participants were from the collectivistic group (i.e., Africa, Asia, Middle East, Latin America), while 7 participants were from the individualistic group (i.e., Europe and Oceania).

Of the 190 total participants, 163 (85.8%) indicated that they had F1 degree-seeking student visa, 11 (5.8%) had J1 exchange student visa, and 13 (6.8%) indicated they had other types of visa. In addition, 144 (75.8%) participants indicated that they would like to gain work experience in the U.S. before going back to their home countries; 40 (21.1%) participants indicated that they would like to pursue career in their home countries; 2 (1.1%) participants indicated they would work in other countries (i.e., neither home country nor U.S.); 2 (1.1%) participants indicated "undecided or unknown," and 2 (1.1%) participants did not indicate their residency plan. The mean age of the sample was 27. The average length of residency for the participants was 28 months. The demographic description of the sample is summarized in the *Table 7*.

The total sample was used to assess the reliability of the instruments used in this study. Cronbach's α was computed as a measure of internal consistency for the total scale. The two instruments demonstrated good evidence of reliability (ISAQ α =.93; CDMSE – SF α =.94).

Table 7
Demographic Description of Main Study Sample (N = 190)

Variable	N	%
Gender		
Female	95	50
Male	95	50
Degree Level		
Master	108	56.8
Ph. D.	82	43.2
Place of Origin		
Asia	163	85.8
Africa	13	6.8
Europe	6	3.2
Latin America	5	2.6
Middle East	1	0.5
Oceania	1	0.5
Missing/Refusal Data	1	0.5
Visa Type		
F1	163	85.8
J1	11	5.8
Other	13	6.8
Missing/Refusal Data	3	1.6
Residency Plan		
Work in the U.S.	144	75.8
Work in the home country	40	21.1
Work in other countries	2	1.1
Don't know/undecided	2	1.1
Missing/Refusal data	2	1.1

Variable	Minimum	Maximum	Mean	Std. Deviation
Age	18	46	27.18	4.21
Length of Residency	1	150	28.02	24.80

Research Questions and Hypotheses

The primary purpose of this study was to examine the impact of international graduate students' acculturation experiences on their career decision-making self-efficacy. To answer this general question, four research questions and three hypotheses were developed. The results of the statistical analyses used to examine these questions and

hypotheses are presented here.

Research Question 1/Hypothesis 1

Research question 1 explored the mean difference in career decision-making self-efficacy (as measured by total scores on the CDMSES - SF) among international graduate students from different cultural groups (i.e. individualistic vs. collectivistic). To test this question, hypothesis 1 proposed that international graduate students from individualistic cultures will have higher mean total scores on the CDMSE - SF than students from collectivistic cultures.

An independent sample t-test was computed comparing the mean difference of CDMSE – SF for international graduate students from two cultural groups. Levene's test for equality of variances supported the assumption that two independent groups have approximately equal variance on the dependent variable. As hypothesized, a significant difference was found between international graduate students from these two cultural groups ($t_{(187)} = -2.572$, $p < .05$). The international graduate students from individualistic cultural groups reported higher mean scores on CDMSE – SF ($M = 108.71$, $SD = 14.99$) than international graduate students from collectivistic cultural groups ($M = 94.82$, $SD = 13.99$). *Table 8* and *9* present the descriptive statistics and t-test analysis results.

Table 8
Means and Standard Deviations of CDMSE –SF Total Scores by Cultural Group

	N	**Mean**	**SD**	**Mini.**	**Maxi.**
Collectivistic (Africa, Asia, Middle East, Latin America)	182	94.82	13.99	53	125
Individualistic (Europe & Oceania)	7	108.71	14.99	84	125
Missing/refusal data	1				
Total	190	95.28	14.22		

Table 9
Independent Sample T-Test on Mean Difference of CDMSE Total Score

		t-test for Equality of Means				
		T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
CDMSETOT	Equal variances assumed	-2.57	187	.011	-13.90	5.40

Research Question 2/Hypothesis 2

The second hypothesis used to test research question 2 proposed that international graduate students from individualistic cultures will have higher mean total scores on the ISAQ than students from collectivistic cultures, and no gender differences will be found on students' overall acculturation experiences.

A two-way ANOVA analysis was conducted comparing the mean scores of ISAQ for international graduate students from two cultural groups and between males and females. As hypothesized, a significant difference for cultural groups was found ($F_{(1, 185)} = 5.643$, $p < .05$, $\eta^2 = .030$). Students from individualistic cultural group had higher mean total scores on ISAQ ($M = 109.86$, $SD = 14.55$) than students from collectivistic group ($M = 97.30$, $SD = 12.80$). However, no significant difference was found between the male and female groups ($F_{(1, 185)} = .019$, $p > .05$, $\eta^2 = .000$). Finally, the interaction between gender and cultural groups was also not significant ($F_{(1, 185)} = .079$, $p > .05$, $\eta^2 = .000$), which means gender did not contribute to the mean score difference on the ISAQ within cultural groups. Thus, it appears that gender difference does not have any significant impact on students' acculturation experiences. *Table 10* presents the descriptive statistics of ISAQ total scores by gender and cultural groups. *Table 11*

presents the two-way ANOVA analysis results.

Table 10
Descriptive Statistics of ISAQ Total Scores by Gender and Cultural Groups

Gender	Cultural Group	Mean	SD	N
Male	Collectivistic	97.7	13.94	89
	Individualistic	109.2	15.42	5
	Missing/Refusal Data			1
	Total	98.31	14.17	95
Female	Collectivistic	96.91	11.68	93
	Individualistic	111.5	17.68	2
	Total	97.22	11.89	95
Total	Collectivistic	97.3	12.8	182
	Individualistic	109.86	14.55	7
	Missing/Refusal Data			1
	Total	97.76	13.05	190

Table 11
Two-Way ANOVA Analysis

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Eta Squared	Observed Power[a]
GENDER	3.19	1	3.19	.019	.890	.000	.052
CULTUREG	942.75	1	942.75	5.643	.019	.030	.657
GENDER * CULTUREG	13.16	1	13.162	.079	.779	.000	.059
Error	30909.42	185	167.08				
Corrected Total	32008.29	188					

a. Computed using alpha = .05

Research Questions 3 & 4/Hypothesis 3

The research questions 3 and 4 examined whether international graduate students' demographic variables and their overall cross cultural adjustment experiences would influence their career decision-making self-efficacy. No specific hypotheses were generated regarding the relationships between students' demographic variables such as gender, length of residence, residency plan, academic majors, cultural group, and career

decision-making self-efficacy due to inconsistent findings or lack of such research in prior studies. However, based on the literature review, hypothesis 3 was created to test the relationship between students' acculturation experiences and their career decision-making self-efficacy. This hypothesis proposed that international graduate students' age and overall acculturation experiences would be significantly positively predictive of their overall career decision-making self-efficacy (as measured by the CDMSE – SF). That is positive overall cross-cultural adjustment experiences are predicted to be related to higher career decision-making self-efficacy, and older students will report higher career decision-making self-efficacy than younger students.

First, Pearson product-moment correlation analysis was used to see whether the variable length of residence is significantly correlated with students' career decision-making self-efficacy. The SPSS analysis results showed that these two variables were weakly correlated (r = .089), and the correlation was not significant (p >.05). International graduate students' length of residence in the U.S. is not related to their career decision-making self-efficacy. The Pearson correlation coefficient is presented in the following *Table 12*.

Table 12
Pearson Product-Moment Correlation Analysis

		LENGTHMO	CDMSETOT
LENGTHMO	Pearson Correlation	1.000	.089
	Sig. (2-tailed)		.225
	N	186	186
CDMSETOT	Pearson Correlation	.089	1.000
	Sig. (2-tailed)	.225	
	N	186	190

Second, a multiple linear regression analysis was performed between the dependent variable (CDMSE – SF overall scores) and the independent variables (ISAQ total score, major, age, gender, residence plan, and cultural group) to see which variable might be the most important variable out of all six variables in predicting international graduate students' overall career decision-making self-efficacy. Analysis was performed using SPSS regression.

A normal probability plot of residuals was examined to test the assumption of normality. No violation of normality was detected. In addition, the collinearity diagnostics were performed. The statistics (i.e. tolerance and VIF) and the correlation analysis on the 6 predictor variables indicated that multicollinearity might not be an issue. *Table 13* shows the correlations among the 6 predictor variables. Variables of gender, cultural group, major and residency plan were dummy coded, and used as dichotomous independent variables in the multiple linear regression analysis.

Table13
Correlation Analysis on Six Predictor Variables

	Age	Gender	Cultural Group	Major	Residency Plan	ISAQ Total Score
Age	1.000					
Gender	.013	1.000				
Cultural GROUP	.070	-.085	1.000			
Major	.096	.205**	.220**	1.000		
Residency Plan	.164*	-.026	.102	-.051	1.000	
ISAQ Total Score	-.007	-.036	.182*	.236**	-.098	1.000

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

A significant regression equation was found ($F_{(6, 174)} = 36.335$, $p < .001$), with an $R^2 = .556$, and adjusted $R^2 = .541$. This indicated that 54% of the variance of the CDMSE total score could be explained by the combination of six predictor variables (i.e., ISAQ total score, major, age, gender, residence plan, and cultural group).

In terms of individual relationships between the independent variables and the dependent variable, only ISAQ total score ($t = 13.529$, $p < .001$) significantly predicted international graduate students' career decision-making self-efficacy, with standardized beta .719. Other independent variables such as age ($t = 1.105$, $p > .05$), gender ($t = 1.226$, $p > .05$), academic major ($t = .407$, $p > .05$), residence plan ($t = -.601$, $p > .05$), and cultural group ($t = 1.052$, $p > .05$) did not significantly predicted students' self-efficacy in their career decision-making. *Table 14* displays the unstandardized regression coefficients (B), intercept, and standardized regression coefficients (Beta) for each predictor variable.

Table 14
Regression Analysis – Coefficients[a]

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	6.914	8.195		.844	.400
	Age	.201	.182	.057	1.105	.271
	Gender	1.813	1.478	.064	1.226	.222
	Major	.635	1.560	.022	.407	.684
	ResiPlan	-1.067	1.776	-.031	-.601	.549
	ISAQTotal	.781	.058	.719	13.53	.000
	Cultural Group	4.110	3.909	.056	1.052	.294

Continued

	95% Confidence Interval for B		Correlations		
	Lower Bound	Upper Bound	Zero-order	Partial	Part
(Constant)	-9.260	23.088			
Age	-.158	.560	.088	.083	.056
Gender	-1.105	4.731	.030	.093	.062
Major	-2.444	3.715	.231	.031	.021
ResiPlan	-4.572	2.438	-.092	-.045	-.030
ISAQTotal	.667	.895	.738	.716	.683
Cultural Group	-3.604	11.825	.189	.079	.053

a. Dependent Variable: CDMSETOT

Factor Analysis of ISAQ

A factor analysis was performed using 190 samples to investigate the components underlying the 25 items on the ISAQ (i.e., after deleting items 14, 21, 23, 26, & 27). SPSS analysis results indicate 5 components with eigenvalues of 1.0 or higher were extracted. These 5 components explain 65% of variance in all the items on the instruments. The rotated component matrix (see *Table 15*) exhibits four interpretable components. Component 5 was deleted because it only includes two high, and interpretable loadings (i.e., items 7 and 8), and therefore was not included in the analysis. Component 3 includes the 5 same items as displayed in component 2 in the pilot study, measuring students' behavioral learning, social interaction with the host culture. Component 4 includes 4 same items as displayed in the component 4 of the pilot study, assessing students' education experiences. Component 1 includes 6 items, investigating students' cognitive development as a result of their study abroad experiences. Component 2 includes 8 items, and seems to assess international graduate students' affective/psychological acculturation.

Table 15
Items, Component Loading, Communality Estimates for International Students Acculturation Questionnaire (N = 190)

Item	Component Loading	Communalities h^2
Component 1: cognitive development (6 items)		
ISAQ12.I understand English very well.	.784	.762
ISAQ13 I can express myself well in English in conversation.	.757	.734
ISAQ17 I can understand American jokes.	.707	.671
ISAQ18. I understand American cultural values.	.660	.660
ISAQ16. I am able to express different opinions.	.659	.655
ISAQ15 I have learned professional knowledge and skills from studying in my academic programs in the U.S.	.479	.561
Component 2: affective/psychological acculturation, attitude toward host culture (8 items)		
ISAQ30. I am comfortable to "trying on" other points of views with the increase in cultural awareness.	.795	.684
ISAQ29. I enjoy the cultural learning opportunities that my study abroad experience has provided.	.762	.646
ISAQ28 I am willing to understand others' points when there is miscommunication.	.658	.645
ISAQ22. I am comfortable with the dress code (e.g., how people dress in different situations) emphasized in this country.	.607	.609
ISAQ25. I am respectful of the religions in the U.S.	.590	.473
ISAQ19 I am able to identify differences between values of my home country and American cultural values.	.519	.594
ISAQ20 I can identify cultural limitations of my worldview as a result of my study-abroad (i.e., study in the U.S.) experiences.	.502	.445
ISAQ24. I have become used to American ways of communication.	.473	.499
Component 3: behavioral learning, social interaction with the host culture (5 items)		
ISAQ4 I am very involved with social activities in college.	.872	.785
ISAQ5. I participate in social activities organized by the local community and/or other organizations.	.773	.658
ISAQ3. I make friends with Americans.	.742	.724
ISAQ1. I meet as many people, and make as many friends as I want to.	.736	.684
ISAQ2. I socialize with Americans.	.731	.736
Component 4: education experiences (4 items)		
ISAQ10. I work hard at my course work.	.853	.781
ISAQ6. I attend classes regularly.	.807	.722
ISAQ11. I am motivated to learn new knowledge and skills.	.631	.669
ISAQ9. I participate in class discussions.	.551	.570

A reliability analysis was conducted on the ISAQ with 23 items and 190 samples. The SPSS results showed high standardized item alpha (.924) for the entire instrument, and high standardized alpha for each component, with .883 for component 1, .857 for component 2, .872 for component 3, and .808 for component 4. *Table 16* displays the descriptive statistics of the 4 components, and *Table 17* shows the component reliability and correlations.

Table 16
Descriptive Statistics for ISAQ Components (with 23 items & N = 190)

	Mean	**Std. Deviation**	**N**
Component 1	3.83	.68	190
Component 3	4.06	.54	190
Component 2	3.48	.82	190
Component 4	4.26	.68	190

Table 17
ISAQ Component Reliability and Correlations

Instrument	**Alpha**	**Standard Alpha**	**N of Items**	**Mean of Item Variances**
ISAQ	.921	.924	23	.743
	Component 1	Component 2	Component 3	Component 4
Component 1	.883			
Component 2	.648**	.857		
Component 3	.461**	.394**	.872	
Component 4	.545**	.517**	.322**	.808

* Reliability coefficients for each component on the diagonal.
** Correlation is significant at the 0.01 level (2-tailed).

As shown in the *Table 17*, the reliability of each component is high, and correlations among the four components are relatively low. So a second multiple regression was performed to see whether each component would significantly predict international graduate students' career self-efficacy, with the four components as independent

variables, and students' total score on the CDCMSE – SF as the dependent variable.

Again, a significant regression equation was found ($F_{(4, 185)} = 54.476$, $p < .001$), with an $R^2 = .541$, and adjusted $R^2 = .531$. This indicated that 53% of the variance of the CDMSE total score could be explained by the combination of four components, which is consistent with the results from the first regression analysis that international graduate students' overall acculturation scores significantly predicted their career decision-making self-efficacy.

In terms of individual relationships between the four components and the dependent variable, component 1 (i.e., cognitive development, $t = 4.288$, $p < .001$, standardized beta = .310), Component 2 (i.e., psychological acculturation, $t = 3.501$, $p < .05$, standardized beta = .239), and Component 3 (i.e., behavioral learning and social interaction with the host culture, $t = 5.026$, $p < .001$, standardized beta = .285) each significantly predicted international graduate students' career decision-making self-efficacy. Component 4 (i.e., students' educational experiences, ($t = 1.397$, $p > .05$) did not significantly predict students' self-efficacy in their career decision-making. *Table 18* displays the unstandardized regression coefficients (B), intercept, and standardized regression coefficients (Beta) for each component variable.

Table 18
Regression Analysis of Four Components on ISAQ – Coefficient [a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	20.027	5.740		3.489	.001
	Component 1	1.087	.254	.310	4.288	.000
	Component 2	.780	.223	.239	3.501	.001
	Component 3	.993	.198	.285	5.026	.000
	Component 4	.455	.326	.087	1.397	.164

Continued

	95% Confidence Interval for B		Correlations		
	Lower Bound	Upper Bound	Zero-order	Partial	Part
(Constant)	8.703	31.350			
Component 1	.587	1.587	.645	.301	.214
Component 2	.340	1.219	.598	.249	.174
Component 3	.603	1.383	.550	.347	.250
Component 4	-.187	1.098	.474	.102	.070

a. Dependent Variable: CDMSETOT

Summary

The results of this study were presented by providing a description of the sample and descriptive statistics as well as reliability coefficients for each instrument. Based on these findings, it was determined that the ISAQ and the CDMSE –SF were appropriate assessments of international graduate students' acculturation experiences and their career decision-making self-efficacy. Independent sample t-test and ANOVA analyses supported the hypotheses that international graduate students from individualistic culture demonstrated higher self-efficacy in making career-related decisions, and also reported higher acculturation scores than students from collectivistic group. However, no significant gender difference was found on students' overall cross culture adjustment experiences. Pearson product-moment correlation analysis did not exhibit significant correlation between students' length of residence and their career decision-making self-

efficacy. Finally, a multiple linear regression analysis demonstrated that student's overall acculturation experiences were significant predictors of their career self-efficacy. In Chapter 5, the results are discussed, potential limitations are outlined, and implications for the counseling field and recommendations for future research are presented.

CHAPTER V

DISCUSSION

In chapter 4, the results of the study investigating the impact of international graduate students' acculturation experiences on their career decision-making self-efficacy were presented. In this chapter, a brief overview of the study is provided, the results are discussed, and limitations of the study are outlined. In addition, implications for the counseling field, and areas for future research are discussed.

Overview of the Study

This study was designed to explore the impact of international graduate students' acculturation experiences on their career decision-making self-efficacy. It also was designed to examine differences in career decision-making self-efficacy among international graduate students from different cultural groups (individualistic vs. collectivistic), and to compare students' acculturation experiences between individualistic and collectivistic cultural groups, and between male and female students. Participants were graduate level international students enrolled at the researcher's university. The online survey procedure was used to ensure participants' confidentiality. A total of 213 students participated, and 190 surveys were used in the analyses. Participants completed two instruments in order to assess the variables of interest: acculturation experiences and career decision-making self-efficacy. The two instruments included the International Students' Acculturation Questionnaire, which was created by the researcher to assess

international graduate students' cross culture adjustment experiences, and the Career Decision-Making Self-Efficacy Short – Form (Betz, Klein, & Taylor, 1996) to assess students' confidence level in accomplishing career-related tasks. In both pilot and main studies, the two instruments demonstrated high estimates of reliability, and therefore, were used in testing research questions and hypotheses.

After data collection, Cronbach's α was computed as a measure of internal consistency for each instrument. To determine if any differences on career decision-making self-efficacy existed based on cultural group, an independent sample t-test was conducted with cultural group as the independent variable and the score on the CDMSE – SF as the dependent variable. To examine the mean differences in overall acculturation experiences among international graduate students from different cultural groups, and between male and female students, a two-way ANOVA was calculated with cultural group and gender as the independent variables, and the score on the ISAQ as the dependent variable. A Pearson product-moment correlation was computed to assess whether students' length of residence is significantly correlated with their career self-efficacy. Finally, a multiple linear regression was conducted to examine the extent to which international graduate students' demographic variables such as age, gender, academic major, residency plan, cultural group, and their overall acculturation experiences in the host society predicted their career self-efficacy.

Overall, the results of statistical analyses supported the hypothesis that acculturation is a significant predictor of career self-efficacy. Further, significant differences in mean scores of career self-efficacy and acculturation experiences were

found based on cultural group with students from individualistic culture having higher mean scores than students from collectivistic culture. A discussion of the results of specific research questions and hypotheses follows.

Discussion of the Results

It was hypothesized that international graduate students from individualistic cultures would have higher mean total scores on the CDMSE - SF than students from collectivistic cultures. Results of the independent sample t-test supported this hypothesis. This result is consistent with previous studies in the literature. According to Social Cognitive Career Theory (Lent, Brown, & Hackett, 1994), contextual variables influence the formation of individuals' self-efficacy beliefs. Acculturation is one of the most important contextual variables that have been found to impact immigrants' career self-efficacy (Mau, 2000, 2001, & 2004; Miranda & Umhoefer, 1998; Rivera, Chen, Flores, Blumberg, & Ponterotto, 2007; Tang, Fouad, & Smith, 1999). It was also found that there are cultural group differences on acculturation experiences, and that students who have a predisposition for collectivist values have more difficulty adapting to American culture than students with a predisposition for individualistic values due to the dissimilarity of basic values to the host society (Poyrazli, Kavanaugh, Baker, & Al-Timimi, 2004; Yeh & Inose, 2003). These results demonstrated that international graduate students from individualist culture were more confident in accomplishing tasks and making decisions in the career domain than students from collectivistic groups.

The test of differences in acculturation experiences based on cultural group was significant, as expected, with students from individualistic cultures having higher mean

scores on the ISAQ. However, the effect size of the test is rather small ($eta^2 = .036$). Effect size implies the proportion of variance observed in the dependent variable (i.e. ISAQ total score) that can be explained by considering group level. Only 3.6% of the difference on ISAQ total score can be attributed to the cultural group factor. Although it is statistically significant, it is not practically significant because of the small effect size. The effect size in this case indicates that the mean differences on ISAQ total score between these two cultural groups are extremely small. The power value for cultural group is moderate (power = .657). Because power is the probability of a correct rejection, it can be concluded that the rejection of null hypothesis in considering of cultural group factor based on the test is 66% correct. This actually corroborates the hypothesis test. This result confirmed previous research findings that cultural group differences affect acculturation experiences, and that cultural values play a significant role in students' acculturation process (Milhouse, 1996; Poyrazli et al., 2004; Yeh & Inose, 2003).

The two-way ANOVA analysis also tested gender differences in terms of overall acculturation experiences. No significant mean differences were found between males and females regarding their cross cultural adjustment experiences. In the literature, no study has been conducted on influences of gender on acculturation experiences of international graduate students.

In terms of the relationship between students' length of residence and their career self-efficacy, the Pearson product-moment correlation analysis did not display significant correlation between these two variables. In fact, the correlation coefficient was rather small ($r = .089$). In the literature, however, researchers have found that longer residence

in the host country helps individuals better cope with the cultural adjustment difficulties (Miranda & Matheny, 2000; Shim & Schwartz, 2007) as the time of exposure to a non-native culture leads to increases in the assimilation of skills that are useful in negotiating the requirements of that culture (Miranda & Matheny). Because acculturation has been found to impact individuals' career self-efficacy (Mau, 2000, 2001, & 2004; Miranda & Umhoefer, 1998; Rivera et al, 2007; Tang et al., 1999), it is reasonable to expect a significant correlation between students' length of residence and their career decision-making self-efficacy. The non-significant findings could be explained by the proposition of Social Cognitive Career Theory (Lent et al., 1994) that learning experiences impact individuals' self-efficacy beliefs. What students have learned in the acculturation process might be more important than how long they have stayed in the host country.

The study demonstrated evidence of a significant predictive relationship between overall acculturation experiences and career decision-making self-efficacy. However, age was not found to be a significant predictor of students' career self-efficacy. This result is not consistent with previous research findings that age impacts students' career self-efficacy, and that older students with established career maturity would report higher career decision-making self-efficacy than younger students (Creed, Patton, & Watson, 2002; Mau, 2004). Gender was not a significant predictor of students' career self-efficacy, which is consistent with previous studies that gender differences typically have not been found in career decision-making self-efficacy (Arnold & Bye, 1989; Betz et al., 1996; Chung, 2002; Creed et al., 2002; Hampton, 2006; Lindley, 2006). Students' academic major, residency plan, and cultural group are new variables that have not been examined

in the previous studies. In this study, these variables were not found to be significant predictors of students' career self-efficacy.

A factor analysis of International Students Acculturation Questionnaire in the main study with 190 samples revealed four interpretable components that assess students' cognitive development, psychological acculturation, behavioral learning and their educational experiences in the host country. A second multiple regression analysis indicated that cognitive development, psychological acculturation, and behavioral learning components significantly predicted students' career self-efficacy. Thus, in addition to students' overall acculturation experiences, their cognitive development, psychological adjustment, and social interaction with the host society also was found to impact their confidence level in making career related decisions.

Overall, results of this study provide evidence of a predictive relationship between acculturation and career decision-making self-efficacy in the sample of international graduate students. These results, however, should be examined within the context of the current study's limitations.

Limitations

Results of the current study provide insight into the relationship between acculturation and career self-efficacy among international graduate students. The results, however, should be viewed in light of limitations in the research design and of the current sample.

One potential problem with survey research is that respondents can be inclined to provide socially desirable responses to questions, which will introduce measurement

error in the analysis and reduce the reliability of responses. To combat the potential problems associated with this type of measurement error, some strategies were adopted. The survey was self-administered online. With online survey, there is no possibility that respondents would be reluctant to provide answers to some questions out of fear of being discovered, as may happen with face-to-face survey interview. In addition, respondents were reminded of the confidential nature of the survey in the beginning online informed consent. As a result, respondents were more open to answer questions given this sufficient assurance of anonymity.

Survey instruments were administered in English. It was assumed that participants had reasonable English proficiency to be able to read the online instructions and complete the instruments. It remains unknown whether the English language ability of this sample is an accurate reflection of the English language skills of the target population.

Another limitation is the unbalanced sample used in the analysis. Of all the 190 participants in the final analysis, only 7 are from individualistic cultures, while the other 182 are from collectivistic groups. The small sample size in the individualistic group did not provide much variance in the final measure. Even though significant mean differences were found between these two groups of international students on their overall acculturation experiences and career self-efficacy, the results may not be representative of the general international graduate student population in the U.S.

A convenience sampling procedure was used for this pilot study, and participants were selected based on ready availability. A major limitation of this sampling procedure is that there is no guarantee how representative the resulting data will be for the

population as a whole. This approach, however, was helpful for generating data that could help with modifying questions, thereby improving the instrument's reliability. The convenience sampling procedure was also used in the dissertation study. Since it is a nonprobability method, the generalization of the study results to the target population will be limited. However, the study results will yield some important information on factors impacting international graduate students' self-efficacy in their career development.

Implications

The current study provides empirical support for the relationship between acculturation and career decision-making self-efficacy. The results provide evidence that a sizable portion (54%) of the variance in international graduate students' career self-efficacy was explained by their overall cross culture adjustment experiences. Other demographic variables such as age, gender, students' academic major, their cultural group, and residency plan did not predict students' career self-efficacy. These findings suggest that some internal variables related to the process of change in students' knowledge, attitudes, cultural beliefs and values (e.g., personality factors, prior work experience, and support system in host culture) might help to explain the remaining 46% of variance. Results also indicated that students who have positive acculturation experiences are more likely to report higher self-efficacy in making decisions regarding future career development. Furthermore, a second regression analysis showed that international graduate students' behavioral, cognitive learning and their psychological acculturation would significantly impact their career decision-making self-efficacy.

These findings that students' learning experiences are more important in influencing their career development have implications for counselors and other helping professionals in working with international graduate students on their career concerns.

The International Programs Center probably is the first office that international graduate students would contact once they arrive on campus. College counselors should consider collaborating with the International Programs Center to offer support groups for international graduate students to share their cross-cultural adjustment concerns. Based on students' concerns, counselors could develop psychoeducational workshops to address their concerns, providing international graduate students opportunities to learn the educational and social systems, which will help students mediate and better cope with acculturative stress. Helping students learn about the principles and practices of the American educational system would better assist them in making academic transitions and developing effective study skills (Mori, 2000). Aspects of the new educational system could include norms in the classroom, the interaction between students and professors, academic credits, grading scales, class participation, and presentations. Once the students get familiar with the educational system in general, they can assess their academic strengths and weaknesses, and develop effective skills in time and stress management.

Workshops also can be focused on social skill training. Counselors can coach and model effective behaviors, and help students understand the meaning of certain behavior in the host culture. On the basis of this understanding, students are taught practical skills

and apply what they have learned from counseling to deal with daily routines. The purpose is to improve and enhance their social ability and skills in the host society.

Second, from a career intervention perspective, counselors could provide practical, up-to-date career and occupational information, including part-time and full-time employment and internship opportunities. Students may also find it helpful if the career counselor can provide some information about employer policies toward international employees (collected from previous international students who have successfully secured employment in the U.S.) and, discuss possible cultural barriers in the work place to help students adjust to the U.S. organizational culture.

Career counselors could consider offering career exploration groups for students to share career information and their experiences with securing employment in the U.S. The group could consist of individuals who are at a similar stage in their career counseling process, and this similarity would help foster group cohesion. For example, the counselor could use the interpretation of career assessment results to facilitate students' learning about themselves. Group members would be encouraged to give each other positive and constructive feedback, and students would be encouraged to highlight their strengths in the job application. The group also can be a good way for students to network with each other and build friendship outside the group, which could be a support system for them. Career counselors could model and expose students to individuals who have attained success in career decision-making, and who demonstrate the process of career exploration, decision making, and implementation, helping students build networks of people (including someone in the client's social network) who are supportive and facilitative of

their career choices and plans, and help reduce the effects of perceived barriers and environmental influences.

Another thing that career counselors could do is to educate students about INS rules and regulations regarding their work permit. For students who want to go back to their home countries, reentry preparation will prepare them for reverse cultural shock (i.e., being judgmental about their home countries). The information covered in the workshop could help students prepare for workplace transitional issues.

Bandura (1986) proposed that individuals' learning experiences would impact their self-efficacy beliefs regarding the ability to successfully perform a specific task. Drawing on this proposition, interventions that are designed to facilitate students' learning of academic, social, career and life-planning skills would benefit students in their later career development, and enhance their self-efficacy in coping with career related challenges. Universities and colleges should also consider evaluating the effectiveness of their cultural integration programs and activities offered to international students so that they could improve the services to help students better adjust to the host society.

Future Research

Results of this study provide additional support for the psychometric qualities of the CDMSE – SF, and demonstrate that the ISAQ is an appropriate measurement for assessing international graduate students' cross culture adjustment experiences. However, the factor analysis on the ISAQ displayed four components rather than three subscales (i.e., behavioral, cognitive, and affective/psychological acculturation) as proposed in the literature. Future research should consider modifying the items on the subscales.

The results indicated that students from individualistic cultures reported higher career self-efficacy and acculturation scores than students from collectivistic groups. However, the sample from the individualistic group is rather small ($N = 7$), and the effect size for the test is small. Even though the test is statistically significant, it is not practically significant, and may not make any practical difference. More students from individualistic group should be recruited in the future study to improve the strength of the relationship between cultural groups and career self-efficacy and acculturation score.

Summary

This study examined the impact of international graduate students' acculturation experiences on their career decision-making self-efficacy. 190 international graduate students were recruited from the researcher's university via the international students' listserv. The data were analyzed using independent sample t-test, ANOVA, correlation, multiple linear regression, and factor analyses. The results supported the hypothesis that acculturation would impact international graduate students' career self-efficacy, and that differences would exist in mean scores of acculturation and career self-efficacy based on the level of cultural group. It did not support previous research findings that age was a variable that impacted individuals' career self-efficacy beliefs.

Findings suggest that acculturation experiences would impact international graduate students' career development. Implications for the counseling practice include the interventions designed to help students build academic, social and career skills, which would then impact their confidence in the job search process.

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APPENDIX A

CONSENT FORM

Page

UNIVERSITY OF NORTH CAROLINA AT GREENSBORO

CONSENT TO ACT AS A HUMAN PARTICIPANT: Long Form

Project Title: Examining the impact of international graduate students' acculturation experiences on their career decision-making self-efficacy

Persons Responsible for the Research: James Benshoff, Ph.D. and Xiaoying Liu, M.S.

Study Description: You are being asked to participate in this dissertation study that examines the impact of international graduate students' cross cultural adjustment experiences on their career decision-making self-efficacy. Approximately 200 international graduate students will participate in this study. If you agree to participate, you will be asked to complete an online survey that will take 15-20 minutes to complete. You will be asked questions about your cross cultural adjustment experiences in the U.S., and how confident you feel about pursuing your career as a result of your study abroad experiences.

Confidentiality: Your privacy will be protected because you will not be identified by name as a participant in this project. Please do not put your name, e-mail or any other identifying information on any of the materials as we wish to have no way of identifying your responses. Your responses will be recorded into the SPSS system, and will be saved on a CD disk with a securing password. The researcher will keep the electronic data for 5 years. After 5 years, the CD will be destroyed.

Voluntary Participation: Participation in this research study is entirely voluntary. Even after you agree to participate in the research, you may decide to leave the study at any time without penalty or prejudice.

Risks: There are no risks to participating in this study.

Potential Benefits: There are no direct benefits for the individual student but there are benefits to society. Students' responses will help us enrich our understanding on international graduate students' acculturation experiences and how those experiences impact their self-identity and self-confidence in their career development.

International students bring intellectual assets to U.S. college campuses. In the U.S., they have played an important role in advancing America's research competitiveness in the disciplines of science, technology, engineering, and mathematics. Understanding their acculturation experience and its impact on their career development will help counselors and other helping professionals better conceptualize their career concerns, and facilitate their career development, and assist them in their school-to-work transition, while at the same time promoting the diversity of the U.S. workforce.

Helping students develop career and life-planning skills would ensure the best future use of theirr unique and enriching educational experiences in the U.S. This study will not only focus on the difficulties students may experience, but also explore the way students manage to overcome these adjustment difficulties. Future students would learn from this study some coping strategies they could use that would result in positive acculturation experiences, and therefore enhance their career development self-efficacy.

For more information about the study or study procedures, please contact the student researcher Xiaoying Liu (e-mail: x_liu@uncg.edu, or phone 336-255-1291), or the principle investigator Dr. James Benshoff (e-mail: benshoff@uncg.edu, or phone 336-334-3424). Any new information that develops during the project will be provided to you if the information might affect your willingness to continue participation in the project.

The University of North Carolina at Greensboro Institutional Review Board, which ensures that research involving people follows federal regulations, has approved the research and this consent form. Questions regarding your rights as a participant in this project can be answered by calling Mr. Eric Allen at (336) 256-1482.

Clicking on the continue to next page button below indicates that you
• Are at least 18 years of age
• Are international graduate students who are holding student visas and studying in the professional and/or graduate schools in the U.S.
• Have read and understand the information above, and
• Agree to participate.

You may download or print a copy of this consent form to keep.

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APPENDIX B

INSTRUMENTS

Page

Demographic Information

Age: _____

Gender: Male _____ Female _____

Visa Type: _____ (e.g., F-1, J-1, or other, please specify)

Home country: _____

Number of months you have stayed in the U.S.: _____

Academic Major: _____

Degree Pursued: Master's _____ Doctoral _____

Other (please specify) _____

Residency Plan (Check one that applies to you):

After I graduate, I would like to gain work experience in the U.S. before going back to my home country to pursue my career.

_____

I would like to pursue my career in my home country after I graduate from my academic program.

_____

International Students Acculturation Questionnaire

Please mark your level of agreement with the following statements related to your acculturation experience in the U.S.:

1	2	3	4	5
Strongly Disagree	**Disagree**	**Don't Agree or Disagree**	**Agree**	**Strongly Agree**

1. I meet as many people, and make as many friends as I want to.
   1 2 3 4 5
2. I socialize with Americans.
   1 2 3 4 5
3. I make friends with Americans.
   1 2 3 4 5
4. I am very involved with social activities in college.
   1 2 3 4 5
5. I participate in social activities organized by the local community and/or other organizations.
   1 2 3 4 5
6. I attend classes regularly.
   1 2 3 4 5
7. I watch American TV shows and movies.
   1 2 3 4 5
8. I read English newspaper, magazines and/or books.
   1 2 3 4 5
9. I participate in class discussions.
   1 2 3 4 5
10. I work hard at my course work.
    1 2 3 4 5
11. I am motivated to learn new knowledge and skills.
    1 2 3 4 5
12. I understand English very well.
    1 2 3 4 5
13. I can express myself well in English in conversation.
    1 2 3 4 5
14. I can express myself well in English in writing.
    1 2 3 4 5
15. I have learned professional knowledge and skills from studying in my academic programs in the U.S.
    1 2 3 4 5
16. I am able to express different opinions.
    1 2 3 4 5

1	2	3	4	5
Strongly Disagree	**Disagree**	**Don't Agree or Disagree**	**Agree**	**Strongly Agree**

17. I can understand American jokes.

1 2 3 4 5

18. I understand American cultural values.

1 2 3 4 5

19. I am able to identify differences between values of my home country and American cultural values.

1 2 3 4 5

20. I can identify cultural limitations of my worldview as a result of my study-abroad (i.e., study in the U.S.) experiences.

1 2 3 4 5

21. I prefer to have the traditional food from my home countries, but it is okay to eat American food.

1 2 3 4 5

22. I am comfortable with the dress code (e.g., how people dress in different situations) emphasized in this country.

1 2 3 4 5

23. I have become used to American holidays.

1 2 3 4 5

24. I have become used to American ways of communication.

1 2 3 4 5

25. I am respectful of the religions in the U.S.

1 2 3 4 5

26. I feel I am often misunderstood due to my different cultural beliefs and values.

1 2 3 4 5

27. I try to remain objective in clarifying stereotypes that Americans have about my own culture.

1 2 3 4 5

28. I am willing to understand others' points when there is miscommunication.

1 2 3 4 5

29. I enjoy the cultural learning opportunities that my study abroad experience has provided.

1 2 3 4 5

30. I am comfortable to "trying on" other points of views with the increase in cultural awareness.

1 2 3 4 5

Career Decision Making Self-Efficacy Scale

Directions: ***For each statement below, please read carefully and indicate how much confidence you have that you could accomplish each of these tasks by circling the appropriate number under the question, using the answer key below.***

1	2	3	4	5
No Confidence at all	**Very little Confidence**	**Moderate Confidence**	**Much Confidence**	**Complete Confidence**

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

Summarize the skills that you have developed in the jobs you have held?

1 2 3 4 5

If your answer was "Moderate Confidence," you would circle number 3.

HOW MUCH CONFIDENCE DO YOU HAVE THAT YOU COULD:

1. Find information in the library or on the Internet about occupations you are interested in.
   1 2 3 4 5
2. Select one major from a list of potential majors that you are considering.
   1 2 3 4 5
3. Make a list of your goals for the next five years.
   1 2 3 4 5
4. Determine the steps to take if you are having academic difficulties in your chosen major.
   1 2 3 4 5
5. Accurately assess your strengths and weaknesses.
   1 2 3 4 5
6. Select one occupation from a list of potential occupations that you are considering.
   1 2 3 4 5
7. Determine the steps you need to take to successfully complete your chosen major.
   1 2 3 4 5
8. Persistently work at your major or career goal even when you get frustrated.
   1 2 3 4 5
9. Determine what your ideal job would be.
   1 2 3 4 5
10. Find out employment trends for an occupation over the next ten years.
    1 2 3 4 5
11. Choose a career that will fit your preferred lifestyle.
    1 2 3 4 5
12. Prepare a good resume.
    1 2 3 4 5

1	2	3	4	5
No Confidence At all	**Very little Confidence**	**Moderate Confidence**	**Much Confidence**	**Complete Confidence**

13. Change majors if you did not like your first choice.
1 2 3 4 5
14. Decide what you value most in an occupation.
1 2 3 4 5
15. Find out the average yearly earnings of people working in a specific occupation of your interest.
1 2 3 4 5
16. Make a career decision and then not worry whether it was right or wrong.
1 2 3 4 5
17. Change occupations if you are not satisfied with the one you enter.
1 2 3 4 5
18. Figure out what you want to sacrifice to achieve your career goals.
1 2 3 4 5
19. Talk with a person already employed in the field you are interested in.
1 2 3 4 5
20. Choose a major or career that will fit your interests.
1 2 3 4 5
21. Identify employers, firms, and institutions relevant to your career possibilities.
1 2 3 4 5
22. Define the type of lifestyle you would like to live.
1 2 3 4 5
23. Find information about graduate or professional schools.
1 2 3 4 5
24. Successfully manage the job interview process.
1 2 3 4 5
25. Identify some reasonable major or career alternatives if you are unable to get your first choice.
1 2 3 4 5