A STUDY OF ETHNIC MINORITY COLLEGE STUDENTS: A RELATIONSHIP AMONG THE BIG FIVE PERSONALITY TRAITS, CULTURAL INTELLIGENCE, AND PSYCHOLOGICAL WELL-BEING

by

Teresa Ann Smith

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

Liberty University

March 29, 2012

A STUDY OF ETHNIC MINORITY COLLEGE STUDENTS: A RELATIONSHIP AMONG THE BIG FIVE PERSONALITY TRAITS, CULTURAL INTELLIGENCE, AND PSYCHOLOGICAL WELL-BEING

by

Teresa Ann Smith

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

Liberty University, Lynchburg, VA

March 29, 2012

APPROVED BY:

Amanda Rockinson-Szapkiw, Ed.D., Chair

_____

Amy T. McLemore, Ed.D., Committee Member

_____

Marrius L. Pettiford, Ph.D., Committee Member

_____

Scott Watson, Ph.D., Associate Dean, Advanced Programs

_____

ABSTRACT

Institutions of Higher Education are challenged to educate an increasing, diverse ethnic minority population. This study examines (1) if the theory of the Big Five personality traits as a predictor of the cultural intelligence theoretical model remains constant with ethnic minority college students attending a southeastern United States Historically Black College or University, and (2) if there is a predictive relationship between cultural intelligence and the psychological well-being of ethnic minority college students. Ethnic minority college students received an online survey that included demographic questions, the Cultural Intelligence Scale (Earley & Ang, 2003), Goldberg's (1999) Internal Personality Item Pool (IPIP), an alternate version of Costa and McCrae's (1992) commercial Neuroticism, Extraversion, and Openness Personality Inventory (NEO-PI-R ™), and the Scale of Psychological Well-Being (Ryff, 1989). Standard multiple regression analyses were used. The results indicate that the antecedent relationship between the Big Five personality traits and the cultural intelligence model remained constant. Study results did not demonstrate a significant relationship between minority college students' cultural intelligence and psychological well-being.

Descriptors: Big Five Personality Traits, Cultural Intelligence, Ethnic Minority College Students, Psychological Well-Being

Dedication

This research is dedicated to God, who has been and always will be my Guide, for without Him I would not exist. "For I know the plans I have for you," declares the Lord, "plans to prosper you and not to harm you, plans to give you hope and a future" (Jeremiah 29:11 NIV).

Acknowledgments

There are no mistakes in life when you understand that your past, present, and future are part of a divine plan. The reward is to embrace the highs and lows as the great Potter shapes your destiny. Each of you was selected before time to travel this road with me. There are no words to adequately convey my profound appreciation for your willingness to accompany me.

My heroes, the wind beneath my wings, are my parents Robert and Gloria B. Smith, who always made sure I soared. If I had the power to rewrite my history, I would not. For my history will usher in my future. To my sisters, Meredith "Marlae" Smith Jeffries and OnJerya "Marlae 2" Tequolla Smith, you have always supported me. To my nieces and nephew, remember nothing, absolutely *nothing* is impossible. To my Uncle Johnny Bennett (deceased), your impact on my life will never cease; it is because of you that I became a lifelong learner. You gave your all for this country. If you were alive today, you would see the tide is finally turning and the contributions of Vietnam veterans are being acknowledged. You and your mother, my Grandmother Lannie Tillman Rivers Bennett, have been angels watching over me for more than thirty-four years. Sometimes I feel you wrapping your wings around me when I cannot go another step. God called two angels home, so they could protect me as I moved through life's phases. I love you both!

To my cousin, Mr. Percell Bennett, I am thankful that God provided my mother with a wonderful first cousin, whom I consider an uncle. Mrs. Doris Bennett, my biblical teacher, you are a steady rock that ensures that I remain humble as I serve our God. Your

intuitive nature and reliance on the scriptures are invaluable. My favorite cousin, you know who you are. You and I have traveled many roads. I learned to trust God through observing your actions. I pray you will be with me the rest of my journey. To my confidante, you have seen me through much adversity, always rising to the occasion when I need wisdom and encouragement; for that I am eternally grateful.

Mrs. Donella Croslan, former UNC-Chapel Hill Dean of Arts and Sciences, your advice has guided me from baccalaureate to doctoral degree.

Dr. Ed Bell, my doctoral mentor and role model, you entered my life at the appointed time as my search for the appropriate doctoral program was nearing its conclusion. I had considered many universities' programs over the years, but never Liberty University. It was no coincidence our paths crossed, for when I sat in my first on-campus course at Liberty University, I knew I was home. What I understand now is that I had to attend a Christian university at this stage in my life in preparation for the next. Thank you for entering my life at the appointed time!

Mrs. Shirley Staten, thank you for using your gift and intellect to sustain me through this entire process. Shirley, you know I love you; there are no words to convey my eternal gratitude. Mr. Derek Jeffries, Jr., my nephew, thank you for assisting me with the online survey distribution. Thank you, Dr. Miriam Wagner and Mrs. Gertrude "GG" Pennix, my higher education angels. It is because of the two of you that I was able to collect my study data. I am eternally grateful. Dr. Johnny Wilson, thank you for your expertise and wisdom!

Dr. Reneé Evans, thank you for your dissertation resources and reminders to strive always for work-life balance, which is essential. I hear you constantly offering this advice, which is a game changer.

Dr. Gloria Morrow, your understanding and perceptiveness propelled me toward the door that had been open and waiting for me. My life will never be the same. To God be the glory.

According to Dr. Caroline L. Lattimore, my Alpha Kappa Alpha Sorority, Incorporated mentor, you cannot tell it all. Dr. Lattimore and the following individuals were instrumental in this process. Each person had a unique influence on my worldview and significantly impacted my journey. Thank you for traveling with me: The Honorable Kelly M. Alexander, Jr., Dr. Vikki Andrews, Mr. Cephus Archie, Mrs. Ruby B. Archie (deceased), Mrs. Doris R. Asbury, Dr. June St Clair Atkinson, Mrs. Diane Balsley, Mr. Click Bennett (deceased), Mrs. Delaine Bennett (deceased), Mr. James E. Bennett (deceased), Dr. Ellen Lowrie Black, Mrs. Maxine Black, Rev. R. E. Blount, Mrs. Nancy Davis Brooks, Dr. Sonja Leathers Brown, Mrs. Retha Mae Burr, Mrs. Annie L. Clemons, Mrs. Sallie Legrand Clemons (deceased), Dr. Walthea Cobitz, Dr. C. C. Craig (deceased), Mrs. Barbara W. Davis, Ms. Lauren Delli Santi, Mrs. Mamie Doane, Ms. Stacey Dove, Mrs. Carmella Fair, Mrs. Veda Mae Flowers (deceased), Mrs. Ada Ford Singleton (deceased), Mrs. Mildred Gerald, Dr. Linda H. Gilliam, Mrs. Brenda Hampton, Mrs. Valorie Hargett, Sister Virginia Hickson, Mrs. Clara M. Hines, Ms. Diane Hunter, Mrs. Lizzie Lee Ingram (deceased), Dr. Marye J. Jeffries, Mrs. Jinx S. Kenan, Mrs. Portia Lambright, Sister Maxine Mason, Dr. Steven McDonald, Mrs. Dorothy M. McGirt, Ms.

Regina Moore, Dr. Ken Paul, Dr. Lucille J. Piggott, Mr. Marvin Pittman, Dr. Wandra C. Polk, Mrs. Angela Pope, Dr. Millicent Rainey, Ms. Alice Rhodes, Ms. Paula Shook, Mrs. Lizzie Smith (deceased), Soror Cynthia Thompson, Sister Sarah Tillman, Dr. Heidi Villanueva, Mrs. Marva Watlington, Sister Geneva West (deceased), Ms. Shanda Whitaker, Mrs. Maggie Williams, Ms. Rose Williams, Esq., Dr. Meeshay Williams-Wheeler, and Mrs. Joanne Woodward.

Within the academic environment, I have been mentored and supported by a plethora of individuals. Specifically, I would like to thank those who guided me throughout this monumental process, my dissertation committee. My Chair, Dr. Amanda J. Rockinson-Szapkiw, "Dr. S.," your focus on helping me through, not just the dissertation process, but life, has sustained my energy and drive. Your support and patience as I narrowed my ideas and found my way were insurmountable. You accepted and never gave up on an unconventional student, helping me endure to the end. Your high expectations have and will serve me well. Thank you for a friendship and a mentorship that are priceless. Dr. Amy T. McLemore, your ability to pose questions, make suggestions, and provide reassurance is greatly appreciated. Dr. Marrius L. Pettiford, your support and encouragement through the many stages of my journey and professional life have been substantial. You are a calming presence in the midst of the storm.

I am grateful to the memory of Dr. Jill Jones, who insisted we create a dissertation completion plan that identified the roars in our life and our support system, as well as

being a prayers warrior. Her insight and guidance sustain me as I enter the next phase of my life.

There are no mistakes in life. Nothing just happens, for every step in our journey is preordained before time. It was no accident that each of you was selected to join me on my journey. I pray God's richest blessings on each of you as you continue your pilgrimage.

Table of Contents

List of Tables

List of Abbreviations

Cultural Intelligence (CQ)

Cultural Intelligence Scale (CQS)

Historically Black College or University (HBCU)

Institutions of Higher Education (IHEs)

Internal Personality Item Pool (IPIP)

Psychological Well-Being (PWB)

Ryff Scales of Psychological Well-Being (SPWB)

CHAPTER ONE: INTRODUCTION

The cultural intelligence model (Earley & Ang, 2003; Earley, Ang, & Tan, 2006) was developed using undergraduate and graduate business schools students. It has been used almost exclusively by United States businesses to determine the feasibility of selecting an employee for international assignment. Specifically, the model assesses "an individual's capability to function and manage effectively in culturally diverse settings…a multidimensional construct targeted at situations involving cross-cultural interactions arising from differences in race, ethnicity, and nationality" (Ang et al., 2007, p. 336). The theoretical model is comprised of four separate and distinct dimensions: metacognitive, cognitive, motivational, and behavioral cultural intelligence. This research study focused on examining the theoretical cultural intelligence model, which originated in the business discipline (Earley & Ang, 2003; Earley et al., 2006), with a non-business population.

Since the Big Five personality traits have been established as an antecedent for cultural intelligence in many populations (Ang & Van Dyne, 2008), the purpose of this study is to determine if the Big Five personality traits predict cultural intelligence in ethnic minority college students attending a United States institution of higher education. In addition, the study examines the cultural intelligence model's ability to predict ethnic minority college students' psychological well-being. Research has indicated that personality and poor psychological well-being relate to students' academic achievement (Barnes, Potter, & Fiedler, 1983; Chamorro-Premuzic & Furnham, 2003; McCann & Meen, 1984; Rothstein, Paunonen, Rush, & King, 1994).

Minorities and Higher Education

It has been predicted that, by 2029, 80% of the world economic output will be in global markets, which have expanded through education, technology, and innovation (Bryan et al., 1999). By 2030, it is projected that children from minorities will represent more than one-half of the nation's population (United States Census Report 2000, 2001). Furthermore, by the year 2050, the U.S. population will exceed 394 million, with approximately 90% of the growth coming from the minority population (United States Census Report 2000, 2001). Consequently, the interconnectedness of the global economy and the increasingly diverse workforce has amplified the demand for education, especially higher education (Carnoy, 2005; Meyer, 2007). U.S. ethnic population growth has resulted in a change in the educational environment in Institutions of Higher Education (IHEs). In 2007, 32.2% of all the students enrolled in U.S. degree-granting institutions were minorities, which is up from 15% in 1976 (United States Department of Education, National Center for Education Statistics, 2009).

Although the minority college-attendance rate has increased, fewer than one-third of the full-time degree-seeking freshmen at U.S. 4-year institutions graduate in 4 years. Most first-time college students are taking at least 6 years to earn a bachelor's degree (Southern Regional Education Board, 2010). According to the National Center for Educational Statistics, the 1998 and 2001 undergraduate minority students' cohort graduation rates were below those of Caucasian students, with the exception of Asian/Pacific Islander and non-resident alien students (Knapp, Kelly-Reid, & Whitmore, 2006). Caucasian students' graduation rate was 58.2%, while the other minority subgroups were African American/Black 39.7%, Hispanic 45.8%, and American

Indian/Alaskan Native 36.5%, with a graduation rate gap of 18.5%, 12.4%, and 21.7%, respectively. Ancis, Sedlacek, and Mohr (2000) have argued that there is a relationship between the higher education environment and ethnic minority students' graduation rates and persistence.

In 2010, the United States world ranking for the percentage of post-secondary degrees earned by students aged 25 to 34 years had fallen to 12th place (de Vise, 2010). In response to this decline, President Barack Obama launched the American Graduation Initiative with a stated goal of regaining world supremacy in per capita college graduates by 2020 (Nelms, 2010). According to U.S. Secretary of Education Arne Duncan, reaching this goal "will require institutions of higher education to dramatically boost college completion—by the end of the decade, our national college degree attainment rate must rise from 40 percent to 60 percent" (Nelms, 2010, p. 1). Historically Black Colleges and Universities (HBCUs) will play a critical leadership role in meeting the president's goal (Duncan, 2010) and must provide an equitable education to their diverse student population.

Higher education research indicates that domestic as well as international students of color are more likely to perceive higher education campus climates as racist and inhospitable than are their Caucasian counterparts (Ancis, Sedlacek, & Mohr, 2000; Bonazzo & Wong, 2007; Cabrera & Nora, 1994). The higher education system's institutional environment often leads to students feeling isolated, alienated, and invisible, which results in decreased satisfaction with the educational experience and diminished psychological well-being (Ancis et al., 2000; Bonazzo & Wong, 2007; Cabrera & Nora, 1994; D'Augelli & Hershberger, 1993; Davis, 2004; Davis et al., 2004; Fine & Carlson,

1994; Hurtado, 1992; Rankin & Reason, 2005; Stark & Brookman, 1994; Suarez-Balcezar, Orellana-Damacela, Portillo, Rowan, & Andrews-Guillen, 2003). Higher education demographic changes have increased the urgency to provide and maintain an equitable education environment (Carnoy, 2005) that assist students in being successful. Cultural intelligence and psychological well-being may play a vital role in students' success in higher education institutions.

Psychological well-being can be a challenge for ethnic cultural groups who assimilate to a new setting for academic attainment while trying to maintain a sense of ethnic identity (Lynch, 1992). A cross-cultural study (Dyal & Chan, 1985) demonstrated that international Chinese students experience more physical and mental illness, stress, and academic problems than their counterparts who do not study abroad. When individuals have to adjust to a new or dominant culture, such as higher education, they often experience acculturative stress (Chavez, Moran, Reid, & Lopez, 1997). Acculturative stressors often manifest as "behaviors that include anxiety, depression, feelings of marginality and alienation, heightened psychosomatic symptoms, and identity confusion" (William & Berry, 1991, p. 634), and inversely relate to the individual's psychological and physical well-being (Kosic, 2004), as well as decreasing academic performance and matriculation (Alva & de Los Reyes, 1999; McCann & Meen, 1984).

Psychological Well-being

Having a positive psychological well-being (PWB) is crucial for successfully navigating a new environment, engaging in meaningful relationships, and realizing one's fullest potential throughout one's lifespan (Allport, 1961; Erickson, 1959; Maslow, 1968;

Rogers, 1961; Ryff, 1989a). Ryff's (1989a, 1989b) multidimensional psychological well-being model examines six constructs identified and defined as follows:

- Self-acceptance reflects a positive evaluation of self and past life experiences (Ryff & Keyes, 1995).
- Positive relations with others emphasize the importance of trusting, satisfying interpersonal relationships with others (Rogers, 1961).
- Autonomy refers to an individual having an internal locus of evaluation and not looking to others for approval, but using personal standards for evaluating self (Rogers, 1961).
- Environmental mastery is the capacity to choose and manage effectively environments suitable to their strengths (Ryff, 1989a).
- Purpose in life is predicated on the belief that life has meaning and purpose.
- Personal growth is having continued development, as characterized by self-actualization (Maslow, 1968; Ryff & Keyes, 1995; Van Dierendonck, 2003).

Identification of the factors that protect minority college students against acculturative stress and positively influence their psychological well-being as they transition from home to the new culture environment of higher education is important. The cultural intelligence dimensions may serve as a protective framework for identifying the factors that support students' psychological well-being. Business school literature has established that one aspect of effective cultural adjustment in diverse environments is cultural intelligence (Alon & Higgins, 2005; Ang, Van Dyne, Koh, & Ng, 2004;

Manning, 2003; Thomas & Inkson, 2004; Triandis, 2006). Motivational and behavioral cultural intelligence (CQ) positively relate to cultural adjustment and well-being (Ang et al., 2007; Earley & Ang, 2003; Templer, Tay, & Chandrasekar, 2006). Individuals with high CQ are expected to adjust better and be more effective in cross-cultural interactions (Earley & Peterson, 2004).

Cultural Intelligence Framework

The culture intelligence theoretical model developed by Earley and Ang (2003) and Earley, Ang, and Tan (2006) extends intercultural competence by creating a new mental framework for individuals to understand what they see and experience. Cultural intelligence, a distinctive aspect of the intelligences, is an individual's ability to adapt successfully to various cultures and cultural settings (Earley & Ang, 2003; Earley & Peterson, 2004). First, metacognitive cultural intelligence is the awareness of, attending to, and usage of information to assist learners in all aspects of their personal and academic lives (Schraw & Dennison, 1994). Second, cognitive cultural intelligence reflects the cultural norms and practical knowledge acquired through education or experiences (Earley & Ang, 2003). Third, motivational cultural intelligence reflects an individual's "capability to direct attention and energy toward learning about and functioning in a situation characterized by cultural differences" (Ang et al., 2007, p. 338). According to Ang et al. (2007), the final dimension, behavioral cultural intelligence, is "the capability to exhibit appropriate verbal and non-verbal actions when interacting with people from different cultures" (p. 338). Cultural intelligence dimensions and intercultural effectiveness outcomes are linked when individuals function effectively in

cross-cultural interactions (Ang et al., 2007; Earley et al., 2006; Elenkov & Manev, 2009; Imai & Gelfand, 2010).

The core of cultural competence is the ability to interpret cultural difference in multifaceted ways (Hammer, Bennett & Wiseman, 2002). For corporations that have both domestic and international holdings, cultural intelligence provides insight for recruitment and selection of employees for expatriate deployment (Carpenter, Sanders, & Gregersen, 2001; Inkson, Arthur, Pringle & Barry, 1997; Reuber & Fischer, 1997; Takeuchi, Tesluk, Yun, & Lepak, 2005). Positive task performance, cultural judgment and decision making, multicultural team effectiveness, intercultural negotiation, organizational innovation, and cross-cultural adjustment have been associated with high levels of cultural intelligence (Ang et al., 2007; Elenkov & Manev, 2009; Imai & Gelfand, 2010, Rockstuhl & Ng, 2008; Templer et al., 2006). If cultural intelligence is important to employee positive outcomes in diverse cultural settings for business organizations, perhaps the same is true for student positive outcome in higher educational settings.

Big Five Personality Traits

An individuals' capability to adapt and understand new cultures varies (Earley & Ang, 2003). The inability to interact appropriately in diverse situations and environments can lead to inappropriate language and behavior and a lack of sensitivity to others, which can negatively affect the organization's and an individuals' relationship building and performance ability. Personality differences have been used to explain this variation in the success of international assignments (Caligiuri, 2000).

The Big Five personality traits have been established as an antecedent for cultural intelligence (Ang & Van Dyne, 2008) and a predictor of job performance and success in international work assignments (Caligiuri, 2000). The Big Five consist of agreeableness, consciousness, extraversion, openness to experiences, and neuroticism (Srivastava, 2010). The Big Five personality traits are defined as follows:

- Agreeableness reflects individual differences in concern with cooperation and social harmony;
- Conscientiousness concerns the way in which we control, regulate, and direct our impulses;
- Extraversion is characterized by a pronounced engagement with the external world;
- Openness to Experience distinguishes imaginative, creative people from down-to-earth, conventional people; and
- Neuroticism refers to the tendency to experience negative feelings (Cohen & Swerdlik, 2005; Johnson, 2010)

Research on Big Five personality traits and cultural intelligence has been extensively conducted with undergraduate and graduate business students to conceptualize the CQ model (Ang et al., 2007; Earley & Ang, 2003; Earley et al., 2006; Moody, 2007; Peterson, 2004; Thomas & Inkson, 2004). According to Ang, Van Dyne, & Koh (2006), a person's capability for successful cross-cultural adjustment may be increased or decreased by his or her unique personality traits. For instance, conscientiousness and openness to experience explained 17% of the variance in intrinsic motivation, conscientiousness and extraversion explained 13% of the variance in

extrinsic motivation, and conscientiousness and agreeableness explained 11% of the variance in a motivation (Komarraju, Karau, & Schmeck, 2009). Four personality traits (conscientiousness, openness, neuroticism, and agreeableness) explained 14% of the variance in student Grade Point Average (GPA) (Chowdhury, 2006; Komarraju et al., 2009).

Problem Statement

Demographic changes have increased ethnic minority student enrollment in institutions of higher education (United States Department of Education, National Center for Education Statistics, 2009). This browning of America's higher education system is a critical issue confronting universities as they seek to establish an inclusive learning environment (Castellanos, Cole, & Jones, 2002). IHEs' environmental culture must successfully accommodate students whose awareness of their ethnic minority status while studying at the university level, is increased (Astone & Nunez-Wormack, 1990; Castellanos et al., 2002; Hurtado & Carter, 1997; Valverde & Castenell, 1998). An understanding of the predictable relationship of the Big Five personality traits and ethnic minority college students' cultural intelligence will demonstrate the applicability of the theory outside of the business discipline to this entire population. An examination of cultural intelligence's ability to predict ethnic minority students' psychological well-being may provide insight into how higher education can support these students' general and interactional adjustment in an effort to increase academic performance (work adjustment) as students adjust to a new cultural environment (Black & Stephens, 1989).

Purpose Statement

The purpose of this correlational research study is to examine the Big Five personality traits as a predictor of the cultural intelligence model for ethnic minority college students. The Big Five personality traits are the predictor variables, and cultural intelligence is the criterion variable. The Big Five personality traits are derived from the Five Factor Model (FFM) personality theoretical model and are the most significant in providing an unbiased description of self and others (Widiger & Trull, 1997). The criterion variable *cultural intelligence* is defined as an individual's ability to adapt successfully to unfamiliar cultural environments (Earley & Ang, 2003), and the control and intervening variables are ethnic minority students and their classification, respectively. In addition, this study has determined if there is a predictive relationship between cultural intelligence factors and ethnic minority college students' psychological well-being. In this instance, cultural intelligence served as the predictor variable. The criterion variable *psychological well-being* is comprised of six domains: (a) self-acceptance, (b) positive relations with others, (c) autonomy, (d) environmental mastery, (e) purpose in life, and (f) personal growth (Ryff, 1989a, 1989b).

Significance of the Study

Cultural intelligence is a new theoretical cultural competence framework, and additional research is important for both theoretical and practical considerations. According to Gelfand, Iman, and Fehr (2008), additional empirical evidence is valuable for the expansion of this new cultural competence construct. The cultural intelligence theoretical model was studied almost exclusively with a non-minority population (Ang et al., 2007; Ang & Van Dyne, 2008; Earley & Ang, 2003; Earley et al., 2006). The cultural

intelligence nomological network is characterized by distal factors, intermediate or intervening variables, as well as other correlates, and situational factors: strong or weak, structured or unstructured, and characterized by low or high distance (physical, institutional, and cultural) (Ang & Van Dyne, 2008). This study advances the cultural intelligence nomological network by determining if the antecedent relationship between ethnic minority college students' Big Five personality traits and cultural intelligence remains constant (Ang & Van Dyne, 2008). Consequently, this research may identify which cultural intelligence dimension (metacognitive, cognitive, motivation, and behavior) best predicts ethnic minority college students' psychological well-being. In addition, this study furthers cultural intelligence research by studying the model in a domestic higher education environment (Ang et al., 2007). As a result, this study extends the cultural intelligence model both theoretically and empirically. Practically, this study's findings may provide a theoretical framework for institutions of higher education to better prepare students for life in a global society (Fantini, 1999).

Research Questions

This correlation research study is guided by the following two specific and testable research questions:

1. Will the combination of the Big Five personality traits predict the cultural intelligence of ethnic minority college students?
2. Will the combination of the cultural intelligence factors predict the psychological well-being of ethnic minority college students?

Null Hypotheses

The following are the null hypotheses:

H_O 1: There is no statistically significant predictive relationship between the combination of the Big Five personality traits and ethnic minority college students' cultural intelligence.

H_O 1.1 There is no statistically significant predictive relationship between ethnic minority college students' openness to experience and cultural intelligence.

H_O 1.2 There is no statistically significant predictive relationship between ethnic minority college students' conscientiousness and cultural intelligence.

H_O 1.3 There is no statistically significant predictive relationship between ethnic minority college students' extraversion and cultural intelligence.

H_O 1.4 There is no statistically significant predictive relationship between ethnic minority college students' agreeableness and cultural intelligence.

H_O 1.5 There is no statistically significant negative predictive relationship between ethnic minority college students' neuroticism and cultural intelligence.

H_O 2: There is no statistically significant predictive relationship between the combination of the cultural intelligence factors and ethnic minority college students' psychological well-being.

H_O 2.1 There is no statistically significant predictive relationship between ethnic minority college students' metacognitive CQ and psychological well-being.

H_O 2.2 There is no statistically significant predictive relationship between ethnic minority college students' cognitive CQ and psychological well-being.

H_O 2.3 There is no statistically significant predictive relationship between ethnic minority college students' motivational CQ and psychological well-being.

H_O 2.4 There is no statistically significant predictive relationship between ethnic minority college students' behavioral CQ and psychological well-being.

Identification of Variables

Big Five Personality Traits

The Big Five personality traits were measured using Goldberg's (1999) Internal Personality Item Pool (IPIP), an alternate version of Costa and McCrae's (1992) commercial Neuroticism, Extraversion, and Openness Personality Inventory (NEO-PI-R ™). The scale uses 120 items for assessing one's personality.

Cultural Intelligence

The other predictor variable in this study will be the student's cultural intelligence score. Cultural intelligence is an individual's ability to adapt successfully to unfamiliar cultural environments (Earley & Ang, 2003). Cultural intelligence will also serve as a criterion variable.

Developed by Ang et al. (2007), the Cultural Intelligence Scale (CQS) was used to assess the student's cultural intelligence score. The CQS uses 20 items that describe one's capability to function culturally in diverse environments within the four dimensions.

Psychological Well-being

The criterion variable in this study was ethnic minority college students' psychological well-being. The Ryff Scales of Psychological Well-Being (SPWB) is recognized as a comprehensive measure of an individual's psychological well-being (Ryff, 1989a; Ryff & Keyes, 1995; Van Dierendonck, 2003) and was used to assess psychological well-being.

The following additional operational definitions are provided to clarify the language used in this study.

Academic persistence. The ability of students to graduate from a program (Lufi, Parish-Plass, & Cohen, 2003).

Acculturation. "The process by which individuals acquire some (but not all) aspects of the host culture" (Kim, 2001, p. 31).

Agreeableness. Agreeableness reflects traits such as sympathy, kindness, and affection (Srivastava, 2010).

Behavioral CQ. An individual's capability to interact appropriately with different cultures as demonstrated by verbal and nonverbal actions (Van Dyne et al., 2009).

Cognitive CQ. An individual's cultural knowledge of different cultures' norms, practices, and conventions (Van Dyne, Ang, & Koh, 2009).

Conscientiousness. Conscientiousness is demonstrated by an individual's ability to organize, thoroughness, and planning ahead (Srivastava, 2010).

Culture. The patterned mental programming that results from the assimilation and interaction of values and environmental responses (Hofstede, 1984).

Cultural awareness. The process of examining one's own prejudices (Campinha-Bacote & Padgett, 1995) and "becoming sensitive to interactions with other cultural and ethnic groups" (Campinha-Bacote, 1995, p.19).

Cultural competence. Awareness of individual's cultural beliefs and practices and an openness and respectfulness for divergent beliefs, laws, and practices (Flaskerud, 2007).

Culturally intelligent behaviors. "External behaviors where the actors are assumed to be actively interpreting the meaning of their cultural surroundings and are motivated to appreciate, understand, and attach meanings to their responses to situational clues" (Earley & Ang, 2003, p. 160).

Domestic. Refers to the United States of America.

Ethnic and race categories. The United States Department of Education defined *ethnic* and *race*. Ethnic is defined as Hispanic/Latino or Non-Hispanic/Latino. Individuals may be of Cuban, Mexican, Puerto Rican, South or Central American, or of other Spanish culture or origin, regardless of race. Race is defined as:

> American Indian or Alaska Native: A person having origins in any of the original peoples of North and South America (including Central America), and who maintains a tribal affiliation or community attachment;
>
> Asian: A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam;
>
> Black or African American: A person having origins in any of the black racial groups of Africa;
>
> Native Hawaiian or Other Pacific Islander: A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands; and
>
> White: A person having origins in any of the original peoples of Europe, the Middle East, or North Africa. (United States Department of Education, 2008)

Ethnic minority students attending HBCUs. This construct is composed of the following underrepresented groups: American Indian or Alaska Native, Asian, Black or African American, and Native Hawaiian or Other Pacific Islander.

Extraversion. Extraversion is characterized as being talkative, energetic, and assertive (Srivastava, 2010).

Globalization. A process in which events, activities, and decisions that occur in one part of the world have significant consequences for individuals and communities in another part of the world (McGrew, 1992).

Historically Black College or University (HBCU). The Higher Education Act of 1965 defined an HBCU as

> A part B institution which "means any historically Black college or university that was established prior to 1964, whose principal mission was, and is, the education of Black Americans, and that is accredited by a nationally recognized accrediting agency or association determined by the Secretary [of Education] to be a reliable authority as to the quality of training offered or is, according to such an agency or association, making reasonable progress toward accreditation except that any branch campus of a southern institution of higher education that prior to September 30, 1986, received a grant as an institution with special needs under section 321 of this title and was formally recognized by the National Center for Education Statistics as a Historically Black College or University but was determined not to be a part B institution on or after October 17, 1986,

shall, from the date of enactment of this exception, be considered a part B institution." (SEC. 322. (2). DEFINITIONS)

Mattering. Sense of fitting in or perceived importance of one's culture within a particular type of institution (Freeman, 1997).

Metacognitive CQ. A person's mental capability to acquire and understand cultural knowledge (Ang & Van Dyne, 2008).

Motivational CQ. An individual's capability to direct attention and energy toward learning about and functioning in intercultural situations (Ang & Van Dyne, 2008).

Neuroticism. Neuroticism is expressed through tension, moodiness, and anxiety (Srivastava, 2010).

Non-verbal overt behaviors. What people do and involving kinesics and body movements (Earley & Ang, 2003, p. 158).

Openness to experience. Openness to experience reflects a wide interest, imagination, and insightfulness (Srivastava, 2010).

Repertoire of behaviors. The range of responses that individuals purposively and strategically create to react in a new cultural setting (Earley & Ang, 2003).

Self-awareness. The acquisition of, processing of, and reaction to social situations using the person's self-concept (Earley & Ang, 2003).

Self-concept. "A person's collection of ideas and images concerning the state of an idealized and real world, most importantly, it acts as a filter for incoming information received" (Earley & Ang, 2003, p. 70).

Self-consistency. The desire of individuals "… to maintain coherence and consistency in their experiences and cognitions" (Earley & Ang, 2003, p. 75).

Self-efficacy. "A judgment of one's capability to accomplish a certain level of performance" (Earley & Ang, 2003, p. 74).

Self-enhancement. An individual's tendency to easily recall information relevant to him or her and to "distort reality to maintain a positive self-image" (Earley & Ang, 2003, p. 74).

Sex. Biological sex means male or female. The term as used in this study was explained through the self-reported demographic information.

Student classification. Operationally defined by the university.

Undergraduate students. Freshman, sophomore, junior, and senior non-business students enrolled at a Historically Black College or University.

Verbal overt behaviors. "Overt behaviors are what people say and do; overt behaviors require language, while overt motor behaviors involve kinesics or body movements." (Earley & Ang, 2003, p.158)

CHAPTER TWO: LITERATURE REVIEW

Introduction

In 2007, 32.2% of all the students enrolled in U.S. degree-granting institutions were minorities, which is up from 15% in 1976 (United States Department of Education, National Center for Education Statistics, 2009). There has been an increase in minority enrollment, and this growth will continue. The ability to constantly decipher intricate social schemas, such as the management of common and diverse views and behaviors within social groups (Mumford, Zaccaro, Harding, Jacobs, & Fleishman, 2000; Wong & Law, 2002), is needed to appropriately meet these students needs. Minority students may not always represent the generally characterized cultural norms, beliefs, or behaviors of their society due to individual differences defined by personal experiences and personality. Personality trait differences link to performance (Ackerman et al., 1995; Colquitt & Simmering, 1998; Ford et al., 1998; Martocchio & Judge, 1997; Mathieu et al., 1993) and may be a vital component in understanding the overabundance of differences exhibited by minority college students. For example, the personality trait optimism is an established contributor to students' academic performance (Smith & Hoy, 2007; Yates, 2002), and it is expected that students who exhibit a high degree of optimism would be academically successful. Personality traits influence students' innate culture and shape their cultural intelligence.

Intelligence in context is the "portion of one's own [individuality] that maintains effectiveness across a variety of situations" (Offermann & Phan, 1999, p. 189) when "assumptions, values, and traditions of one's upbringing are not uniformly shared with

those with whom one needs to work" (Offermann & Phan, 2002, p. 2). Intelligence in context, a precursor to cultural intelligence, is demonstrated by appropriately customizing behaviors in diverse settings based on understanding how one's own culture, background, values, and expectations lead to personal biases and understanding others' unique values, expectations, biases, while avoiding categorizing and stereotyping (Offermann & Phan, 2002). Intelligence in context is significant because the higher education system, continued success depends on its knowledge of individual cultural differences and the development of culturally responsive strategies that support culturally diverse students' psychological well-being (Trompenaars & Hampden-Turner, 2004).

Psychological well-being and adaptability (Bradburn, 1969; Emmons, 1986) positively relate to an individual's adjustment and task performance (Earley & Ang, 2003; Manning, 2003; Triandis, 2006). Minority students who have difficulties adjusting to the higher education environment and negative psychological well-being are more likely to have unsatisfactory academic persistence and matriculation rates (Barnes et al., 1983; Chamorro-Premuzic & Furnham, 2003; McCann & Meen, 1984; Rothstein et al., 1994). These students present a unique challenge (Butler & Constantine, 2005; Garbarino, 2001; Cholewa & West-Olatunji, 2008), and cultural intelligence could be a factor to protect against poor adaptability and cross-cultural adjustment. This study's findings have practical implications that support the selection of student programming (Arkoff et al., 2006; Mahoney et al., 2005) that fosters psychological well-being and adaptability (Clarke, 2006). In addition, addressing minority students' psychological well-being might help IHEs accomplish President Obama's American Graduation Initiative (Nelms, 2010; United States Department of Education, 2010) by

institutionalizing the promotion and celebration of cultural differences into their organizational culture and climate.

This research study examined the cultural intelligence theoretical model (Earley & Ang, 2003; Earley et al., 2006) with ethnic minority college students attending an Institution of Higher Education located in the southeastern region of the United States. The cultural intelligence theoretical model (Earley & Ang, 2003; Earley et al., 2006) has been used almost exclusively by United States businesses to determine the feasibility of employees for international work assignment. For this study, the higher education system and ethnic minority college students were selected. In addition to examining whether the cultural intelligence theoretical model remained constant with a new population, the study also examined the model's ability to predict ethnic minority college students' adjustment to a new environment--college. Specifically, this study examined psychological well-being.

This chapter examines minorities in higher education, psychological well-being, cultural intelligence, and the Big Five personality traits. First, a brief review of psychological well-being and its relationship to higher education and cultural intelligence is presented. Second, the theoretical section begins with a presentation of the cultural intelligence nomological theoretical model with a review of the four cultural intelligence dimensions--metacognitive, cognitive, motivational, and behavioral--and the construct's distinctiveness, and concludes with an overview of current research using the cultural intelligence model. Third, the Big Five personality traits and NEO Personality Inventory are presented with a review of relationship outcomes between cross-cultural adjustment and well-being.

Minorities in Higher Education

The interconnectedness of the global economy and an increasingly diverse workforce has increased the demand for education, especially higher education (Carnoy, 2005; Meyer, 2007). The Association of American Colleges and Universities (AAC&U) identified global knowledge and engagement, and intercultural competence as undeniable institutional priorities (McTighe, 2006). The minority presence in higher education enhances institutional mission by developing students' potential by furthering their cognitive and social advancement, perspectives, and potential for responsible citizenship (Harper & Hurtado, 2007; Milem, Chang, & Antonio, 2005). This is accomplished when both university personnel and students are capable of working effectively with culturally diverse students from the United States and internationally (Franklin-Craft, 2010).

The number of minority students enrolled in U.S. degree-granting institutions has more than doubled over the last three decades (United States Department of Education, National Center for Education Statistics, 2009). This increase in the number of minority students from varied and distinct backgrounds has become an emerging issue for institutions that have traditionally admitted a homogenous population that shared the same history, human participation, and institutional traditions (Kuh & Whitt, 1988). Many institutions have expected students to adapt their personalities and culture to the existing campus culture. The influx of more culturally diverse students has prompted institutions to understand students' cultural needs and backgrounds (Cook & Glenn, 2005; Cruz, 2005; Juno, 2005; Martinez & Martinez, 2005) and the degree of psychological well-being and familiarity experienced when living and working in a new host environment (Black 1988; Black, Mendenhall & Oddou, 1991).

Psychological Well-Being

For over 40 years, social, developmental, and clinical psychologists have tried to determine the degree of psychological well-being in an individual's psychological functioning (Andrews & Withey, 1976; Bradburn, 1969; Bryant & Veroff, 1982; Campbell, Converse, & Rogers, 1976; Chamberlain, 1988; Diener, 1984; Emmons, 1986; Lawrence & Liang, 1988; Liang, 1984; Stock, Okun, & Benin 1986). Bradburn (1969) extended this research by asserting individuals with high positive affect (i.e., happiness) were more likely to function better, both psychologically and socially. However, Bradburn's Affect Balance Scale (1969) was one dimensional and excluded self-acceptance, personal growth, or life's purpose. Campbell et al. (1976) expanded Bradburn's subjective evaluations by assessing individuals' perceptions of their life experiences and evaluated life satisfaction from a global perspective. Although Campbell's model was an improvement over Bradburn's, it was not comprehensive since it only examined one component of positive functioning, perceived life satisfaction.

By the late 1980s, researchers still had not definitively defined the fundamental components of psychological well-being (Ryff, 1989a). Historically, subjective well-being as a domain had been comprised of happiness and life satisfaction, while positive affect had been ignored, with most of the focus placed on "human unhappiness" (Diener, 1984, p. 542). Ryff's theoretical model of psychological well-being examined psychological well-being as a multidimensional construct (1989a; 1989b; 1989c). Ryff's (1989a) comprehensive model included six domains:

- Self-acceptance--having a positive attitude toward self, accepting good and bad qualities, and making a positive evaluation of past life;

- Positive relations with others--having positive, trusting, satisfying relationships with others, possessing abilities of empathy, intimacy, and concern about others;
- Autonomy--being independent and self-determined, regulating behavior, and using personal standards to evaluate oneself;
- Environmental mastery--the capacity to manage effectively environments and opportunities that were present;
- Purpose in life--having goals in life, directedness, and assignment of importance to existence and self-fulfillment; and
- Personal growth--having a sense of continuous development and openness to new life experiences necessary to maximize the individual's potential (Ryff, 1989b, 1989c, 1995; Ryff & Keyes, 1995; Van Dierendonck, 2003).

Psychological Well-being and Higher Education

Ryff proposed that the prior theories of positive functioning research served as the theoretical foundation for Ryff's multidimensional model of well-being. Over the last two decades, the Ryff Scales have been used in numerous empirical studies, that include research on work (Black, 1990), relocation (Ryff & Essex, 1992), personality and well-being (Schmutte & Ryff, 1997), and enhancing the ability of talented students to improve their potential (Jin & Moon, 2006; Moon, 2003). In addition, the Ryff model has been used to examine college students' level of depression, value system, and perfectionism (Chang, 2006; Kitamura, Matsuoka, Miura, & Yamaba, 2004; Sheldon, 2005).

Kitamura, Matsuoka, Miura, and Yamaba (2004), tested the theoretical model of psychological well-being with 574 Japanese university students. They found a factor

structure similar to Ryff's original model. Depression and anxiety correlated only moderately with scores on some subscales of the inventory, which suggested the relative independence of these dimensions of psychological well-being and negative affectivity. When the researchers controlled for negative affectivity, earlier life experiences were significantly linked with psychological well-being (Kitamura et al, 2004).

Sheldon (2005) examined whether 109 (18 men and 91 women) graduating seniors adopted healthier values as they matriculated through college. Intrinsic (community, intimacy, and growth) and extrinsic (money, popularity, and appearance) values were defined using Kasser and Ryan's (1993, 1996, 2001) distinction. The study revealed that graduating seniors shifted away from extrinsic to more intrinsic values when compared to their freshman year scores. Graduating seniors with the greatest intrinsic value shifts also reported greater increases in psychological well-being over their college career (Ryff & Keyes, 1995).

Chang (2006) examined the relationship between perfectionism, stress, and psychological well-being in 265 college students. Stress mediated the relationship between perfectionism and autonomy, environmental mastery, and purpose in life; and greater stress was associated with lower psychological well-being. As stress increases, overall adjustment decreases, making students more susceptible to social and psychological problems and poor academic performance (Wintre & Yaffe, 2000).

The above studies showed that psychological well-being can directly influence students' levels of depression, value systems, and perfectionism. It was reported that students' psychological well-being was negatively related to these areas. For instance, as students experienced more stress, their level of psychological well-being decreased.

Ryff's model involves the individual's perception of engagement given the existential challenges of life (Keyes, Shmotkin, & Ryff, 2002). The level of student engagement and involvement determine their cognitive and social development; with the greatest gains transpiring when students actively experience a supportive and mutually reinforcing higher education environment (Milem et al., 2005). Ryff's model of well-being was selected for this research because of its convergence and operatonalization of prior positive functioning theories from a theoretical to an empirical level (Fernandes, Vasconcelos-Raposo, & Teixeira, 2010) and its relevance to the optimization of student potential (Moon, 2003) and because its role in academia has been studied.

Barnes, Potter, and Fiedler's (1983) research indicated that stress has a predictive relationship to academic task performance, and high expectations and pressures of a new academic environment increase student anxiety (Cooke, Beewick, Barkham, Bradley, & Audin, 2006; Price, McLeod, Gleich, & Hand, 2006; Wong, Cheung, Chan, Ma, & Tang, 2006). Environmental stress significantly inversely relates to academic performance and impairs the performance of less academically gifted students or students who struggle to adjust to the higher education environment (Barnes et al., 1983; McCann & Meen, 1984). Higher education concerns about students' environmental mastery, self-acceptance, positive relations with others, and autonomy further establish the Ryff model as the appropriate model to use in this study.

Psychological Well-being and Cultural Intelligence

In Ryff's models of psychological well-being, unlike earlier models, multidimensionality aligns with the cultural intelligence framework. For instance, having positive self-acceptance (self-concept) is vital to cross-cultural adjustment. Self-

acceptance acts as a guide and motivates adaptation to new environments (Templer et al., 2006). Positive self-acceptance suggests that college students would have high motivational CQ and be able to interact with diverse cultures by modifying their behavior to fit the situation or setting. Motivational CQ is further supported through an individual's sense of autonomy and the confidence to try again to succeed (Earley & Mosakowski, 2004).

Positive relations with others and environmental mastery are influenced by formal and informal language and supporting experiences. Behavioral CQ is demonstrated when individuals are able to draw from a repertoire of verbal and nonverbal behaviors (Ang et al., 2007; Earley & Peterson, 2004) such as voice tone, word selection, gestures, and facial expressions. The behavioral repertoire illustrates both a positive relationship with others and environmental mastery and reinforces an individual's positive experiences or psychological well-being.

Metacognition and cognition dimensions support an individual's purpose in life and personal growth. Metacognition provides the schema to process new and old knowledge and strategies (Earley & Ang, 2003) or the directedness needed while simultaneously adjusting to diverse cultural assumptions during cultural interactions. The cognitive dimension supports individuals' personal growth, as they acquire and comprehend new norms and values and social and legal systems in their quest to adjust to new experiences (Ang et al., 2007). Offermann and Phan's (2002) intelligence in context framework illustrated the interconnectedness of the individual's metacognitive and cognitive perspectives and behaviors and their relevance in supporting the individual's personality and sense of good will towards others and promoting psychological well-

being (Brislin, Worthley, & MacNab, 2006; Peterson, 2004; Hampden-Turner & Trompenaars, 2006; Thomas & Inkson, 2004; Triandis, 2006). These parallels are drawn between the Ryff and cultural intelligence multidimensional models. Currently, research does not exist that demonstrates the relationship between the two constructs; hence, this study will fill the gap in the literature.

The Cultural Intelligence Model

The last two decades have seen an increase in globalization; consequently, the U.S. higher education system is coping with the difficulty of educating an increasing diverse student population (Bird & Osland, 2005; Gollnick & Chinn, 2002). These students embody their own distinct social cultural environment while learning to use new cognitive schemas (Byram, 1997) to appropriately respond to and manage cultural interactions within a new cultural context (Galloway, 1998; Byram & Risager, 1999). Culture denotes the collection of individual or organizational beliefs (Block, 2003) or the "programming of the mind which distinguish[es] the members of one category of people from another" (Hofstede, 1994, p.1). If culture struggle is linked to the collective mental programming (Hofstede, 1994), then cultural intelligence is the ability to effectively function in environments where individuals bring different programming (Offermann & Phan, 2002). Performance difficulties may be linked to cultural differences (Kramsch, 1996), and understanding individual programming can provide insight into how institutions of higher education can increase their culturally responsiveness.

Cultural Intelligence

Understanding cultural differences and the ability to bridge these differences is essential for effective cross-cultural interactions (Rockstuhl, Hong, Ng, Ang, & Chin.,

2010). The cultural intelligence model developed by Earley and Ang (2003), and grounded in contemporary theories of intelligence, is a multidimensional construct that defines an individual's capacity to function and manage effectively in culturally diverse settings (Ang et al., 2005; Early & Ang, 2003). Not culturally bound (Early & Ang, 2003), cultural intelligence measures the individual's performance in situations involving "cross-cultural interactions arising from differences in race, ethnicity, and [or] nationality" (Ang et al., 2007, p. 336). The four intelligence dimensions that conceptualize cultural intelligence are metacognition, cognition, motivational, and behavioral (Earley & Ang, 2003; Sternberg, 1986).

The four dimensions represent a group of individual adaptive capabilities that can be manipulated and are significant for effective interpersonal interactions in culturally diverse environments (Van Dyne et al., 2008). Metacognitive cultural intelligence is the abstract reasoning that "individuals use to acquire and understand cultural knowledge" (Ang et al., 2006, p. 101). Cognitive cultural intelligence is the learned or procedural cultural knowledge (Ang et al., 2006) individuals use to differentiate cultural environments and how self is embedded in a cultural context (Rockstuhl et al., 2010). Motivational cultural intelligence is the degree of energy directed "towards learning about and functioning in cross-cultural situations" (Ang et al., 2006, p. 101). Finally, behavioral cultural intelligence "is the capability to [demonstrate] appropriate verbal and nonverbal [behaviors] when interacting" (Ang et al., 2006, p. 101) between cultures.

Metacognitive cultural intelligence. The first dimension is the mental processes individuals use to acquire and understand cultural knowledge (Earley & Ang, 2003); this understanding is reflected in their self awareness during cross-cultural experiences (Ang

& Van Dyne, 2008). Metacognition is the awareness of, attending to, and use of information (Flavell, 1979; Schraw & Dennison, 1994), reflected in individuals' ability to control their own cognitive processes and influencers (Kitchener, 1983). Metacognition is divided into two balancing components: metacognitive knowledge (how to deal with knowledge gained under a variety of circumstances) and metacognitive experience (how to incorporate relevant experiences as a general guide for future interactions) (Earley, 2002; Earley & Ang, 2003; Ng & Earley, 2006).

Metacognitive experiences govern what information to focus on and how to integrate relevant knowledge or experiences in an effort to generate generalized mental (metacognitive and cognitive) schemas that support future interactions (Earley & Ang, 2003). The metacognitive process is used to acquire and understand knowledge and includes self-regulation, planning, monitoring, and evaluating (Armbruster, 1989). Individuals who monitor their progress and make behavioral adjustments accordingly learn and perform more effectively in diverse cultural situations (Ng & Early, 2006; Selmeski, 2007).

The metacognitive dimension reflects King and Baxter Magolda's (2005) constructive developmental theory of intercultural maturity and Bennett's (1993) origin of intercultural sensitivity. Each model promotes individuals with strong cognitive ability having the capacity to create an internal self, open to challenges to their worldview (Bennett, 1993; Earley & Ang, 2003; King & Baxter Magolda, 2005), through the use of metacognitive capabilities such as planning and monitoring to revise perspectives and behaviors as they adjust to various cultural programming (Bennett, 1993; Earley & Ang, 2003; Flavell, 1979; Hofstede, 1994; King & Baxter Magolda, 2005).

Metacognitive cultural intelligence awareness of self and others aligns to Offermann and Phan's (2002) intelligence in cultural context framework that requires individuals to consciously examine their personal cultural assumptions and to diagnose and customize their behaviors during intercultural encounters to increase their cultural intelligence (Livermore, 2010). This requires a suspension of categorizing or stereotyping (Offermann & Phan, 2002) until additional information is gathered (Triandis, 2006). Individuals who score high on the metacognitive CQ are consciously aware of the norms, habits, and behaviors of other cultures and monitor and adjust cultural assumptions and schemas throughout their intercultural exchanges (Ang et al., 2007; Brislin et al., 2006; Earley & Ang, 2003; Livermore, 2010; Nelson & Narens, 1995).

High metacognitive individuals think in a culturally relativistic manner, engage in meaningful interdependent relationships with individuals from cultures different from their national culture, and realize and value human differences (Earley & Ang, 2003). For example, a high metacognitive academic affairs director, who hosted an academic enrichment program for ethnically diverse students, at the conclusion of the program would review the assumptions used to develop the program and students' cross-cultural and within-cultural interactions and use the information to further inform future enrichment opportunities. According to Early (2003), metacognition is a vital attribute of cultural intelligence since much of what is necessary in a new culture relies on an individual's ability to assemble patterns into a logical picture, even if the individual does not know what this logical picture might look like.

Cognitive cultural intelligence. The second dimension, cognitive cultural

intelligence, refers to the knowledge acquired through education and personal experiences (Ang et al., 2007). Cognitive CQ creates a broader understanding of how to maneuver and operate within a different culture and incorporates culture-specific knowledge (Earley & Ang, 2003) such as cultural norms; values; and social and legal systems (Ang et al, 2007), practices, and conventions (Ward & Fischer, 2008); or knowledge of the processes through which culture influences behavior (Thomas, 2006). In concert, the mental (cognitive and metacognitive) dimensions represent what people know of themselves and about other cultures (Earley & Ang, 2003; Thomas, 2006; Ward & Fischer, 2008).

Understanding self (Offermann & Phan, 2002) provides the interpersonal and intrapersonal interpretative rules individuals require for supporting culturally diverse interactions (Early & Ang, 2003; Gecas, 1982; Markus & Kitayama, 1991; Markus & Wurf, 1987). This individual-specific knowledge provides insight into the individual's personality, social identity, and social role (Early & Ang, 2003). Inevitably personal knowledge supplies the guidelines (i.e., schemas, prototypes, goals) for processing social stimuli to discern or understand one's social standing in relation to others. The more multifaceted an individual is in terms of self-awareness and knowledge, the greater the likelihood that the individual will be able to function well cross-culturally (Early & Ang, 2003).

Adapting to new cultural environments frequently necessitates disposing of pre-existing perceptions about why people behave in a certain manner (Triandis, 2006). Thus, knowledge about other cultures is critical to increasing one's cultural intelligence. Without this knowledge, individuals are incapable of applying their interpersonal

knowledge of self to different cultural situations. Individuals with high CQ should also be able to use culture-specific knowledge inductively and deductively. Inductively, individuals should be able to examine incidences in dissimilar cultural settings and appropriately infer meaning from their examination. Deductively, individuals should be able to compare general cultural knowledge to unique cultural situations in order to interact culturally appropriately (Earley & Ang, 2003).

Self-knowledge and knowledge of others should be examined relationally to each other and include individual reflection, which leads toward the development of the cognitive cultural intelligence knowledge base (Earley, 2002; Earley & Ang, 2003; Schraw & Dennison, 1994). Individuals with high cognitive CQ mirror a better appreciation and understanding of similarities and differences found between cultures (Brislin et al., 2006; Imai & Gelfand, 2010). Typically, cognitive cultural intelligence is the focus of intercultural training (Earley & Mosakowski, 2004; Earley & Peterson, 2004); however, knowledge acquisition effectiveness is contingent upon reflective interactions with the remaining cultural intelligence dimensions (Van Dyne, Ang, & Livermore, 2010). To exhibit high cognitive CQ, cognitive multifacetedness should be mitigated by flexibility or the ability to redesign and regulate one's self concept to novel cultural environments (Early & Ang, 2003).

Motivational cultural intelligence. The third cultural intelligence dimension is known as motivational cultural intelligence, a person's interest in learning and performing in cross-cultural situations (Ang et al., 2005; Ang et al., 2006). The motivational dimension is responsible for directing and encouraging the adoption of new cultural values and is characterized by enhancement--wanting to feel good about oneself-

-and growth--wanting to challenge and improve oneself (Crowne, 2008; Earley & Ang, 2003; Earley et al., 2006; Ng & Earley, 2006). Familiarity with another ethnic group's culture-specific way of interacting with the world is inadequate without the individual being motivated to apply this knowledge to increase the likelihood of an appropriate cultural response.

Bennett's (1993) model of intercultural competence addresses the motivational cultural intelligence dimension that focuses on an individual's openness to experiences, extent of interest, and drive to succeed in unfamiliar cultural situations (Costa &McCrae, 1997; Earley & Ang, 2003; Templer et al., 2006). This dimension relies on individual self-concept motivators such as traits, interests, and performance (Brophy, 2004) to guide adaptation to new environments (McCrae & Costa, 1997; Templer et al., 2006). Earley and Ang (2003) further quantified self-concept using the self-preservation driver of self-efficacy and intrinsic motivation.

Self-efficacy or confidence is an individual's judgment regarding his or her "capability to accomplish a certain level of performance" (Bandura, 1986, p. 391), which supports the development of intercultural effectiveness through perseverance in spite of obstacles (Bandura, 1994; Earley & Ang, 2003). Individuals with high self-efficacy learn from examining other individuals' success in performing similar intercultural tasks (Bandura, 1994; Earley & Ang, 2003) and monitoring and reflecting on feedback from physical and emotional states (Bandura, 1994; Earley & Ang, 2003). Accordingly, individuals tend to avoid tasks and/or situations that they perceive to be beyond their capabilities. This is especially significant for motivational CQ since successful cultural interactions are based on a sense of confidence or expectancy (DeNisi & Pritchard, 2006;

Eccles & Wigfield, 2002) and intrinsic motivation that increase the likelihood of intercultural success.

Earley et al., (2006) offered an uncomplicated explanation of the motivational dimension by stating that "rigorous knowledge of cultural facts or rituals doesn't guarantee [cultural] adjustment; [instead], these facts and bits of information become useful only if a person is appropriately motivated and guided" (p. 81). Extrinsic and intrinsic motivators provide the impetus for supporting individuals' motivational CQ drive. Tangible extrinsic motivators like career advancement, creativity, innovation, recognition, expansion of global networks, and salary and profit (Livermore, 2010) may drive intercultural encounters (Van Dyne et al., 2010). Intrinsic motivators, which go beyond financial benefits (Macdonald, 2009) and encompass enjoyment, develop a sense of satisfaction from being culturally intelligent (Van Dyne et al., 2010). Extrinsic motivators are compelling, yet intrinsic motivators are used to promote and sustain motivational cultural intelligence (Ang & Van Dyne, 2008; Deci & Ryan, 1985).

Therefore, the higher the motivational CQ, the greater likelihood the individual will be inclined to experience new and diverse cultural incidences, as well as to place value (Ang et al., 2007; Ang & Van Dyne, 2008) on interpersonal interactions with culturally different individuals. Intercultural effectiveness research supports Earley and Ang's assumptions that motivation is positively associated with the nature of individuals who seek opportunities to acquire knowledge and experiences about different cultural groups (Mueller & Pope, 2001). Individuals with high motivational CQ direct attention and energy toward cross-cultural situations based on intrinsic interest and confidence in cross-cultural effectiveness (Deci & Ryan, 1985; Bandura, 2002).

Behavioral cultural intelligence. Behavioral cultural intelligence is the fourth cultural intelligence dimension. Ward and Fischer (2008) defined this dimension as "an individual's flexibility in demonstrating the appropriate actions when interacting with people from different cultural backgrounds" (p. 3). Behavioral cultural intelligence is aligned to self-presentation and impression management theory (Earley & Ang, 2003; Goffman, 1959; Rosenfeld, Giacalone, & Riordan, 1995). Making a 'good first impression' in a cross-cultural setting requires that an individual attend, not only to verbal and nonverbal communications, but to kinesics, facial expressions, proxemics, and time, which vary by culture (Earley & Ang, 2003; Livermore, 2010). Behavioral CQ focuses on individual performances that shape the perceptions of the individuals' new encounters (Earley & Ang, 2003). Individual performances are divided into several areas:

- self-presentation–the ability to expresses oneself (Earley & Ang, 2003).
- framing–the ability to communicate both verbally and nonverbally appropriately in context (Earley & Ang, 2003).
- scripting–the ability to be flexible and adaptive and to improvise (Earley & Ang, 2003).
- staging–the ability to represent appropriate symbols verbally or nonverbally or as artifacts (Earley & Ang, 2003).
- performing–the ability to perform culturally appropriate behaviors in context (Earley & Ang, 2003).

Positive or negative impressions can be enhanced by performances (Earley & Ang, 2003; Leary, 1996). Impression awareness is individuals' self-awareness that others

are formulating impressions of them based upon their behavior (Leary, 1996). Impression awareness is demonstrated when an American uses 'maybe' or 'slightly' when communicating in Asian societies, which value conformity over the Western value of assertiveness (Earley & Ang, 2003). Self-presentation and cognitive flexibility is essential to knowing when and when not to adapt one's behavior to manage others' impressions (Van Dyne et al., 2010).

Behavioral cultural intelligence relates directly to the individual's ability to obtain and act upon newly acquired knowledge in a culturally competent manner in cross-cultural situations (Earley & Ang, 2003). Individuals draw from their repertoire of verbal and nonverbal capabilities and use culture-specific knowledge to exhibit culturally appropriate words, tones, facial expressions, and gestures (Gudykunst, Ting-Toomey, & Chu, 1988). Individuals with high behavioral CQ adjust their behaviors to culturally appropriate forms in order to promote culturally effective interactions that help culturally diverse others feel at ease (Rockstuhl et al., 2010).

Behavioral cultural intelligent individuals use "purposive, motivate-oriented, and strategic" (Earley & Ang, 2003, p.159) culturally intelligent behaviors that reinforce a positive self-presentation as they respond to situational clues in cross-cultural interactions (Earley, 2002; Earley & Ang, 2003). Metacognitive experiences support the relevance of a particular behavior in a new cultural situation. For example, in some cultures hugging is a standard expression, whereas in other cultural settings hugging might be restricted to close family members only or not observed at all (Earley et al., 2006). High behavioral CQ individuals actively demonstrate culturally intelligent behaviors by using metacognitive structures and culture-specific knowledge to discern subtleties and adjust

behaviors to influence the beliefs and feelings others hold (Earley & Ang, 2003; Livermore, 2010).

Cultural Intelligence Conceptual Distinctiveness

Cultural intelligence is an individual's "capability to grasp, reason, and behave effectively in situations characterized by cultural diversity" (Ang et al., 2007, p. 337). Although this multidimensional approach to intercultural competence is embedded within the intelligence literature, it is useful to further distinguish the construct. Sternberg's (1986) integrated framework of multiple intelligences suggested that different loci of intelligences exist within an individual's mental and behavioral capabilities (verbal and nonverbal). General intelligence is "the ability to grasp and reason correctly with abstractions (concepts) and solve problems" (Schmidt & Hunter, 2000, p. 3). Intelligences research focuses on specific domains, such as the general cognitive ability of a person, commonly referred as IQ, Emotional Intelligence (EQ), Social Intelligence (SI), and Practical Intelligence (PQ) (Ang & Van Dyne, 2008). Ang and Van Dyne (2008) contended that the four cultural intelligence dimensions are similar to and different from the four other forms of intelligence.

The ability to understand the feelings, thoughts, and behaviors of self and others in interpersonal situations and to act appropriately upon that understanding is known as social intelligence (Elenkov & Pimentel, 2008; Kihlstrom & Cantor, 2000). According to Elenkov and Pimentel (2008), SI has three dimensions: cognitive, which reflects perspective taking, understanding people, knowing social rules, and openness to others; behavioral, characterized as being good at dealing with people, social adaptability, and interpersonal warmth; and motivational, characterized by manipulating, leading, and

motivating others. Individuals with high social intelligence use interpersonal knowledge and skills to problem solve with others (Earley & Peterson, 2004). However, in isolation social intelligence does not consider cultural differences (Earley & Ang, 2003).

Emotional intelligence is the ability to perceive and use emotions to improve performance on cognitive tasks, make sense of culturally different individuals' emotions, and effectively regulate affective states (Earley & Peterson, 2004; Elenkov & Pimentel, 2008; Mayer & Salovey, 1997). This ability is predicated on the premise that the individual possesses a familiarity with another's culture norms and values, which may or may not be factual (Earley & Peterson, 2004). Cultural competence is not a prerequisite for emotional intelligence; as a result, an individual's emotional intelligence may vary across cultures (Earley & Ang, 2003). Cultural intelligence refers to a general set of capabilities relevant in culturally diverse situations, not one specific culture (Ang & Van Dyne, 2008). Emotional intelligence, unlike cultural intelligence, focuses on the general ability to perceive and manage emotions without considering the cultural context.

Cultural intelligence differs from other intercultural competency constructs. A review of intercultural competencies literature reveals a lack of consistency across cultural definitions and poor integration, resulting in a fragmented list of competencies that lack theoretical coherence (Yamazaki & Kayes, 2004). Constructs may be labeled differently although they have the same meaning, while constructs with similar meanings may be labeled alike (Gelfand, Iman, & Fehr, 2008). For example, both cultural sensitivity and cultural empathy refer to the ability to empathize with the feelings, thoughts, and behavior of people from diverse cultures (van Oudenhoven & van der Zee, 2002). According to van der Zee and van Oudenhoven (2000), flexibility is defined

differently depending on the author. Some authors define flexibility as the ability to adjust behavior in a new cultural setting while other authors incorporate tolerance for ambiguity, the willingness to change, and ability to deal with stress into their definitions (Arthur & Bennett, 1995). Cultural intelligence is not bound by a particular culture or cultural setting and mitigates the terminology inconsistencies.

According to Ang et al. (2007), cultural intelligence is grounded in the theoretical framework of multiple intelligences, and its four dimensions provide a logical rationale for organizing and integrating existing research on intercultural competencies. The authors (Ang & Van Dyne, 2008) review of intercultural competency instrument scales highlighted the gaps that CQ addresses (Ang et al., 2007). Ang et al. (2007) found that most intercultural competencies scales mix both ability and personality (e.g., CCAI: Cross-Cultural Adaptability Inventory; CCWM: Cross-Cultural World Mindedness; CSI: Cultural Shock Inventory; ICAPS: Intercultural Adjustment Potential Scale; IDI: Intercultural Development Inventory; MAKSS: Multicultural Awareness-Knowledge-Skills Survey; OAI: Overseas Assignment Inventory; and Prospector), which can make it difficult to determine the validity and precision of the constructs (Ang et al., 2007, Ang & Van Dyne, 2008).

While many scales include items similar to the cultural intelligence items, no scale is based explicitly on contemporary theories of intelligence and systematically assesses the four aspects of intelligence (Ang et al., 2006; Ang et al., 2007; Earley & Ang, 2003; Templer et al., 2006; Thomas, 2006). Cultural intelligence is not culturally bound, which makes it different from cultural competency models that focus on country-specific knowledge or ability, such as the Culture-Specific Assimilator (Ang et al., 2007).

Instead, the four dimensions of cultural intelligence can be enhanced through training, experiences, and education (Earley & Peterson, 2004; Ng, Van Dyne, & Ang, 2009). Therefore, cultural intelligence concentrates on the development of a global theoretical framework for identifying and understanding the cultural skills, knowledge, and behaviors (Gelfand et al., 2008) necessary to function effectively in a culturally diverse society (Earley & Ang, 2003; Livermore, 2010).

Critique of Cultural Intelligence

Although the cultural intelligence model has received a favorable reception from researchers (Elenkov & Manev, 2009), it is not without criticism. Hampden-Turner and Trompenaars (2006) posit three objections to the cultural intelligence model's credibility. First, cultural value systems, norms, and beliefs are relative; to suggest that one culture is more intelligent is biased (Hampden-Turner & Trompenaars, 2006) and does not take into consideration differences. An individual's adjustment to environmental situations is connected to the universality of common values (Hampden-Turner & Trompenaars, 2006). Task performance levels variance results from synergistic differences (Hampden-Turner & Trompenaars, 2006). The synergy hypothesis addresses the first objection that contrasting values are synergized (Benedict, 1934; Hampden-Turner & Trompenaars, 2006; Ng & Earley, 2006).

The second objection is that cultural research is a postmodernism construct. Accordingly, cultural intelligence is considered an affront to the objective scientific schema (Hampden-Turner & Trompenaars, 2006). The complementary hypothesis addresses this objection as cultures converge into a single phenomenon that allows exploration of its contrasting aspects (Hampden-Turner & Trompenaars, 2006).

Convergence is an objective description and counters the argument that cultural intelligence is subjective as cultural values are not random or arbitrary (Benedict, 1934; Hampden-Turner & Trompenaars, 2006; Ng & Earley, 2006).

The third objection is that the examination of cultures from a category perspective exclusively could be considered stereotypical. The latency hypothesis counters this objection through assessing both dominant and micro values when distinguishing cultures (Hampden-Turner & Trompenaars, 2006). Despite the aforementioned criticisms, the cultural intelligence model is still practical and empirically sound as has been demonstrated in business literature.

Intercultural Effectiveness Outcomes

Grounded in multiple intelligence research, cultural intelligence is a promising new approach to cross-cultural competence (Manning, 2003; Triandis, 2006). Research to date has concentrated mostly on conceptualizing the cultural intelligence theory (Ang et al., 2007; Sternberg & Grigorenko, 2006). Empirical research has identified intercultural effectiveness outcomes that support individuals working in cultures that differ from their native culture (Ang & Van Dyne, 2008; Ng & Earley, 2006). Outcomes include task performance, cultural judgment and decision making (CJDM), intercultural negotiation, and cross-cultural adjustment and well-being (Ang et al., 2007; Elenkov & Manev, 2009; Imai & Gelfand, 2007, Rockstuhl & Ng, 2008; Templer et al., 2006).

Task performance. The research of Ang et al. (2007) established that task performance (a behavioral outcome) responsibilities are dependent on an individual's knowledge, skills, abilities, and motivation. The four cultural intelligence dimensions relate to this behavior outcome. Metacognitive and behavioral cultural intelligence

positively enhance task performance in culturally diverse settings fulfilling the role-prescribed behaviors (Ang et al., 2007; Campbell, 1999; de la Garza Carranza & Egri, 2010; Rose, Sri Ramalu, Uli, & Kumar, 2010).

A task performance study involving 98 international managers and 103 foreign professionals established both metacognitive and behavioral cultural intelligence as predictors of successful task performance (Ang et al., 2007). The international managers and foreign professionals' task performance evaluation was conducted via problem-solving simulation and through supervisor ratings of two in-role responsibilities, respectively (Ang et al., 2007). De la Garza Carranza and Egri's (2010) study of 122 Canadian small business executives confirmed that overall cultural intelligence was indeed positively related to task performance as it related to the employee's commitment and the organization's reputation.

Metacognitive culturally intelligent individuals use metacognitive skills and abilities to determine when to apply the cultural knowledge that best supports role expectation (Ang et al., 2007; Earley & Ang, 2003). These individuals use cognitive CQ to select the appropriate knowledge structure for the cultural context while directing energy toward learning the role expectation. Motivational CQ facilitates learning the role expectation even in the midst of confusing cultural cues while behavioral cultural intelligence is used to exhibit appropriate verbal and nonverbal behaviors to meet the role expectation of others, thereby, exhibiting a positive self-presentation (Earley & Ang, 2003; Goffman, 1959; Leary, 1996).

Cultural judgment and decision making. Traditionally, cultural judgment and decision-making (CJDM) research has focused on the human information necessary for

making decisions (Einhorn & Hogarth, 1981). Ethnic minority college students may have to deny their own opportunities for career advancement against their family's wishes when deciding whether to accept a job requiring them to relocate (Luce et al., 1997). However, Ang et al. (2007) posited that the quality of decision making is significant when interacting in culturally diverse settings. For that reason, effective CJDM (a cognitive outcome) is dependent upon appropriate appraisal and understanding of cultural cues and concerns (Mendenhall & Oddou, 1995). Decisions are made after careful judgment of alternatives using mental (metacognitive and cognitive) processes such as critical thinking, problem solving, evaluation of information, and comparison of alternative outcomes (Einhorn & Hogarth, 1981; McClelland et al., 1987).

Research supports metacognitive cultural intelligence and cognitive cultural intelligence as predictors of cultural judgment and decision-making effectiveness (Ang et al., 2007; Mannor, 2008; Triandis, 2006; Van Dyne, Koh, & Ng, 2004). Using a correlational research design, Ang et al. (2007) evaluated 235 U.S. undergraduate students, 359 Singapore undergraduate students, and 98 international managers' appraisals of cross-cultural decision making scenarios and found that mental (metacognitive and cognitive) CQ significantly predicts cultural judgment and decision making. Cognitively culturally intelligent individuals use elaborate mental social-cultural interaction schemas to identify fundamental differences and similarities and examine and understand issues that impact cultural judgment and decision making (Ang et al., 2007), thus, not making quick decisions based only on one or two cultural clues but instead evaluating the situation and identifying relevant information for making the decision and incorporating both to make the correct decision (Mannor, 2008; Triandis, 2006).

Culturally informed decision making fosters an understanding of cultural differences that might otherwise lead to misunderstandings, conflicts, low morale, and lackluster productivity (Hampden-Turner & Trompenaars, 2006; Levy-Leboyer, 2004).

Intercultural negotiation. Intercultural negotiation is a critical skill for individuals functioning in a constantly changing global environment (Adler, 1997, 2002; Bernard, 2009; Cai & Drake, 1998). Cultural intelligence is a predictor of effective intercultural negotiations (Imai & Gelfand, 2010). Imai and Gelfand's (2010) research, involving 150 undergraduate and graduate students (75 Americans and 75 East Asians) at a large university in the eastern part of the United States, found that culturally intelligent individuals, when evaluated using cross-cultural dyads, are cooperative and motivated and employ more strategic sequencing of integrative behaviors to achieve mutually beneficial outcomes. Motivational cultural intelligence is the strongest predictor of intercultural negotiation effectiveness. Highly motivationally culturally intelligent persons are more likely to be receptive to complementary intercultural negations that reflect mutual self-efficacy and self-presentation (Earley & Ang, 2003; Goffman, 1959; Rosenfeld et al., 1995) when establishing a win-win for both parties (Imai & Gelfand, 2010; Klafehn, Banerjee, & Chiu, 2008; Livermore, 2010).

Cross-cultural adjustment and well-being. Cross-cultural adjustment (an affective outcome) is the degree of psychological comfort and familiarity an individual experiences when living and working in a new host culture (Black 1988; Black et al., 1991). Cross-cultural adjustment is vital for expatriates or other professionals who are working abroad temporarily (Black, 1990; Richardson & McKenna, 2002) and for ethnic minority college students in a higher education environment (Cooke et al., 2006; Price et

al., 2006; Wong et al., 2006). Cultural adjustment implies a socio-cultural sense of adjustment and psychological well-being (Ang et al., 2007), which studies have found positively relates to both motivational and behavioral cultural intelligence (Dagher, 2010; Ramalu, Raduan, Kumar, & Uli, 2010; Templer et al., 2006). Black and his colleagues (1991) proposed three dimensions of expatriate or cross-cultural adjustment: work adjustment, interaction adjustment, and general adjustment. Although related, these dimensions are separate and distinctive:

- work adjustment--adjustment to the job;
- interaction adjustment--adjustment to interacting with host-country nationals; and
- general adjustment--adjustment to the general non-work environment (Black et al., 1991, p. 291-317).

Van Dyne, Ang, and Koh (2008) examined the discriminant validity of the four dimensions of cultural intelligence relative to cultural judgment and decision making, interactional adjustment, and mental well-being. Study results concluded that motivational and behavioral CQs related positively to interactional adjustment and mental well-being. A total of 332 Malaysian business expatriates completed the Expatriate Adjustment Scale (Black & Stephens, 1989), and results reflected the assertion of Ang et al. (2007) and Templer et al. (2006) of motivational cultural intelligence's importance to cross-cultural adjustment (Ramalu et al., 2010).

Both interactional adjustment and work adjustment (Black & Stephens, 1989) are impacted by personality traits and cross-cultural adjustment (Stahl, Miller, & Tung, 2002). Personality traits of agreeableness, conscientiousness, extraversion, sensitivity [neuroticism], and learning [openness to experience] (Psychometric Success, 2011;

Srivastava, 2010; Wang, 2008) are key influencers of expatriates and students' performance (Chamorro-Premuzic & Furnham, 2003; DeNeve & Cooper, 1998; Rothstein et al, 1994). A desire for cross-cultural adjustment, social relations, tolerance of ambiguity, confidence, and the ability to satisfy expectation are factors that support positive adjustment (Black, 1988). Behavioral cultural intelligence transforms the desire for cross-cultural adjustment in academia, work, life, and social situations into culturally compatible intelligent verbal and nonverbal performances (Dagher, 2010; Earley & Ang, 2003; Lee & Sukoco, 2010).

Cross-cultural adjustment and psychological well-being involve the stress individuals feel when moving into unfamiliar cultures (Ang et al., 2007). However, individuals with high motivational cultural intelligence have an intrinsic interest in other cultures and confidence regarding their skills and abilities to adjust to a culturally diverse workforce, educational system, or social environment (Ang et al., 2007; Dagher, 2010; Ramalu et al., 2010; Templer et al., 2006). Additionally, behavior cultural intelligence relates positively to cross-cultural adjustment because those who successfully adjust to culturally diverse situations are driven to sustain positive intercultural relationships in their new work, education, or social environments (Ang et al., 2007; Dagher, 2010; Ramalu et al., 2010; Templer et al., 2006).

These intercultural effective outcomes articulate the importance of individuals having high cultural intelligence. The above cultural intelligence research occurred primarily in the global business and expatriate arenas. A title search performed via the EBSCO Host database using the keywords "cultural intelligence" and "ethnic minority college students" returned just one item. Only one article (Coates et al., 2003) related to

ethnic minority students; however, none of the articles addressed cultural intelligence in relation to ethnic minority students attending a higher education institution. Another title search was performed via the EBSCO Host database using the keywords "cultural intelligence" and "psychological well-being," which returned no items.

Additional research is needed on cultural intelligence and ethnic minority undergraduate students. More research is needed to determine if high cultural intelligence positively affects adjustment, specifically psychological well-being of ethnic minority college students. Since little research has been done on cultural intelligence with ethnic minority college students, the CQ theoretical model should be tested with this new population.

Cultural Intelligence and Personality

Cultural intelligence involves how efficiently an individual can adapt to culturally diverse situations. The Big Five personality traits and cultural intelligence dimensions demonstrated differential relationships (Shannon & Begley, 2008). Personality traits relate to particular CQ domains and have a predictive relationship. Empirical research indicates that conscientiousness relates positively to metacognitive CQ; agreeableness positively relates to behavioral CQ; neuroticism negatively relates to behavioral CQ; extraversion was linked to cognitive, motivational, and behavioral cultural intelligence dimensions; and openness to experiences was related to all four dimensions (Ang et al., 2007). The Big Five personality traits underlie the cultural intelligence capabilities (Ang et al., 2006) and are the most appropriate personality theory for this study.

Big Five Personality Traits

The Five Factor Model refers to the personality traits that are the most significant in providing an unbiased description of self and others (Tokar et al, 1998; Widiger & Trull, 1997). Based on the tenets of evolutionary (natural selection) personality psychology (Buss, 1991), the Big Five universal adaptive mechanisms allow human beings to cope with and meet the demands of diverse physical, social, cultural, and educational environments (Buss, 1991; Caligiuri, 2000; MacDonald, 1998; Ozer & Benet-Martinez, 2006). The Big Five structure does not suggest that personality differences can be reduced to only five factors; instead, it represents personality hierarchy, with each factor containing a large number of specific and narrowly defined traits (Schmukle, Back, & Egloff, 2008). These overarching factors and specific traits provide a more complete character analysis of an individual's affective, behavioral, and cognitive character (McCrae & Costa, 1997). Historically, the Big Five personality taxonomy (Wiggins, 1996) consisted of five broad factors coupled with discrete facets:

- Factor I: Surgency or Extraversion is characterized by the discrete traits of talkativeness, assertiveness, and activity level with contrast traits such as silence, passivity, and reserve;
- Factor II: Agreeableness or Pleasantness is characterized by the discrete traits kindness, trust, and warmth with contrast traits such as hostility, selfishness, and distrust;
- Factor III: Conscientiousness or Dependability is characterized by the discrete traits of organization, thoroughness, and reliability and contrast traits such as carelessness, negligence, and unreliability;

- Factor IV: Emotional Stability vs. Neuroticism includes such traits as nervousness, moodiness, and temperamentality; and
- Factor V: Intellect or Openness to Experience is characterized by the discrete traits of imagination, curiosity, and creativity and with the contrast traits of shallowness and imperceptiveness. (Goldberg, p. 27, 1993)

The Big Five personality traits reflect the dimensions of individual variances that represent consistent thoughts, feelings, and behaviors over time (McCrae & Costa, 1991).

NEO Personality Inventory

The NEO Personality Inventory (NEO-PI) (Costa & McCrae, 1997) is one of the most well-known inventories developed to measure the Big Five personality traits. NEO-PI measures not only the five factors but also the more specific facet scales for neuroticism, extraversion, and openness to experiences (Piedmont & Weinstein, 1993). Goldberg (1999) created the IPIP-NEO, alternative version for the public domain. The IPIP-NEO is a practical alternative because the mean correlation between NEO-PI-R and the corresponding IPIP scales is .73 with a mean correlation of .94 after correcting for attenuation due to unreliability (Goldberg et al., 2006). Available in two online versions, the original version contains 300 items and 120 items. The shorter version can be completed in 20 minutes and will be used for this study.

Personality and Cross-cultural Outcomes

The Big Five personality traits (openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism) have been verified through numerous empirical studies of which some research settings include institutes of higher education

(Costa & McCrae, 1994). The Big Five personality traits of conscientiousness and agreeableness have been demonstrated to be significantly related to psychological adjustment (Costa & McCrae, 1992b). Research with Taiwanese students resulted in agreeableness and conscientiousness relating to psychosocial health (Chen & Piedmont, 1999). Ward, Berno, and Main's (2002) study of international students in New Zealand showed that openness to experience was related to a decrease in socio-cultural difficulties. Finch, Okun, Pool, and Ruehlman's (1999) quantitative review of 48 studies found conscientiousness had a direct negative effect on depression while agreeableness impacted depression through social support.

Two samples of sojourners in Australia (165 Singaporean and 139 Australian students) and Singapore (244 Australian expatriates and 671 Chinese Singaporeans) were studied to explore the relationship between the Big Five personality dimensions and cross-cultural adjustment. The results demonstrated that conscientiousness and agreeableness were also significant correlates to psychological well-being in the samples and to cross-cultural adjustment in the Singaporean group (Ward, Leong, & Low, 2004). In another study involving Singaporean and Malaysian students in New Zealand, findings indicated that extraversion was predictive of improved psychological well-being (Searle & Ward, 1990).

Personality traits remain stable over time, and situations (Costa & McCrae, 1992a) are generalizable across cultures (McCrae & Costa, 1997; Salgado, 1997) and are a reliable and valid measure of predictive human behavior (McAdams, 1992). Empirical research findings are consistent with Costa and McCrae (1992) and Early and Ang's

(2003) research and support the relationship between personality and cross-cultural adjustment (Ward, Leong, & Low, 2004).

Summary

Empirical research on cultural intelligence outcomes has been positive, specifically as it relates to improved task performance, cultural judgment and decision making, intercultural negotiation, and cross-cultural adjustment and well-being (Ang et al., 2006; Ang et al., 2007; Ang & Van Dyne, 2008; Dagher, 2010; Elenkov & Manev, 2009; Imai & Gelfand, 2010; Ramalu et al., 2010; Templer et al., 2006). However, these studies have focused on the business world while ethnic minority college students have been neglected. There is a positive correlation between cultural intelligence and cross-cultural adjustment and well-being. If this relationship remains constant when applied outside of the business world with minority college students, will there be similar outcomes application?

Empirical findings imply an antecedent relationship between the Big Five personality traits and cultural intelligence. Because of the Big Five and cultural intelligence predictive relationship, cultural intelligence may be a predictor of ethnic minority college students' psychological well-being. In reviewing the literature, no research studies were located that examined the cultural intelligence of ethnic minority college students. As well, there were no empirical studies located that looked at the predictive relationship between cultural intelligence and ethnic minority college students' psychological well-being. If the model is applicable to this population, it may provide objective information about improving cross-cultural adjustment and well-being. This study would fill that gap and add to the nomological network of cultural intelligence by

examining whether the cultural intelligence dimensions (metacognitive, cognitive, motivation, behavior) predict ethnic minority college students' cultural intelligence and whether cultural intelligence predicts psychological well-being. In addition, this study would add empirical evidence to support conceptualizing cultural intelligence in a new population, ethnic minority college students. Finally, the study would add empirical evidence to support conceptual theorizing articles establishing a relationship between the new theoretical construct of cultural intelligence and psychological well-being. The results may be useful in developing student programming that better attends to the cultural proclivities students bring with them to college and, in so doing, may increase students' degree attainment. Since cultural intelligence is a growth-based capabilities theoretical model and is malleable, cultural intelligence can be assessed and enhanced through intentional training and experiences

CHAPER THREE: METHODOLOGY

Introduction

This research study used a correlational research design. The purpose of this study was to determine if there is a predictive relationship between the Big Five personality traits and the cultural intelligence of ethnic minority college students, as well as if there is a predictive relationship between cultural intelligence factors and the psychological well-being of ethnic minority college students. This research study was guided by the following two questions:

1. Will the combination of the Big Five personality traits predict the cultural intelligence of ethnic minority college students?
2. Will the combination of the cultural intelligence factors predict the psychological well-being of ethnic minority college students?

These research questions were answered by analyzing the data using two standard multiple regressions to determine if the Big Five personality traits predict cultural intelligence and if cultural intelligence predicts psychological well-being.

Participants

The participants were a purposive random sampling of ethnic minority college students attending a southern HBCU, whose program of study excluded the business degree areas. Ethnic minority college students were defined as freshman, sophomore, junior, and senior students who self-identified themselves using the definitions utilized by the United States Department of Education (2008). The university's registrar distributed the electronic survey to 3,978 undergraduate students. A total of 284 students responded

to the electronic survey, which yields an overall response rate of 7.1%. Respondents who were enrolled in a business degree program, and those who did not complete the entire survey, were removed. Non-minority students who completed the survey were also removed. This yielded 137 usable surveys with a return rate of 3.4%. This response rate is little less than the anticipated response rate of 14% for web surveys (National Survey of Student Engagement, 2003). Although the response rate is low, the number of completed responses received was sufficient to conduct the analysis.

Setting

The study setting was a medium-sized public residential research university in the southeastern region of the United States. The university is divided into six schools and two colleges: the School of Agriculture and Environmental Sciences, College of Arts and Sciences, School of Business and Economics, School of Education, School of Technology, College of Engineering, School of Nursing, Joint School of Nanoscience and Nanoengineering, and School of Graduate Studies. The 2009-10 undergraduate enrollment was 89% African American/Black, less than 1% American Indian/Alaskan Native, 1% Asian/Pacific Islander, 1% Hispanic, 5% White/Caucasian, and 1% International (College Portrait, 2010).

Instrumentation

Students completed an Internet-based survey that consisted of demographic questions, the Cultural Intelligence Scale (Ang & Earley, 2003), the Internal Personality Item Pool (Goldberg, 1999), an alternate version of Costa and McCrae's (1992) commercial Neuroticism, Extraversion, and Openness Personality Inventory (NEO-PI-R

™), and the Ryff Scales of Psychological Well-Being (1989) via the online survey system.

Demographic questions. Section one of the Internet-based survey contained eleven multiple-choice demographic items (Appendix B). The demographic questions gathered basic information about the participants' college/university, age, sex, ethnicity, race, country of birth, program of study, and student classification. In addition, participants were asked to indicate what foreign language they spoke and if they had completed a multicultural or cross-cultural class as part of their degree program.

Cultural intelligence scale. The Cultural Intelligence Scale (CQS) was used to measure the four dimensions of cultural intelligence (Ang & Earley, 2003). The 20-item scale (Appendix C) CQS was composed of the metacognitive CQ, cognitive CQ, motivational CQ, and behavioral CQ factors and used a 7-point Likert-type scale (i.e., 7 = strongly agree, 6 = agree, 5 = slightly agree, 4 = neutral, 3 = slightly disagree, 2 = disagree, and 1 = strongly disagree) for subjects to select the belief that corresponds best to their cultural beliefs (Ang et al., 2007; Van Dyne et al., 2008). According to Ang et al., (2005) confirmatory factor analysis yielded good validity and reliability. All four subscales (Metacognition CQ (α = .76); Cognitive CQ (α = .84); Motivation CQ (α = .77); and Behavioral CQ (α = .84)) had high Cronbach alpha values. In the present study, Cronbach alpha coefficients for each subscale were Metacognition CQ (α = .83); Cognitive CQ (α = .89); Motivation CQ (α = .85); Behavioral CQ (α = .87), and an overall Cronbach alpha coefficient (α = .90).

Score interpretation. The four-dimensions of cultural intelligence are aligned to an individual's mental processing, knowledge, desires, and abilities, and are viewed as

the degree to which an individual reflects a particular state. Individuals are classified as low, average, or high, respectively, if their score is in the lowest 30%, middle 40%, or highest 30% of scores when compared to similar people.

Metacognitive CQ. Metacognition refers to an individual's knowledge and control of cognition. Knowledge of cognition is divided into three sub-processes--declarative knowledge, procedural knowledge, and conditional knowledge--that facilitate the reflective aspect of metacognition (Paris et. al., 1984; Schraw & Dennison, 1994; de Jager, Jansen, & Reezigt, 2005). The metacognitive process is used to acquire and understand knowledge and includes self-regulation, planning, monitoring, and evaluating (Armbruster, 1989). Individuals who monitor their progress and make adjustments accordingly learn and perform more effectively. Individuals who score high on the metacognitive CQ subscale would question cultural assumptions and consider cultural norms throughout cultural interactions (Ang et al., 2007). A score for metacognitive CQ is low if it falls between 4 and 11, moderate if it falls between 12 and 20, and high if it falls between 21 and 28.

Cognitive CQ. Cognitive intelligence refers to general knowledge. Cognitive CQ is an individual's cultural knowledge of different cultures' norms, practices, and conventions (Van Dyne et al., 2009). This knowledge may be acquired through education and experiences (Ang et al., 2007). High cognitive CQ reflects an understanding of similarities and differences across cultures (Brislin et al., 2006). A cognitive CQ score is low if it falls between 6 and 18, moderate if it falls between 19 and 30, and high if it falls between 31 and 42.

Motivational CQ. Motivational CQ relates to an individual's capability to direct attention or energy and to adapt to unfamiliar intercultural situations whether it originates through self-efficacy motivations, intrinsic interests, or other driving forces (Ang & Van Dyne, 2008). Individuals with high motivational CQ direct attention and energy toward cross-cultural situations based on intrinsic interest and confidence in their cross-cultural capability (Bandura, 2002; Deci & Ryan, 1985). A motivational CQ score is low if it falls between 5 and 15, moderate if it falls between 16 and 25, and high if it falls between 26 and 35.

Behavioral CQ. Behavioral CQ reflects an individual's capability to demonstrate appropriate verbal and nonverbal actions during intercultural interactions, despite one's natural reactions to the culture (Ang et al., 2007; Van Dyne et al., 2009). A behavioral CQ score is low if it falls between 5 and 15, moderate if it falls between 16 and 25, and high if it falls between 26 and 35.

IPIP-NEO. The Big Five personality traits were the study's predictor variable and were measured by Goldberg's (1999) Internal Personality Item Pool (Appendix D), an alternate version of Costa and McCrae's (1992) commercial Neuroticism, Extraversion, and Openness Personality Inventory (NEO-PI-R ^{TM}). IPIP-NEO is a public domain 120-item (positively and negatively keyed) personality assessment (Goldberg, 2001). The five personality traits assessed are Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness.

The average correlation between the IPIP-NEO and NEO-PI-R scale is .81, which, when corrected for attenuation due to unreliability, translates into a correlation of .90 (Goldberg, 1992). Each domain consists of 24 questions that are responded to using a

5-point Likert scale (i.e., 4 = very accurate, 3 = moderately accurate, 2 = neither inaccurate nor accurate, 1 = moderately inaccurate, and 0 = very inaccurate) for rating. Domain internal consistency for each trait is reported as Neuroticism (α = .91), Extraversion (α = .91), Openness to Experiences (α = .89), Agreeableness (α = .85), and Conscientiousness (α = .90), with an average domain coefficient alpha value of .89. Cronbach alpha coefficients for the current study were Neuroticism (α = .86) and Extraversion (α = .81). Openness to Experiences, Agreeableness, and Conscientiousness had Cronbach alpha coefficients with a value over .8.

Score interpretation. For negative keyed items, the response "very inaccurate" is assigned a value of 1, "moderately inaccurate" a value of 2, "neither inaccurate nor accurate" a 3, "moderately accurate" a 4, and "very accurate" a value of 5. For negative keyed items, the response "very inaccurate" is assigned a value of 5, "moderately inaccurate" a value of 4, "neither inaccurate nor accurate" a 3, "moderately accurate" a 2, and "very accurate" a value of 1. Once numbers were assigned for all of the items, a score for each trait was obtained by summing the items in each category.

The IPIP-NEO classifies the degree to which the respondent possesses a particular personality trait as low, average, or high, which is neither positive nor negative. Low, average, or high is operationally defined as a score in the lowest 30%, middle 40%, or highest 30%, respectively, for respondents of the same sex and approximate age (Johnson, 2010). Numerical scores are graphed as percentile estimates.

Extraversion. Extraversion is classified by obvious engagement with the external world (Srivastava, 2010). Extraverts enjoy being with people and are full of energy. Individuals who score low in Extraversion are known as introverts and lack the

exuberance, energy, and activity levels of extreme extroverts. Introverts are characterized as quiet, deliberate, and more disengaged from the social world. However, their lack of engagement should not be interpreted as shyness or depression; they simply require lesser interpersonal stimuli than extraverts do. An individual's Extraversion score is considered low if it falls between 0 and 36, moderate if it falls between 37 and 83, and high if it falls between 84 and 120 (Allport & Odbert, 1936; Barrick, Mount, & Judge, 2001; Johnson, 2010; McCrae & Costa, 1987; Moody, 2007).

Conscientiousness. Conscientiousness focuses on the way in which we control, regulate, and direct our impulses (Srivastava, 2010). The benefits of high conscientiousness include avoiding trouble and using intentional planning and persistence to achieve success. Individuals low in conscientiousness may be criticized for their unreliability, lack of ambition, and failure to conform to the approved societal norms and values. An individual's conscientiousness score is considered low if it falls between 0 and 34, moderate if it falls between 35 and 81, and high if it falls between 81 and 115 (Allport & Odbert, 1936; Barrick et al., 2001; Johnson, 2010; McCrae & Costa, 1987; Moody, 2007).

Agreeableness. Agreeableness is the individual differences in the degree of corporation and social agreement (Srivastava, 2010). Agreeable individuals value personal relationships while disagreeable individuals are uninterested in others' well-being and are unlikely to extend themselves for others. An individual's agreeableness score is considered low if it falls between 0 and 37, moderate if it falls between 38 and 87, and high if it falls between 88 and 125 (Allport & Odbert, 1936; Barrick et al., 2001; Johnson, 2010; McCrae & Costa, 1987; Moody, 2007).

Neuroticism. Neuroticism is the propensity to experience a significant degree of negative feelings and the inability to cope effectively with the normal demands of life (Srivastava, 2010). Individuals who score high in this dimension may experience a dominant negative feeling such as anxiety, anger, or depression but are likely to experience several of these emotions (Johnson, 2010). People high in neuroticism are emotionally reactive. They respond more intensely to events that would not impact most people. Individuals who score low on this dimension are not easily upset, are less emotionally reactive, and are characterized as calm and emotionally stable. An individual's neuroticism score is considered low if it falls between 0 and 36, moderate if it falls between 37 and 83, and high if it falls between 84 and 120 (Allport & Odbert, 1936; Barrick et al., 2001; McCrae & Costa, 1987; Moody, 2007).

Openness to experience. Openness to experience distinguishes imaginative and creative people from down-to-earth, conventional people (Srivastava, 2010). Open people are intellectually curious, appreciative of art and beauty, and are individualistic and non-conforming. People with low scores on this dimension have narrow, common interests and prefer the plain, straightforward, and obvious to the complex and ambiguous. The lower the individual's score, the greater the preference for novelty and resistance to change. An individual's openness to experience score is considered low if it falls between 0 and 36, moderate if it falls between 37 and 83, and high if it falls between 84 and 120 (Allport & Odbert, 1936; Barrick et al., 2001; McCrae & Costa, 1987; Moody, 2007).

Ryff scales of psychological well-being. Ryff Scales of Psychological Well-Being (SPWB) were used to assess the criterion variable students' well-being (Ryff,

1989b). The 54-item questionnaire (Appendix E) is composed of six dimensions: (a) self-acceptance, (b) positive relations with others, (c) autonomy, (d) environmental mastery, (e) purpose in life, and (f) personal growth (Ryff, 1989b). Each subscale contains nine randomly distributed items that participants respond to using a 6-point Likert-type scale (i.e., 6 = strongly agree, 5 = agree, 4 = agree slightly, 3 = disagree slightly, 2 = disagree, and 1 = strongly disagree) for rating. In the development of the six-factor model, Ryff (1989b) reported the following internal consistency reliability coefficients: Self-acceptance ($\alpha = .93$); Positive Relations with Others ($\alpha = 91$); Autonomy ($\alpha = 86$); Environmental Mastery ($\alpha = 90$); Purpose in Life ($\alpha = 90$); and Personal Growth ($\alpha = 87$). For the current study, the overall Cronbach alpha coefficient was ($\alpha = .96$).

Score interpretation. For positively keyed items, the response "strongly agree" is assigned a value of 6, "agree" a value of 5, "agree slightly" a value of 4, disagree slightly" a value of 3, "disagree" a value of 2, and "strongly disagree" a value of 1. For negative keyed items, the response "strongly agree" is assigned a value of 1, "agree" a value of 2, "agree slightly" a value of 3, disagree slightly" a value of 4, "disagree" a value of 5, and "strongly disagree" a value of 6.

There are no specific scores or cut-points for defining high or low well-being. Those distinctions are best derived from the data's distributional information. For example, high well-being could be defined as scores that are in the top 25% (quartile) of the distribution; whereas, low well-being could be defined as scores that are in the bottom 25% (quartile) of the distribution. An alternative would be to define high well-being as scores that are 1.5 standard deviations above the mean, whereas low well-being is scores

that are 1.5 standard deviations below the mean (T. Berrie for Carol Ryff, personal communication, April 5, 2011).

Self-acceptance. A high scorer possesses a positive attitude toward self, acknowledges and accepts multiple aspects of self, including good and bad qualities, and feels positive about past life experiences; a low scorer feels dissatisfied with self, is disappointed with what has occurred in past life, is troubled about certain personal qualities, and wishes to be different than what he or she is (Ryff, 1989a).

Positive relations with others. A high scorer has warm, satisfying, trusting relationships with others; is concerned about the welfare of others; is capable of strong empathy, affection, and intimacy; understands give and take of human relationships. A low scorer has few close, trusting relationships with others; finds it difficult to be warm, open, and concerned about others; is isolated and frustrated in interpersonal relationships; is not willing to make compromises to sustain important ties with others (Ryff, 1989a).

Autonomy. A high scorer is self-determining and independent, is able to resist social pressures to think and act in certain ways, regulates behavior from within, and evaluates self by personal standards; a low scorer is concerned about the expectations and evaluations of others, relies on judgments of others to make important decisions, and conforms to social pressures to think and act in certain ways (Ryff, 1989a).

Environmental mastery. A high scorer has a sense of mastery and competence in managing the environment, controls a complex array of external activities, makes effective use of surrounding opportunities, and is able to choose or create contexts suitable to personal needs and values; a low scorer has difficulty managing everyday affairs, feels unable to change or improve surrounding contexts, is unaware of

surrounding opportunities, and lacks a sense of control over the external world (Ryff, 1989a).

Purpose in life. A high scorer has goals in life and a sense of directedness, feels there is meaning to present and past life, holds beliefs that give life purpose, and has aims and objectives for living; the low scorer lacks a sense of meaning in life, has few goals or aims, lacks a sense of direction, does not see purpose in past life, and has no outlooks or beliefs that give life meaning (Ryff, 1989a).

Personal growth. An individual with a high score has a feeling of continued development, sees self as growing and expanding, is open to new experiences, has a sense of realizing his or her potential, sees improvement in self and behavior over time, and is changing in ways that reflect more self-knowledge and effectiveness; a low scorer has a sense of personal stagnation, lacks a sense of improvement or expansion over time, feels bored and uninterested in life, and feels unable to develop new attitudes or behaviors (Ryff, 1989a).

Procedures

After receiving approval from Liberty University's Institutional Review Board (Appendix A), an Institutional Review Board (IRB) application was submitted for approval to the prospective university explaining the research study and expectations of participants. Once IRB approval was granted, a letter requesting recruitment assistance, an explanation of the study and expectations of participants, and the study's informed consent (Appendix G) were shared with undergraduate department deans and the university registrar. The registrar distributed to undergraduate students an email cover letter that outlined the study's purpose and importance, a URL link to the survey

instrument, information on whom to contact with questions, and a study completion deadline (Appendix H). The online survey included an informed consent form, demographic questions, the CQS, IPIP-NEO, the Ryff Scales of Psychological Well-Being, and information regarding confidentiality rights (Dillman, 2007). The informed consent form was hosted via the online survey system. The informed consent had to be completed prior to the participant beginning the survey. The statement following the informed consent indicated 'click agree' to acknowledge the following statement: "I have read and understand the description of the study and contents of this document." Although the process did not produce a physical signed consent form, each respondent's agreement or disagreement to participate in the study was indicated in the downloaded data. All respondent data was confidential. In order to maintain anonymity, the researcher did not collect any identifying IP addresses or additional information from the respondents.

Research Design

This research study used a multivariate correlational research design. The correlational research design is used to discover and express relationships among variables (Tabachnick & Fidell, 2007). According to Tabachnick and Fidell (2007), this research design is appropriate for non-experimental research where variables exist naturally and are not deliberately controlled or manipulated. Thus, this research design permitted an investigation of the relationship between predictor and criterion variables (Tabachnick & Fidell, 2007). The design permitted the examination of the relationship between the Big Five personality traits, cultural intelligence, and psychological well-being.

Data Analysis

Multiple regression analysis was used to determine (a) the relationship between the Big Five personality traits and cultural intelligence and (b) the relationship between cultural intelligence and psychological well-being in ethnic minority college students. Multivariate statistics permit an exploration into complex, real-life research questions, such as the relationships between a criterion variable and several predictor variables (Thompson, 1991). According to Tabachnick and Fidell (2007), the evidence of "multiple correlation emphasizes the degree of relationship between the DV and the IVs" (p. 18). Regression techniques are often used when the predictor variables are correlated with one another and to a criterion variable (Tabachnick & Fidell, 2007). A standard multiple regression was chosen to determine the strength of the relationship between personality and cultural intelligence, and cultural intelligence and psychological well-being (Tabachnick & Fidell, 2007). Stepwise or hierarchical multiple regression is used when there is a well-built theoretical foundation; research on CQ is fairly new, so a standard multiple regression was selected (Tabachnick & Fidell, 2007).

Green (1991) suggested that "$N > 50 + 8m$ (where m is the number of predictor variables) for testing the multiple correlation and $N > 104 + m$ for testing individual predictors (assuming a medium-sized relationship)" (p. 499). According to VanVoorhis and Morgan (2007), when testing both, the larger sample size should be used. Harris (1985) recommends that in studies that use five or fewer predicator variables, participants should exceed the number of predictor variables by at least 50 ($N > 50 + m$). For this study, a minimum sample size of 52 would have been acceptable. However, this study used a minimum sample size of 137 as its benchmark. The alpha of $p < .05$ was used to

determine whether to reject the null hypothesis (Ary, Jacobs, Razavieh, & Sorenson, 2006). Preliminary assumption testing was completed to examine outliers, normality, linearity, and homoscedasticity of residuals. Results are reported in chapter 4.

CHAPTER FOUR: RESULTS

This chapter outlines the statistical procedures and findings from this study. The purpose of this study was two-fold: (1) to determine if there is a predictive relationship between the Big Five personality traits and the cultural intelligence of ethnic minority college students and (2) to determine if there is a predictive relationship between the cultural intelligence factors and the psychological well-being of ethnic minority college students. A report of the demographics and descriptive statistics is presented below and followed by the analysis of the two research questions.

Demographics

The study consisted of 137 ethnic minority college students. Thirty-five (25.5%) of the participants were male, and 102 (74.5%) were female. Participants' ages ranged from 20 to over 46 years old; 28 (20.4%) were 18 to 20 years old, 86 (62.8%) were 21 to 26 years old, 11 (8%) were 27 to 35 years old, 5 (3.6%) were 36 to 45 years old, and 7 were (5.1%) 46 or older. In terms of ethnicity, 118 (86.1%) of the participants were Black or African-American, 1 (.7%) was Asian, 5 (3.6%) were Hispanic or Latino, 2 (1.5%) were American Indian or Alaska Native, and 11 (8%) chose two or more races. Undergraduate participant classification ranged from freshman to senior: 2 (1.5%) were freshmen, 10 (7.3%) were sophomores, 53 (38.7%) were juniors, and 72 (52.6%) were seniors. A total of 128 (93.4%) participants reported the United States as their country of birth, 3 (2.2%) reported Europe, 2 (1.5%) reported Africa, 1 (.7%) reported Pakistan, 1 (.7%) reported Algeria, 1 (.7%) reported Dominican Republic, and 1 (.7%) reported Asia.

Ethnic minority college students enrolled in 54 different program areas in the School of Agriculture and Environmental Sciences, College of Arts & Sciences, College of Engineering, School of Education, and School of Technology completed the survey.

Ethnic minority college students who completed the survey indicated their exposure to cultural competence training. A total of 40 (29.2%) out of the 137 participants reported having completed a multicultural or cross-cultural class as part of their degree program, and three (2.2%) did not respond to the question on having completed a multicultural or cross-cultural class as part of their degree program. In addition, 40 (29.2%) out of 137 reported having prior travel abroad experience. A total of 121 (88.3%) out of 137 participants reported not living abroad. Forty-one (30%) of the participants that completed the survey indicated they spoke another language in addition to English; these languages included Spanish, French, German, Italian, Chinese, Navajo, Hindi, Portuguese, Arabic, Hebrew, Yoruba Creole, Chimini, American Sign Language, Latin, Vietnamese, Polish, Swahili, Kikuyu, Urdu, Punjabi, Pashto, and Hindko.

Research Question One

Research question one asked, Will the combination of the Big Five personality traits predict the cultural intelligence of ethnic minority college students? The following null hypotheses were evaluated using a standard multiple regression analysis.

H_O 1: There is no statistically significant predictive relationship between the combination of the Big Five personality traits and ethnic minority college students' cultural intelligence.

H_O 1.1 There is no statistically significant predictive relationship between ethnic minority college students' openness to experience and cultural intelligence.

H_O 1.2 There is no statistically significant predictive relationship between ethnic minority college students' conscientiousness and cultural intelligence.

H_O 1.3 There is no statistically significant predictive relationship between ethnic minority college students' extraversion and cultural intelligence.

H_O 1.4 There is no statistically significant predictive relationship between ethnic minority college students' agreeableness and cultural intelligence.

H_O 1.5 There is no statistically significant predictive relationship between ethnic minority college students' neuroticism and cultural intelligence.

Descriptive Statistics. The mean and standard deviation of the sample (N=137) for (a) agreeableness, (b) conscientiousness, (c) extraversion, (d) openness to experience, and (e) neuroticism/emotional stability are M = 86.45, SD = 10.16; M = 92.13, SD = 11.91; M = 92.26, SD = 11.08; M = 81.54, SD = 9.28; and M = 66.78, SD = 15.54, respectively. The mean and standard deviation of the sample (N=137) for the criterion variable cultural intelligence are M = 104.52, SD = 15.94. Table 4.1 displays the correlations among the predictor variables (extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience) and the criterion variable (cultural intelligence).

.

Table 4.1

Intercorrelations Among Variables

Variable	Agreeableness	Extraversion	Neuroticism	Openness To Experience	Conscientiousness	CQ Total
Agreeableness	1	.22**	-.42**	.39**	.55**	.09
Extraversion	.22**	1	-.56**	.49**	.40**	.24**
Neuroticism	-.42**	-.56	1	.21	-.64	-.17
Openness To Experience	.39**	.49**	-.21*	1	.33**	.33**
Conscientiousness	.55**	.40**	-.64	.33**	1	.19*
CQ Total	.09	.24**	-.17	.33**	.19*	1

Note.

** $p < .01$, two-tailed. * $p < .05$, two-tailed.

Assumption testing. Preliminary analyses were performed to ensure no violations of the assumptions of normality, extreme outliers, homoscedasticity of the residuals, linearity, and multicollinearity. The assumption of normality was verified through a visual inspection of the Normal Probability Plots of the Regression Standardized Residual. This inspection revealed that the assumption of normality was tenable. Normality was also confirmed by the rectangular shaped distributed residuals in the scatter plot, suggesting that there are no major deviations from normality. The normality of each predictor variable was examined using histograms; inspection revealed that openness to experience, conscientiousness, and extraversion were positively skewed. Outliers were evaluated using a scatter plot and boxplots. A visual inspection of the scatter plot and box plots revealed no extreme outliers. The Mahalanobis maximum value of 19.65 did not exceed the critical value of 20.5 (Cohen & Swerdlik, 2005). The maximum value of Cook's distance was .061, indicating that no outliers were unduly influencing the model (Tabachnick & Fidell, 2007). A visual examination of a plot for the standardized residuals by the regression standardized predicted value was assessed to determine that the assumption of homoscedasticity was found tenable. Linearity was checked using a scatter plot. The assumption is tenable (Tabachnick & Fidell, 2007). The correlation between the predictor variables was assessed to examine multicollinearity (see Table 4.1). The correlation matrix demonstrates that the predictor variables are not highly correlated (e.g., $r < .9$). Multicollinearity was examined by the analysis of tolerance and Variance Inflation Factor (VIF) values. The five tolerance values were greater than .10, and the VIF values were under 10, suggesting that the assumption of no multicollinearity is tenable (Tabachnick & Fidell, 2007).

Results using the standard multiple regression model. Results of the standard multiple regression analysis indicated that the linear combination of extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience significantly predicted cultural intelligence, $R^2 = .133$, $adj\ R^2 = .100$, $F = (5,131) = 4.014$, $p = .002$. The multiple correlation coefficient was .364. The results explained that approximately 13.3% of the variance in cultural intelligence could be accounted for by the linear combination of the Big Five personality traits. The first null hypothesis was rejected. While the model is statistically significant, its low value indicates a lower practical significance. Openness to experience was the only variable that was significant.

Each predictor variable was examined to determine how much it contributed to the prediction of the criterion variable. According to the results shown in Table 4.2, openness to experience had an alpha level less than .05 $\alpha = 002$ and a β of .321, which meant that this predictor variable makes the largest unique contribution to the criterion variable, cultural intelligence. Openness to experience uniquely explains 6.5% of the variance in cultural intelligence. The first hypothesis and five sub-null hypotheses pertained to the five predictor variables examined, and I failed to reject the four sub-null hypotheses pertaining to agreeableness, neuroticism, conscientiousness, and extraversion.

Table 4.2

Contributions of Predictor Variables (N=137)

Variable	Zero-order	Partial r	β	SE	B	*t*	*p*
Openness	.33*	.26*	.32	.18	.55	3.14	.002
Conscientiousness	.19	.07	.09	.16	.12	.74	.46
Neuroticism	-.17*	-.06	-.08	.13	-.09	-.68	.50
Extraversion	.24*	.02	.03	.16	.04	.25	.80
Agreeableness	.09	-.11	-.13	.16	-.20	-.1.23	.22

Note.
*p < .05

Research Question Two

The second research question asked, Will the combination of the cultural intelligence factors predict the psychological well-being of ethnic minority college students? A standard multiple regression analysis was used to examine the following null hypotheses:

H_O 2: There is no statistically significant predictive relationship between the combination of the cultural intelligence factors and ethnic minority college students' psychological well-being.

H_O 2.1 There is no statistically significant predictive relationship between ethnic minority college students' metacognitive CQ and psychological well-being.

H_O 2.2 There is no statistically significant predictive relationship between ethnic minority college students' cognitive CQ and psychological well-being.

H_O 2.3 There is no statistically significant predictive relationship between ethnic minority college students' motivational CQ and psychological well-being.

H_O 2.4 There is no statistically significant predictive relationship between ethnic minority college students' behavioral CQ and psychological well-being.

Descriptive Statistics. The mean and standard deviations of the sample (*N*=137) for metacognitive cultural intelligence, cognitive cultural intelligence, motivational cultural intelligence, and behavioral cultural intelligence are *M* = 23.83, *SD* = 3.61; *M* = 27.01, *SD* = 6.96; *M* = 29.18, *SD* = 4.47; and *M* = 24.69, *SD* = 6.09, respectively. The mean and standard deviations of the sample (*N*=137) for the criterion variable psychological well-being are *M* = 248.89, *SD* = 45.42. The intercorrelation among variables is reported in Table 4.3.

Table 4.3

Intercorrelations Among Variables

Variable	Well-being Total	Metacognitive CQ	Cognitive CQ	Motivational CQ	Behavioral CQ
Well-being Total	1	.17*	.04	.14	.16
Metacognitive CQ	.17*	1	42**	.55**	.33
Cognitive CQ	.04	.42**	1	.41	.37
Motivational CQ	.14	.55**	.41*	1	.36**
Behavioral CQ	.16	.33**	.37**	.36**	1

Note.

** $p < .01$, two-tailed. * $p < .05$, two-tailed.

Assumption testing. Preliminary analyses were performed to ensure no violations of the assumptions of normality, extreme outliers, homoscedasticity of the residuals, linearity, and multicollinearity. The assumption of normality was assessed through a visual inspection of the Normal Probability Plots of the Regression Standardized Residual. The distribution of the data deviates from a normal distribution on the Normal Probability Plot. According to Tabachnick and Fidell (2007), a regression analysis is robust against normality violations, especially when not due to extreme outliers. The assumption of extreme outliers and all other multivariate assumptions were met, so it was concluded this violation should not unduly influence the results (Tabachnick & Fidell, 2007). Outliers were evaluated using a scatter plot and boxplots. A visual inspection of the scatter plot and boxplots revealed no extreme outliers. The Mahalanobis maximum value of 15.33 did not exceed the critical value of 18.47 (Cohen & Swerdlik, 2005). The maximum value of Cook's distance was .095, indicating that no outliers were unduly influencing the model (Tabachnick & Fidell, 2007). Therefore, the assumption of homoscedasticity was found tenable. Linearity between the predictor and criterion variables were checked using a scatter plot. The assumption is tenable (Tabachnick & Fidell, 2007).

The correlation between the predictor variables was assessed to examine multicollinearity (see Table 4.3). The correlation matrix demonstrates that the predictor variables are not highly correlated, e.g. $r < .9$. Multicollinearity was examined by the analysis of tolerance and Variance Inflation Factor (VIF) values. The four tolerance values were greater than .10, and the VIF values were under 10, suggesting that the assumption of no multicollinearity is tenable (Tabachnick & Fidell, 2007).

Results using the standard multiple regression model. Results of the standard multiple regression analysis indicated that the linear combination (metacognitive cultural intelligence, cognitive cultural intelligence, motivational cultural intelligence, and behavioral cultural intelligence) did not significantly predict psychological well-being R^2 = .046, *adj* R^2 = .017, $F(4,131) = 1.59$, $p = .18$. I failed to reject null hypothesis 2. Thus, predictor variables were not found to individually predict the criterion. Table 4.4 reinforces this. I failed to reject the sub-null hypotheses for question 2.

Table 4.4

Contributions of Predictor Variables (N=137)

Variable	Zero-order	Partial r	β	SE	B	*t*	*p*
Metacognitive CQ	.17*	.12	.13	1.33	630	.65	.22
Cognitive CQ	.04**	-.07	-.08	.65	55	.74	.40
Motivational CQ	.14**	.05	.06	1.08	.65	.64	.55
Behavioral CQ	.16**	.11	.12	.71	.90	.80	.21

Note.
** $p < .01$, two-tailed. * $p < .05$, two-tailed.

CHAPTER FIVE: DISCUSSION

Introduction

Cultural intelligence is a new multidimensional theoretical model that has been used almost exclusively to evaluate business employees for international assignments (Ang et al., 2007; Earley & Ang, 2003; Earley et al., 2006; Elenkov & Manev, 2009; Imai & Gelfand, 2010; Rockstuhl & Ng, 2008; Templer et al., 2006). Cultural intelligence is an individual's capacity to "function and manage effectively in culturally diverse settings…involving cross-cultural interactions arising from differences in race, ethnicity, and nationality" (Ang et al., 2007, p. 336). Institutions of Higher Education are considered a new cultural environment for ethnic minority college students. Students' ability to effectively adapt to this new cultural environment is critical for U.S. Institutions of Higher Education, which were challenged by President Obama to be classified as first in the world in higher education by 2020 (Duncan, 2010; Nelms, 2010; Southern Regional Education Board, 2010; United States Department of Education, 2010).

The Big Five personality traits are a predictor of cultural intelligence in business students and expatriates who work in culturally diverse environments that differ from their native culture (Ang et al., 2007; Earley & Ang, 2003; Templer et al., 2006; Van Dyne et al., 2008). In addition, CQ has been shown to predict role-prescribed task performance effectiveness in culturally diverse settings fulfilling the role-prescribed behaviors (Ang et al., 2007; Campbell, 1999; de la Garza Carranza & Egri, 2010; Rose et al., 2010).

The ability of personality traits to predict ethnic minority college students' cultural intelligence needs to be examined. No empirical studies were found that examined the predictive relationship between personality and ethnic minority college students' cultural intelligence, or the relationship between cultural intelligence and ethnic minority college students' psychological well-being. A better understanding of the relationship among these factors is advantageous for creating programming that supports students' degree attainment.

In this study, ethnic minority college students attending a Historically Black College or University in the southeastern region of the United States were surveyed. The online survey included an informed consent; demographic questions; the Cultural Intelligence Scale (Ang & Earley, 2003); the Internal Personality Item Pool (Goldberg, 1999); an alternate version of Costa and McCrae's (1992) commercial Neuroticism, Extraversion, and Openness Personality Inventory (NEO-PI-R ^{TM}); and the Ryff Scales of Psychological Well-Being (Ryff, 1989). Standard multiple regression analysis was used to determine the ability of the Big Five personality traits to predict ethnic minority college students' cultural intelligence and psychological well-being. Chapter 4 provided an overview of the statistical analysis utilized. Chapter 5 includes a discussion of the findings, theoretical and practical implications, limitations, recommendations for future research, and conclusion.

Findings

The results of this research study demonstrated a significant positive relationship between ethnic minority college students' Big Five personality traits and cultural intelligence. These results are consistent with past research and confirm the theory;

however, they do differ in that this study did not use ungrouped data to determine if the model was significant. Therefore, this study did not address how each personality trait relates to the four CQ dimensions. When the intercorrelations among the Big Five personality traits were examined, results indicated that openness to experience had the greatest significance for cultural intelligence. This relationship is consistent with research by Ang et al. (2007) that established openness to experience as a crucial personality factor in determining an individual's capability to function effectively when working with culturally diverse individuals. Moody (2007) corroborated that openness to experience emerged as the greatest predictor of overall cultural intelligence. Openness to experience and extraversion are predictors of training proficiency criteria across occupations (Barrick & Mount, 1991) and indirectly affect performance by enhancing cultural intelligence (Hurtz & Donovan, 2000). These significant results imply the model may provide an education framework for systematically exposing minority students to new experiences that encourage and support enhanced academic task performance.

The results of this research study did not demonstrate a significant relationship between minority college students' cultural intelligence and psychological well-being. In conceptualizing the CQ model, Ang and Van Dyne (2008) contended that there are similarities and differences between CQ and the other intelligences. Historically, traditional cognitive intelligence tests did not clearly explain success in life; for instance, IQ alone is not a good predictor of task performance (Hunter & Hunter, 1984; Sternberg, 1996). A 40-year longitudinal study of 450 males in Massachusetts, of which two-thirds received governmental assistance and a third had IQs below 90, found participant IQ had little relationship to future work or life success (Snarey & Vaillant, 1985). Instead, the

biggest difference was their abilities to self-regulate emotions and interact with others (Snarey & Vaillant, 1985). A similar 40-year longitudinal study involving 80 Ph.D.s found IQ was not the greatest contributor to their success; affective abilities were four times more important than IQ in influencing professional achievements and status (Feist & Barron, 1996). Nevertheless, cognitive ability is important, but it is equally or more important to be able to persevere when encountering difficulties and to develop good interpersonal relationships with colleagues, peers, and subordinates. These study results align with prior intelligence research; thus, it may take a longer time for change to occur in variables such as autonomy, personal growth, and purpose in life (Jin & Moon, 2006).

Theoretical Implications

This study's research is exploratory in nature. The cultural intelligence model widely evaluated from an international business perspective was researched with a new setting and population, U.S. Historically Black Colleges and Universities and ethnic minority college students, respectively. The international business arena and the higher education setting share a commonality, individuals from diverse cultures and the need to effectively communicate and understand their perspective in order to accomplish desired outcomes. These findings may be useful to Institutions of Higher Education seeking the best means to support ethnic minority students' degree attainment.

The nomological network of cultural intelligence is comprised of distal factors, intermediate or intervening variables, other correlates, and situational factors (Ang & Van Dyne, 2008). According to Ang et al. (2007), additional experimental proof is needed to support the literature. This study provides empirical evidence for cultural intelligence by examining the antecedent relationship of personality and cultural

intelligence in a new population, ethnic minority college students. This study identified openness to experience as the best predictor of ethnic minority college students' cultural intelligence. These findings expand the cultural intelligence nomological network by determining that the predictive relationship between the Big Five personality traits and cultural intelligence remained constant when used exclusively with ethnic minority college students.

Practical Implications

Although results did not show a predictive relationship between cultural intelligence and psychological well-being, the CQ theory remained constant, suggesting that it may be useful in the creation of student programming. The Big Five personality traits influence the likelihood that an individual can use cognitive knowledge to be successful in a culturally diverse environment when measured by task performance. For instance, research on the creativity of college students found openness to experience was a significant factor in creative performance in college courses (Bull et al., 1995). Also, highly conscientious medical students were driven to achieve and complete academic tasks successfully (Lievens, Harris, Van Keer, & Bisqueret, 2003; Furnham, Chamorro-Premuzic, & McDougall, 2003).

Consequently, higher education curriculum programming should capitalize on students' openness to experience (Earley & Ang, 2003; Klein, 2010; Tan & Chu, 2003). Experiential programming that requires students to examine and analyze implied assumptions and beliefs about self, others, and the world supports minority students' identity through improved self-efficacy, evaluation of personal prejudices and biases, practical knowledge acquisition experiences, and within and without group activities

(Klein, 2010; Ng et al., 2009). For instance, students may catalog their experiential learning through reflective journaling to analyze the role personality traits played in their outcomes, and in so doing, they may increase their cultural intelligence and change their behavior (Klein, 2010; Tan & Chu, 2003).

Limitations

This study used a correlational research design to determine relationships, assessing consistency and prediction. According to Tabachnick and Fidell (2007), this design is not indicative of a cause and effect relationship. Participant self-reporting is a limitation of this study. Participant self-reporting is a limitation due to subjectivity and an increase in responder bias (Gall, Gall, & Borg, 2005). Research has shown that individuals with a low skill set (low competence) are usually overconfident when assessing their own skills (Dunning, Heath, & Suls, 2004; Kruger & Dunning, 1999) while participants who are more knowledgeable accept what they do not know and are more likely to rate themselves lower (Gelfand et al., 2008). In addition, it is unclear what criteria participants use when they respond (Gelfand et al., 2008). For instance, an individual who has traveled abroad several times might believe his or her cultural intelligence is higher than that of someone who has never left the continental United States but lower than that of someone who is a bilingual immigrant.

Generalizations of the findings may be limited since the population was small. Generalizations across institutions may be limited since the study focused on students attending a Historically Black College or University. Although a non-random convenience sampling was used for the group selection, the study institution may not be representative of institutions in other parts of the United States.

Additionally, there was a large non-response rate. Since this study used survey data, responses made by students who did not respond to the survey were not accounted for. This subjected the study to unit non-response and the issue of non-ignorable non-response. Within the realm of non-ignorable non response issues, item non-response was not a problem in this study; however, the problem of unit non-response needs to be noted as a limitation when applying and making inferences based on part 1 of this study (King, Honaker, Joseph, & Shever, 1998). Since the data analysis did not use statistical controls to address the issue of non-ignorable non-response, findings cannot be applied to the students who did not respond. Thus, care should be taken not to make invalid inferences based on the results (Hausman & Wise, 1979).

Recommendations for Future Research

Cultural intelligence is a malleable state that may be modified through experiences, training, modeling, and mentoring (Earley & Ang, 2003). There is a need for further research regarding the correlation between cultural intelligence and other factors that might influence ethnic minority college students' academic performance. Academically under-prepared students may have difficulties navigating both the academic and social demands of higher education, (Hock, Deshler, & Schumaker, 1999). This study did not obtain student academic performance data. A comparison could be made between students' academic and social integration support and students with low, moderate, or high academic performance (Hoyt, 1999). Collecting data on the academic and natural support systems minority students use to maintain their motivation and connectedness with the university setting should be a priority. Many minority students come from cultures where traditional sex roles may conflict with educational pursuits

(Castillo & Hill, 2004). A study that includes an examination of parental education and support may provide additional insight into improved minority student degree attainment. The use of a larger sample and an experimental research design can mitigate the limitations of the correlational research design. This may provide data to determine if different results would be produced due to the higher confidence level and smaller confidence interval. This study could also be replicated by comparing ethnic minority college students attending a Historically Black College or University with similar students attending a Predominantly White Institution to enhance the generalizability of the results.

To further examine the moderating effect of ethnicity, future research would benefit from exploring whether the demographic variables of sex and gender orientation may also moderate the antecedent relationship between personality and cultural intelligence. Additionally, this study could be replicated with ethnic minority college students who are immigrants to the U.S..

Self-report assessment limitations could be mitigated by including objective observer feedback from peers, professors, faculty advisors, employers, etc., as well as using student academic achievement scores to evaluate how well the student is adjusting to the new cultural environment of higher education. An additional experimental research design could be implemented with a control group to evaluate the effects of cultural competence training using the CQ as a framework for delivery. One group would receive cultural competence training using the CQ framework while the control group would receive cultural competence training without the CQ framework. A longitudinal research study may be use to determine whether affective variables might

change over time (Jin & Moon, 2006). In addition, future research is needed for determining the role of cultural intelligence in self-concept clarity and self-esteem (Usborne & Taylor, 2010), healthiness (i.e., smoking and drinking habits), and spiritual practices (Keyes, 2007; Ryff, 1995b).

Summary and Conclusion

The last two decades have seen an increase in U.S. ethnic minority college student enrollment and focused attention on the higher education system's ability to effectively educate a diverse student population (Gollnick & Chinn, 2002). Educating culturally different students is compounded by the challenge associated with defining cultural competence; there are varying opinions (Gelfand et al., 2008) on exactly what cultural competence is, despite agreement on its importance (Cunningham, Foster, & Henggeler, 2002). It is the awareness of an individual's cultural beliefs and practices; an openness and respect for divergent beliefs, laws, and practices (Flaskerud, 2007); and cultural exposure (Crowe, 2008) that challenge our preconceived assumptions (Earley & Peterson, 2004). It is this challenge that requires individuals to ''learn [how] to select and apply the appropriate tools, adapting them when necessary'' (Johnson, Lenartowicz, & Apud, 2006, p. 534). Cultural intelligence is a relatively new cultural competence multifaceted growth model for systematically identifying and assessing missing cultural competencies through the removal of cultural borders when addressing cultural differences (Ang et al., 2005; Ang et al., 2007; Early & Ang, 2003). Additional empirical studies are needed to provide the cultural intelligence field a broader foundation of research with ethnic minority college students. This research study has added to the cultural intelligence nomological network and the Big Five personality traits by

investigating which personality traits best predict ethnic minority college students' cultural intelligence. The present study yielded no empirical data to substantiate a relationship to psychological well-being. Still, the CQ model may be considered a tool to teach intercultural differences in higher education, thus preparing students to be successful in the new global education environment characterized by diverse social realities (Friedman, 2005; Ohmae, 2005).

REFERENCES

Ackerman, P. L., Kanfer, R., & Goff, M. (1995). Cognitive and noncognitive determinants and consequences of complex skill acquisition. *Journal of Experimental Psychology Applied, 1*, 270-304.

Adlaf, E. M., Gliksman, L., Demers, A., & Newton-Taylor, B. (2001). The prevalence of elevated psychological distress among Canadian undergraduates: Findings from the 1998 Canadian campus survey. *Journal of American College Health, 50*, 67-72.

Adler, N. J. (1997). *International dimensions of organizational behavior*. Cincinnati, OH: South-Western College.

Adler, N. J. (2002). *International dimensions of organizational behavior* (4 ed.). Cincinnati, OH: South-western.

Allport, G. W. (1961). *Pattern and Growth in Personality.* New York, NY: Holt, Rinehart, and Winston.

Allport, G. W., & Odbert, H. S. (1936). Trait names: A psycho-lexical study. *Psychological Monographs, 47*(211).

Alon, I., & Higgins, J. M. (2005). Global leadership success through emotional and cultural intelligences. *Business Horizons, 48*, 501-512.

Alva, S. A., & de Los Reyes, R. (1999). Psychosocial stress, internalized symptoms, and the academic achievement of Hispanic adolescents. *Journal of Adolescent Research, 14*, 343-358.

Ancis, J. R., Sedlacek, W. E., & Mohr, J. J. (2000). Student perceptions of campus cultural climate by race. *Journal of Counseling and Development, 78*(2), 180-185.

Andrews, F. M., & Withey, S. B. (1976). *Social indicators of well-being: America's perception of life quality.* New York, NY: Plenum Press.

Ang, S., & Van Dyne, L. (2008). Conceptualization of cultural intelligence: Definition, distinctiveness, and nomological network. In S. Ang & L. Van Dyne (Eds.), *Handbook of cultural intelligence: Theory, measurement, and applications* (pp. 3-38). Armonk, NY: M. E. Sharpe.

Ang, S., Van Dyne, L., & Koh, C. (2006). Personality correlates of the four-factor model of cultural intelligence. *Group & Organization Management, 31*(1), 100-123. doi:10.1177/1059601105275267

Ang, S., Van Dyne, L., Koh, C., & Ng, K. Y. (2004). *The measurement of cultural intelligence*. Working paper presented at the Academy of Management Symposium on Cultural Intelligence in the 21st Century, New Orleans, LA.

Ang, S., Van Dyne, L., Koh, C. K. S., Ng, K.Y., Templer, K. J., Tay, C., & Chandrasekar, N. A. (2007). Cultural intelligence: Its measurement and effects on cultural judgment and decision making, cultural adaptation, and task performance. *Management and Organization Review*, *3*, 335-371.

Ang, S., Van Dyne, L., Yee, N. K., & Koh, C. (2005). *The measurement of cultural intelligence*. Paper presented at the Annual Meeting of the Academy of Management, New Orleans, LA.

Arkoff, A., Meredith, G. M., Bailey, E., Cheang, M. D., Richard, A., Griffin, P. B., & Niyekawa, A. M. (2006). Life review during the college freshman year. *College Student Journal, 40*(2), 263-269.

Armbruster, B. (1989). Metacogniton in creativity. In G.Glover, R. Ronning, & C. Reynolds (Eds.), *Handbook of creativity* (pp. 177-182). New York, NY: Plenum Press.

Arthur, W., & Bennett, W. (1995). The international assignee: The relative importance of factors perceived to contribute to success. *Personnel Psychology, 48*, 99-114.

Ary, D., Jacobs, L. C., Razavieh, A., & Sorenson, C. (2006). *Introduction to research in education* (7th ed.). Belmont, CA: Thomson Higher Education.

Astone, B., & Nunez-Wormack, E. (1990). *Pursuing diversity: Recruiting college minority students*. Washington, DC: ERIC Clearinghouse on Higher Education.

Bandura, A. (1986). *Social foundations of thoughts and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), *Encyclopedia of human behavior* (Vol. 4, pp. 71-81). New York, NY: Academic Press.

Bandura, A. (2002). Social cognitive theory in cultural context. *Applied Psychology: An International Review, 51*, 269-290.

Barnes, V., Potter, E. H., & Fiedler, F. E.(1983). Effect of interpersonal stress on the prediction of academic performance. *Journal of Applied Psychology*, 68(4), 686-697.

Barnett, D., & McNamara, K. (1980). *Perfectionism: The double-edged sword*. Austin, TX: Clearinghouse for Structured/Thematic Groups and Innovative Programs

at the University of Texas at Austin.

Barrick, M., & Mount, M. (1991). The Big Five personality dimensions and job performance: A meta-analysis. *Personnel Psychology, 44*, 1-26.

Barrick, M., Mount, M., & Strauss, J. (1993). Conscientiousness and performance of sales representatives: Test of the mediating effects of goal setting. *Journal of Applied Psychology, 78*, 715-722.

Barrick, M. R., Mount, M. K., & Judge, T. A. (2001). The FFM personality dimensions and job performance: Meta-analysis of meta-analyses. Invited submission to a special "selection" issue of *International Journal of Selection and Assessment, 9*, 9-30.

Benedict, R. (1934). *Patterns of culture*. Boston, MA: Houghton-Mifflin.

Bennett, M. (1993). Towards ethnorelativism: A developmental model of intercultural sensitivity. In M. Paige (Ed.), *Education for the intercultural experience* (pp. 21-71). Yarmouth, ME: Intercultural Press.

Berger, J. B., & Milem, J. F. (1999). The role of student involvement and perceptions of integration in a causal model of student persistence. *Research in Higher Education*, *40*(6), 641-664.

Bernard, P. E. (2009). Bringing soul to international negotiation. *Negotiation Journal, 25*(2), 147-159. doi: 10.1111/j.1571-9979.2009.00216.x

Bird, A., & Osland, J. (2005). Making sense of intercultural collaboration. *International Studies of Management & Organization*, 35(4), 117-135.

Black, J. S. (1988). Work role transitions: A study of American expatriate managers in Japan. *Journal of International Business Studies, 19*, 277-294.

Black, J. S., Mendenhall, M. E., & Oddou, G. (1991). Toward a comprehensive model of international adjustment: An integration of multiple theoretical perspectives. *Academy of Management Review, 16,* 291-317.

Black, J. S., & Stephens, G. K. (1989). The influence of the spouse on American expatriate adjustment and intent to stay in Pacific Rim overseas assignments. *Journal of Management, 15*, 529–544.

Black, S. (1990). Factors related to the adjustment of Japanese expatriate managers in America. *Research in Personnel and Human Resources Management, 2*, 109-125.

Block, L. (2003). The leadership-culture connection: An explanatory investigation. *Leadership & Organization Development Journal, 24*(5/6), 318-334.

Bonazzo, C., & Wong, Y. J. (2007). Japanese international female students' experience of discrimination, prejudice and stereotypes. *College Student Journal, 41*(3), 631-39.

Bradburn, N. M. (1969). *The structure of psychological well-being*. Chicago, IL: Aldine Publishing Company.

Brislin, R., Worthley, R., & MacNab, B. (2006). Cultural intelligence: Understanding behaviors that serve people's goals. *Group and Organizational Management, 31*, 40-55.

Brophy, J. (2004). *Motivating students to learn* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Bryan, L. L., Fraser, J., Rall, W., & Oppenheim, J. (1999). *Race for the world: Strategies*

to build a great global firm. Boston, MA: Harvard Business Press.

Bryant, F. B., & Veroff, J. (1982). The structure of psychological wellbeing: A Sociohistorical analysis. *Journal of Personality and Social Psychology, 43,* 653-673.

Bull, K. S., Montgomery, D., & Baloche, L. (1995). Teaching creativity at the college level: A synthesis of curricular components perceived as important by instructors. *Creativity Research Journal, 8,* 83–90.

Buss, D. M. (1991). Evolutionary personality psychology. In M. R. Rosenzweig & L.W. Porter (Eds.), *Annual review of psychology* (Vol. 42, pp. 459-492). Palo Alto, CA: Annual Reviews.

Butler, S. K., & Constantine, M. G. (2005). Collective self-esteem and burnout in professional school counselors. *Professional School Counseling, 9,* 55–62.

Byram, M. (1997). *Teaching and assessing intercultural communicative competence*. Clevedon, UK: Multilingual Matters

Byram, M., & Risager, K. (1999). *Language teachers, politics and cultures* . Bristol, PA: Multilingual Matters.

Cabrera, A., & Nora, A. (1994). College students' perceptions of prejudice and discrimination and their feelings of alienation: A construct validation approach. *The Review of Education/Pedagogy/Cultural Studies,16*(3-4), 387-409.

Cai, D. A., & Drake, L. E. (1998). The business of business negotiation. In M. E. Roloff (Ed.), *Communication yearbook 21* (pp. 153–189). Newbury Park, CA: Sage.

Caligiuri, P. M. (2000). The big five personality characteristics as predictors of expatriate's desire to terminate the assignment and supervisor-rated performance.

Personnel Psychology, *53*, 67-88.

Campbell, A., Converse, P. E., & Rogers, W. L. (1976). T*he quality of American life: Perceptions evaluations, and satisfactions*. New York, NY: Russell Sage Foundation.

Campbell, J. P. (1999). The definition and measurement of performance in the new age. In D. R. Ilgen & E. D. Pulakos (Eds.), *The changing nature of performance: Implications for staffing, motivation, and development* (pp. 399-429). San Francisco, CA: Jossey-Bass.

Campinha-Bacote, J. (1995). The quest for cultural competence in nursing care. *Nursing Forum, 30*(4), 19-25.

Campinha-Bacote, J., & Padgett, J. (1995). Cultural competence: A critical factor in nursing research. *Journal of Cultural Diversity, 2*, 31-34.

Carnoy, M. (2005). Education and open society: A critical look at new perspectives and demand. OSI Education Conference. Retrieved from http://www.soros.org/initiatives/esp/articles_publications/articles/globalization_20060217/carnoy_english.pdf

Carpenter, M. A., Sanders, W. G., & Gregersen, H. B. (2001). Bundling human capital with organizational context: The impact of international assignment experience on multinational firm performance and CEO pay. *Academy of Management Journal, 44*(3), 493-511.

Castellanos, J., Cole, D., & Jones, L. (2002). Students of color in the academy: A case study. *Journal of Hispanic Higher Education*, *1*, 19-39.

Castillo, L. G., & Hill, R. D. (2004). Predictors of distress in Chicana college students.

Journal of Multicultural Counseling and Development, 32(4), 234-246.

Chamberlain, K. (1988). On the structure of subjective well-being. *Social Indicators Research, 20,* 581-604.

Chamobrro-Premuzic, T., & Furnham, A. (2003). Personality traits and academic examination performance. *European Journal of Personality, 17*(3), 237-250.

Chang, E. C. (2006). Perfectionism and dimensions of psychological well-being in a college student sample: A test of a stress-mediation model. *Journal of Social & Clinical Psychology, 25*(9), 1001-1022.

Chavez, D. V., Moran, V. R., Reid, S. L., & Lopez, M. (1997). Acculturative stress in children: A modification of the SAFE Scale. *Hispanic Journal of Behavioral Sciences, 19,* 34–44.

Chen, M. C., & Piedmont, R. (1999). Development and validation of the NEO PI-R for a Taiwanese sample. In T. Sugiman, M. Karasawa, J. H. Liu, & C. Ward (Eds.), *Progress in Asian social psychology* (Vol. 2, pp. 105-119). Seoul: Kyoyook-Khahak-Sa.

Cholewa, B., & West-Olatunji, C**.** (2008). Exploring the relationship among cultural discontinuity, psychological distress, and academic achievement outcomes for low-income, culturally diverse students. *Professional School Counseling, 12,* 54-61.

Chowdhury, M. (2006). Students' personality traits and academic performance: A five-factor model perspective. *College Quarterly, 9*(3).

Coates, D. L., Perkins, T., Vietze, P., Cruz, M., Park, S., & National Research Center on

the Gifted and Talented. (2003). *Teaching thinking to culturally diverse, high ability, high school students: A triarchic approach*. University of Connecticut, Storrs, CT: National Research Center on the Gifted and Talented.

Cohen, R. J., & Swerdlik, M. (2005). *Psychological testing and assessment: An introduction to tests and measurement*. New York, NY: McGraw Hill Humanities.

Cook, E., & Glenn, E. (2005, April 26). University of Minnesota faculty call for more diversity. *Minnesota Daily via U-Wire*, 1-4.

Cooke, R., Beewick, B. M., Barkham, M., Bradley, M., & Audin, K. (2006). Measuring, monitoring and managing the psychological wellbeing of first year university students. *British Journal of Guidance & Counselling, 34(*4*),* 505-517.

Costa, P. (1996). Work and personality: Use of the NEO-PI-R in industrial/organizational psychology. *Applied Psychology: An International Review, 45,* 225-241.

Costa, P. T., Jr., & McCrae, R. (1997). Stability and change in personality assessment: The revised NEO personality inventory in the year 2000. *Journal of Personality Assessment, 68*(1), 86-94.

Costa, P. T., & McCrae, R. R. (1980). Influence of extraversion and neuroticism on subjective well-being: Happy and unhappy people. *Journal of Personality and Social Psychology, 38,* 668-678.

Costa, P. T., Jr., & McCrae, R. R. (1992a). Normal personality assessment in clinical practice: The NEO personality inventory. *Psychological Assessment: A Journal of Consulting and Clinical Psychology, 4*, 5-13.

Costa, P. T., Jr., & McCrae, R. R. (1992b). *Revised NEO Personality Inventory (NEO PI-R) and NEO Five-Factor Inventory (NEO-FFI) professional manual*. Odessa, FL:

Psychological Assessment Resources.

Costa, P. T., Jr., & McCrae, R. R. (1994). Stability and change in personality from adolescence through adulthood. In C. F. Halverson, G. A. Kohnstamm, & R. P. Martin (Eds.), *The developing structure of temperament and personality from infancy to adulthood* (pp. 139–150). Hillsdale, NJ: Erlbaum.

Crowne, K. A. (2008). What leads to cultural intelligence? *Business Horizons, 51,* 391-399.

Cruz, C. E. (2005, September 7). Diversity abounds within Rutgers campus organizations. *Daily Targum via U-Wire,* 1-3.

Cunningham, P. B., Foster, S. L., & Henggeler, S. W. (2002). The elusive concept of cultural competence. *Children's Services: Social Policy, Research and Practice, 5*, 231-243.

Dagher, G. (2010). The relation between motivational and behavioral cultural intelligence and the three dimensions of cross-cultural adjustment among Arabs working in the USA. *The Business Review, Cambridge, 15*(1), 137.

D'Augelli, A. R., & Hershberger, S. L. (1993). African American undergraduates on a predominantly white campus: Academic factors, social networks, and campus climate. *The Journal of Negro Education, 62*(1), 67-81.

Davis, M., Dias-Bowie, Y., Greenberg, K., Klukken, G., Pollio, H. R., Thomas, S. P., & Thompson, C. L. (2004). "A fly in the buttermilk:" Descriptions of university life by successful Black undergraduate students at a predominately white southeastern university. *The Journal of Higher Education,* 75, 420-445.

Davis, R. D. (2004). *Black students' perceptions: The complexity of persistence to*

graduation at an American university. New York, NY: Peter Lang.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York, NY: Plenum.

de Jager, B., Jansen, M., & Reezigt, G. (2005). The development of metacognition in primary school learning environments. *School Effectiveness & School Improvement, 16*(2), 179-196. doi:10.1080/09243450500114181

de la Garza Carranza, M. T., & Egri, C. P. (2010). Managerial cultural intelligence and small business in Canada. *Management Revue, 21*(3), 353-371. doi: 10.1688/1861-9908

DeNeve, K. M., & Cooper, H. (1998). The happy personality: A meta-analysis of 137 personality traits and subjective well-being. *Psychological Bulletin, 124*, 197-229.

DeNisi, A. S., & Pritchard, R. D. (2006). Performance, appraisal, performance management and improving individual performance: A motivational framework. *Management & Organization Review, 2*(2), 253-277.

de Vise, D. (2010). *U.S. goes from leading to lagging in young college graduates*. Retrieved from <http://www.washingtonpost.com/wp-dyn/content/article/2010/07/22/AR2010072201250.html

Diener, E. (1984). Subjective well-being. *Psychological Bulletin, 95*, 542-575.

Diener, E., & Larsen, R. J. (1993). The experience of emotional wellbeing. In M. Lewis & J. M. Haviland (Eds.), *Handbook of emotions* (pp. 404-415). New York, NY: Guilford Press.

Dillman, D. A. (2007). *Mail and internet surveys: The tailored design method 2007*

update with new internet, visual, and mixed-mode guide (2nd ed.). Hoboken, NJ: John Wiley and Sons.

Duncan, A. (2010). *Changing the HBCU narrative from corrective action to creative investment. HBCU Symposium*. Retrieved from http://www.nathanielturner.com/changingthehbcunarrative.htm

Dunning, D., Heath, C., & Suls, J. M. (2004). Flawed self-assessment: Implications for health, education, and the workplace. *Psychological Science in the Public Interest, 5*, 69-106.

Dyal, J. A., & Chan, C. (1985). Stress and distress: A study of Hong Kong Chinese and Euro-Canadian students. *Journal of Cross-Cultural Psychology, 16*, 447-466.

Earley, P. C. (2002). Redefining interactions across cultures and organizations: Moving forward with cultural intelligence. In B. M. Staw & R. I. Sutton (Eds.), *Research in organizational behavior* (pp. 271-299). New York, NY: JAI Press.

Earley, P. C., & Ang, S. (2003). *Cultural intelligence: Individual interactions across cultures*. Palo Alto, CA: Stanford University Press.

Earley, P. C., Ang, S., & Tan, J.-S. (2006). *CQ: Developing cultural intelligence at work.* Stanford, CA: Stanford University Press.

Earley, P. C., & Mosakowski, E. (2004). Toward cultural intelligence: Turning cultural differences into a workplace advantage. *Academy of Management Executive, 18*(3), 151-157.

Earley, P. C., & Peterson, R. S. (2004). The elusive cultural chameleon: Cultural intelligence as a new approach to intercultural training for the global manager. *Academy of Management Learning & Education, 3*(1), 100-115.

Eccles, J. S., & Wigfield, A. (2002). Motivational beliefs, values and goals. *Annual Review of Psychology, 53*(1), 109-132.

Elenkov, D. S., & Manev, I. M. (2009). Senior expatriate leadership's effects on innovation and the role of cultural intelligence. *Journal of World Business, 44*(4), 357-369. doi: 10.1016/j.jwb.2008.11.001

Elenkov, D. S., & Pimentel, J. R. C. (2008). Social intelligence, emotional intelligence, and cultural intelligence: An integrative perspective. In S. Ang, & L. Van Dyne (Eds.), *Handbook of cultural intelligence: Theory, measurement, and applications* (pp. 289-305). Armonk, NY: M. E. Sharpe.

Emmons, R. A. (1986). Personal strivings: An approach to personality and subjective well-being. *Journal of Personality and Social Psychology, 51*, 1058-1068.

Erikson, E. H. (1959). Late adolescence. In D. H. Funkenstein (Ed.), *The student and mental health*. Cambridge, MA: Riverside Press.

Fantini, A. E. (1999). Comparison: Toward the development of intercultural competence. In J. K. Phillips, & R. M. Terry (Eds.), *Foreign language standards: Linking research, theories, and practices* (pp. 57-135). Lincolnwood, IL: National Textbook Company.

Feist, G. J., & Barron, F. (1996, June). *Emotional intelligence and academic intelligence in career and life success.* Paper presented at the Annual Convention of the American Psychological Society, San Francisco, CA.

Fernandes, H. M., Vasconcelos-Raposo, J., & Teixeira, C. M. (2010). Preliminary analysis of the psychometric properties of Ryff's scales of psychological well-being in Portuguese adolescents. *The Spanish Journal of Psychology, 13*(2), 1032-

1043.

Finch, J. F., Okun, M. A., Pool, G. J., & Ruehlman, L. S. (1999). A comparison of the influence of conflictual and supportive social interactions on psychological distress. *Journal of Personality*, *67*, 581-622.

Fine, J. M. & Carlson, C. (1994). A systems-ecological perspective on home-school intervention. In Fine, J. M. & Carlson, C. (Eds). *The handbook of family-school intervention: A system perspective.* Needham Heights, MA: Allyn and Bacon.

Flaskerud, J. H. (2007). Cultural competence: What is it?. *Issues in Mental Health Nursing*, *28*(1), 121-123. doi:10.1080/01612840600998154

Flavell, J. H. (1979). Metacognition and cognitive monitoring: A new area of cognitive inquiry. *American Psychologist, 34*(10), 906-911.

Folkman, S., Lazarus, R. S., Gruen, R. J., & DeLongis, A. (1986). Appraisal, coping, health status and psychological symptoms. *Journal of Personality and Social Psychology, 50(3),* 571-579.

Ford, J. K., Smith, E. M., Weissbein, D. A., Gully, S. M., & Salas, E. (1998). Relationships of goal orientation, meta-cognitive activity, and practice strategies with learning outcomes and transfer. *Journal of Applied Psychology*, *83*, 218-233.

Franklin-Craft, A. (2010). *An assessment of the intercultural competence of student affairs administrators* (Doctoral dissertation). Available from ProQuest Dissertations & Theses. (AAT 3435119).

Freeman, K. (1997). Increasing African Americans' participation in higher education: African American high school students' perspectives. *Journal of Higher Education*, *68*(5), 523-550.

Friedman, T. L. (2005). *The world is flat: A brief history of the twenty-first century.* New York, NY: Farrar Straus and Giroux.

Furnham, A., Chamorro-Premuzic, T., & McDougall, F. (2003). Personality, cognitive ability, and beliefs about intelligence as predictors of academic performance. *Learning and Individual Differences, 14,* 47−64.

Gall, J. P., Gall, M. D., & Borg, W. R. (2005). *Applying educational research: A practical guide* (5th ed.). Boston, MA: Pearson Education.

Galloway, V. (1998). Constructing cultural realities: "Facts" and frameworks of association. In J. Harper, M. Lively, & M. Williams (Eds.), *The coming of age of the profession* (pp. 129-140). Boston, MA: Heinle and Heinle.

Garbarino, J. (2001). An ecological perspective on the effects of violence on children. *Journal of Community Psychology, 29*(3), 361-378. doi:10.1002/jcop.1022

Gecas, V. (1982). The self-concept. *Annual Review of Sociology,* 8, 1-33.

Gelfand, M. J., Imai, L., & Fehr, R. (2008). Think intelligently about cultural intelligence: The road ahead. In S. Ang & L. Van Dyne (Eds.), *Handbook of cultural intelligence: Theory, measurement, and applications* (pp. 375-387). Armonk, NY: M. E. Sharpe.

Goffman, E. (1959). *The presentation of self in everyday life*. Garden City, NY: Doubleday Anchor.

Goldberg, L. R. (1992). The development of markers for the Big-Five factor structure. *Psychological Assessment, 4,* 26-42.

Goldberg, L. R. (1993). The structure of phenotypic personality traits. *American Psychologist,* 26-34.

Goldberg, L. R. (1999). A broad-bandwidth, public domain, personality inventory measuring the lower-level facets of several five-factor models. In I. Mervielde, I. Deary, F. DeFruyt, & F. Ostendorf (Eds.), *Personality psychology in Europe* (Vol. 7, pp. 7-28). Tilburg, Netherlands: Tilburg University Press.

Goldberg, L. R. (2001). *International personality item pool*. Retrieved from http://ipip.ori.org.

Goldberg, L., Johnson, J., Eber, H., Hogan, R., Ashton, M., Cloninger, C., & Gough, H. (2006). The international personality item pool and the future of public-domain personality measures. *Journal of Research in Personality*, *40*, 84-96. doi: 10.1016./j.jrp.2005.08.007

Gollnick, D. M., & Chinn, P. C. (2002). *Multicultural education in a pluralistic society* (6th ed.). New York, NY: Merrill.

Green, S. B. (1991). How many subjects does it take to do a regression analysis? *Multivariate Behavior Research*, *26*, 499-510.

Gudykunst, W., Ting-Toomey, S., & Chua, E. (1988). *Culture and interpersonal communication.* Newbury Park, CA: Sage Publications.

Halgin, R. P., & Leahy, P. M. (1989). Understanding and treating perfectionistic college students. *Journal Counseling and Development*, *68*, 222-225.

Hall, E. T. (1987). *The dance of life: The other dimension of time*. New York, NY: Doubleday.

Hammer, M. R., Bennett, M. J., & Wiseman, R. (2002). Measuring intercultural competence: The intercultural development inventory. *International Journal of Intercultural Relations*.

Hampden-Turner, C., & Trompenaars, F. (2006). Cultural intelligences: Is such a capacity credible? *Group and Organization Management, 31,* 56-63.

Haring, M. J., Stock, W. A., & Okun, M. A. (1984). A research synthesis of gender and social class as correlates of subjective well-being. *Human Relations, 37,* 645-657.

Harper, S., & Antonio, A. L. (2008). Not by accident: Intentionality in diversity, learning and engagement. In S. Harper (Ed.), *Creating inclusive campus environments: For cross-cultural learning and student engagemen*t (pp. 1-18). Washington, D.C.: National Association for Student Personnel Administrators.

Harper, S. R., & Hurtado, S. (2007). Nine themes in campus racial climates and implications for institutional transformation. *New Directions for Student Services, 120*, 7-24.

Harris, R. J. (1985). *A primer of multivariate statistics* (2nd ed.). New York, NY: Academic Press.

Hausman, J. A., & Wise, D. (1979). Massachusetts Institute of Technology attrition bias in experimental and panel data: The Gary income maintenance experiment. *Econometrica, 47*(2), 455-473.

Headey, B., & Wearing, A. (1989). Personality, life events, and subjective well-being: Toward a dynamic equilibrium model. *Journal of Personality and Social Psychology, 57,* 731-739.

Higher Education Act of 1965 Part B strengthening Black colleges and universities. (1999). Retrieved from http://www2.ed.gov/programs/iduestitle3b/leg_docs/hbcuhea99.pdf

Hock, M. F., Deshler, D. D., & Schumaker, J. B. (1999). Tutoring programs for

academically underprepared college students: A review of the literature. *Journal of College Reading and Learning, 29*(2), 101-115.

Hofstede, G. (1980). *Culture's consequences: International differences in workrelated values.* Newbury Park, CA: John Wiley & Sons.

Hofstede, G. (1984). *Culture's consequence*. Newbury Park, CA: Sage.

Hofstede, G. (1994). Business cultures. *UNESCO Courier, 47*(4), 12.

Hong, Y., & Chiu, C. (2001). Toward a paradigm shift: From cross-cultural differences in social cognition to social-cognitive mediation of cultural differences. *Social Cognition, 19*(3), 181-196.

Hoyt, J. E. (1999). Remedial education and student remedial. *Community College Review, 27*(2), 51-65.

Hunter, J. E., & Hunter, R. F. (1984). Validity and utility of alternative predictors of job performance. *Psychological Bulletin, 76*(1), 72-93.

Hurtado, S. (1992). The campus racial climate: Contexts of conflict. *Journal of Higher Education, 63*(5), 539-569.

Hurtado, S., & Carter, D. (1997). Effects of college transition and perceptions of the campus racial climate on Latino students' sense of belonging. *Sociology of Education, 70*(4), 324-345.

Hurtz, G. M., & Donovan, J. J. (2000). Personality and job performance: The Big Five revisited. *Journal of Applied Psychology, 85*, 869-879.

Imai, L., & Gelfand, M. J. (2010). The culturally intelligent negotiator: The impact of cultural intelligence (CQ) on negotiation sequences and outcomes. *Organizational Behavior & Human Decision Processes, 112*(2), 83-98. doi:

10.1016/j.obhdp.2010.02.001

Inkson, K., Arthur, M. B., Pringle, J., & Barry, S. (1997). Expatriate assignment versus overseas experience: Contrasting models of international human resource development. *Journal of World Business, 32*(4), 351-368.

Jin, S. U., & Moon, S. M. (2006). A study of well-being and school satisfaction among academically talented students attending a science high school in Korea. *Gifted Child Quarterly, 50*, 169-184.

Johnson, J. A. (2010). *International Personality Item Pool Representation of the NEO PI-R*™). Retrieved from http://www.personal.psu.edu/faculty/j/5/j5j/IPIP/

Johnson, J. P., Lenartowicz, T., & Apud, S. (2006). Cross-cultural competence in international business: Toward a definition and a model. *Journal of International Business Studies,* 37(4), 525-543.

Juno, J. (2005, April 25). Office advocates for multicultural students at University of Minnesota. *Minnesota Daily via U-Wire*, 1-3.

Kasser, T., & Ryan, R. M. (1993). A dark side of the American dream: Correlates of financial success as a central life aspiration. *Journal of Personality and Social Psychology, 65*, 410-422.

Kasser, T., & Ryan, R. M. (1996). Further examining the American dream: Well-being correlates of intrinsic and extrinsic goals. *Personality and Social Psychology Bulletin, 22*, 281-288.

Kasser, T., & Ryan, R. M. (2001). Be careful what you wish for: Optimal functioning and the relative attainment of intrinsic and extrinsic goals. In P. Schmuck & K. Sheldon (Eds.), *Life goals and wellbeing: Towards a positive psychology of*

human striving (pp. 116-131). Seattle, WA: Hogrefe.

Katz, J. H. (1989). The challenges of diversity. In C. Woolbright (Ed.), *Valuing diversity on campus.* (pp. 1-21). Bloomington, IN: Association of College Unions-International.

Keeling, R. P. (2004). *Learning reconsidered: A campus-wide focus on the student experience*. Washington DC: American College Personnel Association and National Association of Student Personnel Administrators.

Keyes, C. (2007). Promoting and protecting mental health as flourishing: A complementary strategy for improving national mental health. *American Psychologist, 62*(2), 95-108.

Keyes, C. L. M., Shmotkin, D., & Ryff, C. D. (2002). Optimizing well-being: The empirical encounter of two traditions. *Journal of Personality and Social Psychology, 82,* 1007–1022.

Kihlstrom, J. F., & Cantor, N. (2000). Social intelligence. In R. J. Sternberg (Ed.), *Handbook of intelligence*. Cambridge, U.K.: Cambridge University Press.

Kim, Y. Y. (2001). *Becoming intercultural: An integrative theory of communication and cross-cultural adaptation*. Thousand Oaks, CA: Sage Publishers.

King, G., Honaker, J., Joseph, A., & Sheve, K. (1998). *Listwise deletion is evil: What to do about missing data in political science*. Working paper, Department of Government, Harvard University, Cambridge, MA .

King, P. M., & Baxter Magolda, M. (2005). A developmental model of intercultural maturity. *Journal of College Student Development, 46*(6), 571-592.

Kitamura, T., Matsuoka, T., Miura, S., & Yamaba, K. (2004). Ryff's psychological well-being inventory: Factorial structure and life history correlates among Japanese university students. *Psychological Reports, 94*, 83-103.

Kitchener, K. 1983. Cognition, metacognition, and epistemic cognition. *Human Development,* 26, 222-232.

Klafehn, J., Banerjee, P. M., & Chiu, C. (2008). Navigating cultures: The role of metacognitive cultural intelligence. In S. Ang & L. Van Dyne (Eds.), *Handbook of cultural intelligence: Theory, measurement and applications* (pp. 318 - 331). Armonk, NY: M.E. Sharpe.

Klein, J. R. (2010). *Cultural intelligence of students in an undergraduate multicultural studies course* (Doctoral dissertation). Available from ProQuest Dissertations & Theses. (AAT 3428239).

Knapp, L. G., Kelly-Reid, J. E., & Whitmore, R. W. (2006). *Enrollment in postsecondary institutions, fall 2004; Graduation rates, 1998 & 2001 Cohorts; and Financial statistics, fiscal year 2004 (NCES 2006-155).* U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved from http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2006155

Komarraju, M., Karau, S. J., & Schmeck, R. R. (2009). Role of the Big Five personality traits in predicting college students' academic motivation and achievement. *Learning and Individual Differences*, *19*(1) 47-52.

Kosic, A. (2004). Acculturation strategies, coping process and acculturative stress. *Scandinavian Journal of Psychology, 45*(4), 269-278. doi:10.1111/j.1467-9450.2004.00405.xb

Kramsch, C. (1996). The cultural component of language teaching. *Zeitschrift für Interkulturellen Fremdsprachenunterricht, 1*(2), 13. Retrieved from http://www.spz.tu-darmstadt.de/projekt_ejournal/jg_01_2/beitrag/kramsch2.htm

Kruger, J., & Dunning, D. (1999). Unskilled and unaware of it: How difficulties in recognizing one's own incompetence lead to inflated self-assessments. *Journal of Personality and Social Psychology, 77*, 1121-1134.

Kuh, G. D., & Whitt, E. J. (1988). *The invisible tapestry: Culture in American colleges and universities*. (AHSE-ERIC Higher Education, Report No. 1). Washington, D.C.: Association for the Study of Higher Education.

Lawrence, R. H., & Liang, J. (1988). Structural integration of the Affect Balance Scale and the Life Satisfaction Index A: Race, sex, and age differences. *Psychology and Aging, 3,* 375-384.

Leary, M. R. (1996). *Self-presentation: Impression management and interpersonal behavior*. Boulder, CO: Westview Press.

Lee, L.-Y., & Sukoco, B. M. (2010). The effects of cultural intelligence on expatriate performance: The moderating effects of international experience. *International Journal of Human Resource Management, 21*(7), 963-981. doi: 10.1080/09585191003783397

Levy-Leboyer, C. (2004). Cultural intelligence: Individual interactions across cultures (Book Review). *Personnel Psychology*, *57*(3), 792-794.

Liang, J. (1984). Dimensions of life satisfaction Index A: A structural formulation. *Journal of Gerontology, 5,* 613-622.

Lievens, F., Harris, M. M., Van Keer, E., & Bisqueret, C. (2003). Predicitng cross-

cultural training performance: The validity of personality, cognitive ability, and dimensions measured by an assessment center and a behavior description interview. *Journal of Applied Psychology, 88*, 476-489.

Livermore, D. (2010). *Leading with cultural intelligence: The new secret to success*. New York, NY: American Management Association.

Luce, M. F., Bettman, J. R., & Payne, J. W. (1997). Choice processing in emotionally difficult decisions. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 23*, 384-405.

Lufi, D., Parish-Plass, J., & Cohen, A. (March, 2003). Persistence in higher education and its relationship to other personality variables. *College Student Journal*. Retrieved from http://findarticles.com/p/articlesmi_mOFCR/is_1_37/ai_99816479

Lynch, E. W. (1992). From culture shock to cultural learning. In E. W. Lynch & M. J. Hanson (Eds.), *Developing cross-cultural competence: A guide for working with young children and their families* (pp. 19–34). Baltimore, MD: Paul H. Brooke.

Macdonald, J. (2009). Balancing priorities and measuring success. *Journal of Research in International Education, 8*(1), 81-98. doi: 10.1177/1475240908100682

MacDonald, K. (1998). Evolution, culture, and the five-factor model. *Journal of Cross-Cultural Psychology*, *29*, 119-149.

Mahoney,A., Carels, R., Pargament, K.,Wachholtz, A., Edwards-Leeper, L., Kaplar,M., & Frutchey, R. (2005). The sanctification of the body and behavioral health patterns of college students. *The International Journal of the Psychology of Religion, 15*, 221–238.

Manning, T. T. (2003). Leadership across cultures: Attachment style influences. *Journal of Leadership & Organizational Studies, 9*(3), 20-29.

Mannor, M. J. (2008). Top executives and global leadership: At the intersection of cultural intelligence and strategic leadership theory. In S. Ang & L. Van Dyne (Eds.), *Handbook of cultural intelligence: Theory, measurement and applications* (pp. 71-90). Armonk, NY: M.E. Sharpe.

Markus, H., & Wurf, E. (1987). The dynamic self-concept: A social psychological perspective. In M. R. Rosenzweig & L.W. Porter (Eds.), *Annual Review of Psychology, 38*, 299-337.

Martinez, T. P., & Martinez, A. P. (2005). High aspirations for diversity at the University of Chicago. *The Hispanic Outlook in Higher Education, 15*(17), 9-11.

Maslow, A. (1968). *Toward a psychology of being*. (2nd ed.). New York, NY: Van Nostrand Reinhold.

Mathieu, J. E., Martineau, J. W., & Tannenbaum, S. I. (1993). Individual and situational influences on the development of self-efficacy: Implications for training effectiveness. *Personnel Psychology, 46*, 125-147.

Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence. In J. D. Mayer, P. Salovey, & D. J. Sluyter (Eds.), *Emotional development and emotional intelligence*. New York, NY: Basic Books.

McAdams, D. P. (1992). The five factor model in personality: A critical appraisal. *Journal of Personality, 60,* 329-361.

McCann, S. J .H., & Meen, K. S. (1984). Anxiety, ability, and academic achievement. *The Journal of Social Psychology, 124*, 257-258.

McCrae, R. R., & Costa, P. T. (1991). Adding liebe und arbeit: The full five-factor model and well-being. *Personality and Social Psychology Bulletin, 17,* 227-232.

McCrae, R. R., & Costa, P. T., Jr. (1987). Validation of the five-factor model of personality across instruments and observers. *Journal of Personality and Social Psychology, 52,* 81-90.

McCrae, R. R., & Costa, P. T., Jr. (1997). Personality trait structure as a human universal. *American Psychologist, 52,* 509-516.

McGrew, A. G. (1992). Conceptualizing global politics. In A. G. McGrew, & P. G. Lewis, (Eds.) *Global politics: globalization and the nation-state*. (pp. 1-28). Cambridge: Polity Press.

McTighe, M. C. (2006). *Assessing global learning: Matching good intentions with good practice*. Washington, D.C.: Association of American Colleges & Universities.

Mendenhall, M., & Oddou, G. (1995). Expatriation and cultural adaptation. In T. Jackson (Ed.), *Cross-cultural management* (pp. 342-354). Oxford, UK: Butterworth-Heinemann Ltd.

Meyer, J. W. (2007). Globalization: Theory and trends. *International Journal of Comparative Sociology, 48*(4), 261-273.

Milem, J. F., Chang, M. J., & Antonio, A. L. (2005). Making diversity work on campus: A research-based perspective. Washington, DC: Association of American Colleges and Universities.

Moody, M. C. (2007). *Adaptive behavior in intercultural environments: The relationship between cultural intelligence factors and big five personality traits* (Doctoral dissertation). Available from ProQuest Dissertations & Theses. (AAT 3279483).

Moon, S. M. (2003). Developing personal talent. In F. J. Mönks & H. Wagner (Eds.), *Development of human potential: Investment into our future. Proceedings of the 8th Conference of the European Council for High Ability.* (ECHA, pp. 11-21). Bad Honnef, Germany: K. H. Bock.

Mueller, J. A., & Pope, R. L. (2001). The relationship between multicultural competence and White racial consciousness among student affairs practitioners. *Journal of College Student Development, 42,* 133-144.

Myers, D. G. (1992). *The pursuit of happiness: Who is happy and why.* New York, NY: William Morrow.

Myers, D. G., & Diener, E. (1995). Who is happy? *Psychological Science, 6,* 10-19.

National Survey of Student Engagement. (2003). *The college student report: 2003 overview*. Retrieved from http://nsse.iub.edu/nsse_2003/overview_2003.cfm

Nelms, C. (2010). *Strengthening America's Historically Black Colleges and Universities: A call to action*. HBCU Symposium. NCCU Office of the Chancellor. Retrieved from http://www.nccu.edu/formsdocs/proxy.cfm?file_id=1447

Nelson, T. O., & Narens, L. (1995). Why investigate metacognition? In J. Metcalfe & A. P. Shimamura (Eds.), *Metacognition: Knowing about knowing*. Cambridge, MA: MIT Press.

Ng, K. Y., & Earley, P. C. (2006). Culture + intelligence: Old constructs, new frontiers. *Group & Organization Management, 31*(1), 4-19. doi: 10.1177/1059601105275251

Ng, K. Y., Van Dyne, L., & Ang, S. (2009). From experience to experiential learning: Cultural intelligence as a learning capability for global leader development.

Academy of Management Learning & Education, *8*(4), 511-526.

O'Connor, M. C., & Paunonen, S. V. (2007). Big Five personality predictors of post-secondary academic performance. *Personality and Individual Differences*, *43*, 971-990.

Offermann, L. R., & Phan, L. U. (2002). Culturally intelligent leadership for a diverse world. In R. E. Riggio, S. E. Murphy, & F. J. Pirozzolo (Eds.), *Multiple intelligences and leadership* (pp. 187–214). Mahwah, NJ: Lawrence Erlbaum.

Ohmae, K. (2005). *The next global stage: Challenges and opportunities in our borderless world* (2nd ed.). Upper Saddle River, NJ: Wharton School Publishing.

Ormel, J., & Schaufeli, W. B. (1991). Stability and change in psychological distress and their relationship with self-esteem and locus of control: A dynamic equilibrium model. *Journal of Personality and Social Psychology, 60,* 288-299.

Ormel, J., & Wohlfarth, T. (1991). How neuroticism, long-term difficulties, and life situation change influence psychological distress: A longitudinal model. *Journal of Personality and Social Psychology, 60,* 744-755.

Ozer, D. J., & Benet-Martinez, V. (2006). Personality and the prediction of consequential outcomes. *Annual Review of Psychology, 57,* 401-421.

Paris, S., Cross, D. R, & Lipson, M. Y. (1984). Informal strategies for learning: A program to improve children's reading awareness and comprehension. *Journal of Educational Psychology, 76,* 1239-1252.

Peterson, B. (2004). *Cultural intelligence: A guide to working with people from other cultures.* Yarmouth, ME: Intercultural Press.

Piedmont, R., & Weinstein, H. (1993). A psychometric evaluation of the new NEO-PIR

facet scales for agreeableness and conscientiousness. *Journal of Personality Assessment, 60*(2), 302.

Price, E., McLeod, P. J., Gleich, S. S., & Hand, D.(2006). One year prevalence rates of major depressive disorder in first year university students. *Canadian Journal of Counselling, 40*(2), 68-81.

Psychometric Success. (2011). *The Big 5 aspects of personality*. Retrieved from http://www.psychometric-success.com/personality-tests/personality-tests-big-5-aspects.htm

Ramalu, S. S., Raduan Che, R., Kumar, N., & Uli, J. (2010). Doing business in global arena: An examination of the relationship between cultural intelligence and crosscultural adjustment. *Asian Academy of Management Journal, 15*(1), 79-97.

Rankin, S. R., & Reason, R. D. (2005). Differing perceptions: How students of color and white students perceive campus climate for underrepresented groups. *Journal of College Student Development, 46*(1), 43-61.

Reuber, A. R., & Fischer, E. (1997). The influence of the management team's international experience on the internationalization behaviors of SMEs. *Journal of International Business Studies, 28*(4), 807-825.

Richardson, J., & McKenna, S. (2002). International experience and academic career: What do academics have to say? *Personnel Review, 32*(6), 774-793.

Rockstuhl, T., Hong, Y. Y., Ng, K. Y., Ang, S., & Chiu, C. Y. (2010). The culturally intelligent brain: From detecting to bridging cultural difference. *NeuroLeadership Institute, 3*(1-15).

Rockstuhl, T., & Ng, K. Y. (2008). The effects of cultural intelligence on

interpersonal trust in multicultural teams. In S. Ang, & L. Van Dyne (Eds.), *Handbook of cultural intelligence: Theory, measurement, and applications* (pp. 206-220). Armonk, NY: M. E. Sharpe.

Rogers, C. (1961). *On becoming a person: A therapist's view of psychotherapy*. Boston, MA: Houghton Mifflin.

Rose, R. C., Sri Ramalu, S., Uli, J., & Kumar, N. (2010). Expatriate performance in international assignments: The role of cultural intelligence as dynamic intercultural competency. *International Journal of Business & Management*, *5*(8), 76-85.

Rosenfeld, P. R., Giacalone, R. A., & Riordan, C. A. (1995). *Impression management in organizations: Theory, measurement, and practice.* New York, NY: Routledge.

Rothstein, M. G., Paunonen, S. V., Rush, J. C., & King, G. A. (1994). Personality and cognitive ability predictors of performance in graduate business school. *Journal of Educational Psychology, 86,* 516-530.

Ryff, C. D. (1989a). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology, 57*(6), 1069-1081.

Ryff, C. D. (1989b). Beyond Ponce de Leon and life satisfaction: New directions in quest of successful aging. *International Journal of Behavioral Development*, *12*, 35-55.

Ryff, C. D. (1989c). In the eye of the beholder: Views of psychological well-being among middle-aged and older adults. *Psychology and Aging, 4*(2), 195-210.

Ryff, C. D. (1995). Psychological well-being in adult life. *Current Directions in Psychological Science*, *4*(4), 99-104.

Ryff, C. D., & Essex, M. J. (1992). The interpretation of life experience and well-being: The sample case of relocation. *Psychology and Aging, 7,* 507-517.

Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology, 69*(4), 719-727.

Ryff, C. D., & Singer, B. (1998). The contours of positive human health. *Psychological Inquiry, 9,* 1-28.

Salgado, J. (1997). The five factor model of personality ad job performance in the European community. *Journal of Applied Psychology, 82,* 30-43.

Schmidt, F. L., & Hunter, J. E. (2000). Select on intelligence. In E. A. Locke (Ed.), *The Blackwell handbook of organizational principles* (pp. 3-14). Oxford, UK: Blackwell.

Schmukle, S., Back, M., & Egloff, B. (2008). Validity of the five-factor model for the implicit self-concept of personality. *European Journal of Psychological Assessment, 24*(4), 263-272. doi: 10.1027/1015-5759.24.4.263

Schmutte, P. S., & Ryff, C. D. (1997). Personality and well-being: What is the connection? *Journal of Personality and Social Psychology, 73,* 549-559. doi:10.1037/0022-3514.73.3.549

Schraw, G., & Dennison, R. S. (1994). Assessing metacognitive awareness. *Contemporary Educational Psychology, 19,* 460-475.

Searle,W., & Ward, C. (1990). The prediction of psychological and sociocultural adjustment during cross-cultural transitions. *International Journal of Intercultural Relations, 14,* 449-464.

Selmeski, B. (2007). Military cross-cultural competence: Core concepts and individual

development. (Air Force Culture and Language Center Contract Report 2007-01).

Shannon, L. M., & Begley, T. M. (2008). Antecedents of the four-factor model of cultural intelligence. In S. Ang & L. Van Dyne (Eds.), *Handbook of cultural intelligence: Theory, measurement, and applications* (pp. 40-55). Armonk, NY: M. E. Sharpe.

Sheldon, K. M. (2005). Positive value change during college: Normative trends and individual differences. *Journal of Research in Personality, 39*(2), 209-223.

Smail, L., & Jafar, R. (2007). The relationship between students' personality types and their success. *Journal of Mathematics, Statistics, and Allied Fields, 1*(2).

Snarey, J. R., & Vaillant, G. E. (1985). How lower- and working-class youth become middleclass adults: The association between ego defense mechanisms and upward social mobility. *Child Development, 56*(4), 899-910.

Southern Regional Education Board. (2010). *Promoting a cultural of student success: How colleges and universities are improving degree completion*. Retrieved from http://publications.sreb.org/2010/10E02_Promoting_Culture.pdf

Srivastava, S. (2010). *Measuring the big five personality factors*. Retrieved from http://www.uoregon.edu/~sanjay/bigfive.html

Stahl, G. K., Miller, E. L., & Tung, R. L. (2002). Toward the boundaryless career: A closer look at the expatriate career concept and the perceived implications of an international assignment. *Journal of World Business, 37*, 216-227.

Stark, K. D. & Brookman, C. S. (1994). Theory and family-school intervention. In Fine, J. M. & Carlson, C. (Eds). *The handbook of family-school intervention: A system perspective.* Needham Heights, MA: Allyn and Bacon.

Sternberg, R. (1996). *Successful intelligence*. New York, NY: Simon & Schuster.

Sternberg, R. J. (1986). A framework for understanding conceptions of intelligence. In R. J. Sternberg & D. K. Detterman (Eds.), *What is intelligence? Contemporary viewpoints on its nature and definition* (pp. 3-15). Norwood, NJ: Ablex.

Sternberg, R. J., & Grigorenko, E. L. (2006). Cultural intelligence and successful intelligence. *Group & Organization Management, 31*(1), 27-39. doi: 10.1177/1059601105275255

Stock, W. A., Okun, M. A., Baring, M. J., & Witter, R. A. (1983). Age and subjective well-being: A meta-analysis. In R. J. Light (Ed.), *Evaluation studies: Review annual* (Vol. 8, pp. 279-302). Beverly Hills, CA: Sage.

Stock, W. A., Okun, M. A., & Benin, M. (1986). Structure of subjective well-being among the elderly. *Psychology and Aging, 1*, 91-102.

Suarez-Balcazar, Y., Orellana-Damacela, L., Portillo, N., Rowan, J., & Andrews-Guillen, C. (2003). Experiences of differential treatment among college students of color. *Journal of Higher Education, 74*(4), 428-444.

Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics*. (5th ed.). Boston, MA: Pearson.

Takeuchi, R., Tesluk, P. E., Yun, S., & Lepak, D. P. (2005). An integrative view of international experience. *Academy of Management Journal, 48(1),* 85-100.

Tan, J. S., & Chua, R., Y. (2003). Training and developing cultural intelligence. In P. C. Earley & S. Ang (Eds.), *Cultural intelligence: An analysis of individual interactions across cultures*. Palo Alto, CA: Stanford University Press.

Templer, K. J., Tay, C., & Chandrasekhar, N. A. (2006). Motivational cultural

intelligence, realistic job previews, and realistic living conditions preview, and cross-cultural adjustment. *Group and Organization Management, 31,* 154-173.

Thomas, D. C. (2006). Domain and development of cultural intelligence: The importance of mindfulness. *Group & Organization Management*, 31(1), 78-99.

Thomas, D. C., & Inkson, K. (2004). *Cultural intelligence: People skills for global business*. San Francisco, CA: Berrett-Koehler Publishers.

Thompson, B. (1991). A primer on the logic and use of canonical correlation analysis. *Measurement and Evaluation in Counseling and Development, 24*(2), 80-95.

Tokar, D. M., Fischer, A. R., & Subich, L. M. (1998). Personality and vocational behavior: A selective review of the literature, 1993-1997. *Journal of Vocational Behavior, 53,* 115–153.

Triandis, H. C. (2006). Cultural intelligence in organizations. *Group & Organization Management*, 31(1), 20-26.

Trompenaars, F. (1996). Resolving international conflict: Culture and business strategy. *London Business School, 7*(3), 51-68.

Trompenaars, F., & Hampden-Turner, C. (2004). *Managing people across cultures.* New York, NY: John Wiley & Sons.

United States Census Bureau (2000). Coming to America: A profile of the nation's foreign born (2000 update). Washington, D.C.: U.S. Department of Commerce. Retrieved from http://www.census.gov/prod/2002pubs/cenbr01-1.pdf

United States Census Bureau. (2001). *Population by race and Hispanic or Latino origin for all ages and for 18 years and over, for the United States:2000*. Retrieved from

http://www.census.gov/population/www/cen2000/briefs/phc-t1/index.html

United States Department of Education. (2008). *New race and ethnicity guidance for the collection of federal education data*. Retrieved from http://www2.ed.gov/policy/rschstat/guid/raceethnicity/index.html

United States Department of Education. (2010). *A blueprint for reform: The reauthorization of the elementary and secondary education act*. Retrieved from http://www2.ed.gov/policy/elsec/leg/blueprint/blueprint.pdf

United States Department of Education, National Center for Education Statistics. (2009). *Total 2007 Fall Enrollment of Students Attending Degree-Granting Institutions*. Retrieved from http://nces.ed.gov/fastfacts/display.asp?id=98

Usborne, E., & Taylor, D. M. (2010). The role of cultural identity clarity for self-concept clarity, self-esteem, and subjective well-being. *Personality and Social Psychology Bulletin, 36*(7), 883-897.

Valverde, L. A., & Castenell, L. A. (1998). *Multicultural campus: Strategies for transforming higher education*. Walnut Creek, CA: Alta Mira.

van der Zee, K. I., & van Oudenhoven, J. P. (2000). The multicultural personality questionnaire: A multi-dimensional instrument of multicultural effectiveness. *European Journal of Personality, 14,* 291-309.

Van Dierendonck, D. V. (2003). The construct validity of Ryff s scales of psychological well-being and its extension with spiritual well-being. *Personality and Individual Differences, 36,* 629-643. doi:10.1016/S0191-8869(03)00122-3

Van Dyne, L., Ang, S., & Koh, C. (2008). Development and validation of the CQS: The cultural intelligence scale. In S. Ang & L. Van Dyne, (Eds.) *Handbook on*

cultural intelligence: Theory, measurement and applications (pp. 16-38). Armonk, NY: M.E. Sharpe.

Van Dyne, L., Ang, S., & Koh, C. (2009). Cultural intelligence: Measurement and scale development. In M. A. Moodian (Ed.). *Contemporary leadership and intercultural competence: Exploring the cross-cultural dynamics within organizations* (pp. 233-254). Thousand Oaks, CA: Sage.

Van Dyne, L., Ang, S., & Livermore, D. (2010). Cultural intelligence: A pathway for leading in a rapidly globalizing world. In K. M. Hannum, B. McFeeters & L. Booysen (Eds.), *Leadership across differences*. San Francisco, CA: Pfeiffer.

van Oudenhoven, J. P., & van der Zee, K. I. (2002). Predicting multicultural effectiveness of international students: The multicultural personality questionnaire. *International Journal of Intercultural Relations*, *26*, 679-694.

VanVoorhis, C. W., & Morgan, B. L. (2007). Statistical rules of thumb: What we don't want to forget about sample sizes. *Tutorials in Quantitative methods for Psychology*, *3*(2), 43-50.

Wang, I. (2008). The relations between expatriate management and the mentality and adjustment of expatriates. *Social Behavior & Personality: An International Journal*, *36*(7), 865-882. doi:10.2224/sbp.2008.36.7.865

Ward, C., Berno, T., & Main, A. (2002). Can the Cross-cultural Adaptability Inventory predict sojourner adjustment? In P. Boski, F. J. R. van deVijver, & A. M. Chodnicka (Eds.), *New directions in cross-cultural psychology* (pp. 409-423). Warsaw, Poland: Polish Psychological Association.

Ward, C., & Fischer, R. (2008). Personality, cultural intelligence and cross-cultural

adaptation: A test of the mediation hypothesis. In S. Ang & L. Van Dyne (Eds.), *Handbook of cultural intelligence* (pp. 159-176).Armonk, NY: M. E. Sharpe.

Ward, C., Leong, C.-H., & Low, M., (2004).Personality and sojourner adjustment: An exploration of the Big Five and the cultural fit proposition. *Journal of Cross-Cultural Psychology, 35*(2), 137-151.

Widiger, T., & Trull, T. (1997). Assessment of the five-factor model of personality. *Journal of Personality Assessment, 68*(2), 228-250.

Wiggins, S. J. (1996). *The five-factor model of personality: A theoretical perspective*. New York, NY: The Guilford Press.

William, C. L., & Berry, J. W. (1991). Primary prevention of acculturative stress among refugees: Application of psychological theory and practice. *American Psychologist, 46,* 632–641.

Wintre, M. G., & Yaffe, M. (2000). First-year students' adjustment to university life as a function of relationships with parents. *Journal of Adolescent Research, 5*(1), 9-37.

Wong, J. G., Cheung, E. P., Chan K. K., Ma, K. M., & Tang, S. W. (2006). Web based survey of depression, anxiety and stress in first year tertiary education students in Hong Kong. *Australian & New Zealand Journal of Psychiatry, 40*, 777-782.

Wood, W., Rhodes, N., & Whelan, M. (1989). Sex differences in positive well-being: A consideration of emotional style and marital status. *Psychological Bulletin, 106,* 249-264.

Yamazaki, Y., & Kayes, D. C. (2004). An experiential approach to cross-cultural learning: A review and integration of competencies for success expatriate adaptation. *Academy of management learning and education, 3,* 362–379.

Zander, A., & Forward, J. (1968). Position in group, achievement motivation, and group aspirations. *Journal of Personality and Social Psychology, 8,* 282-288.

APPENDICES

APPENDIX A

Institutional Review Board Approval Letter

April 12, 2011

Teresa Smith
IRB Approval 1083.041111: The Impact of Cultural Intelligence on the Cross-Cultural Adjustment of Ethnic Minority Students Attending a Predominantly White University and a Historically Black College or University

Dear Teresa,

We are pleased to inform you that your above study has been approved by the Liberty IRB. This approval is extended to you for one year. If data collection proceeds past one year, or if you make changes in the methodology as it pertains to human subjects, you must submit an appropriate update form to the IRB. The forms for these cases were attached to your approval email.

Thank you for your cooperation with the IRB and we wish you well with your research project.

Sincerely,
Fernando Garzon, Psy.D.
IRB Chair, Associate Professor
Center for Counseling & Family Studies

APPENDIX B

Demographic Questions

1. Indicate the university you attend
    a. UNC-G
    b. A&T
2. Indicate your major
    a. Agricultural Education
    b. African American Studies
    c. Animal Science
    d. Anthropology
    e. Applied Engineering Technology
    f. Art
    g. Biology
    h. Chemistry
    i. Classical Studies
    j. Communication Sciences & Disorders
    k. Communication Studies
    l. Computer Science
    m. Criminal Justice
    n. Education
    o. English
    p. Entrepreneurship
    q. Family and Consumer Sciences
    r. Foreign Language
    s. History
    t. Human Development & Family Studies
    u. Interdisciplinary Studies
    v. Liberal Arts
    w. Journalism & Mass Communication
    x. Nursing
    y. Political Science
    z. Psychology
    aa. Public Health
    bb. Religious Studies
    cc. Sociology
    dd. Social Work
    ee. Statistics
    ff. Women's & Gender Studies
    gg. Other (please specify)
3. Indicate your classification
    a. Junior
    b. Senior
4. Indicate your sex

a. Male
b. Female

5. Indicate your age
    a) 20 or less
    b) 21-26
    c) 27-35
    d) 36-45
    e) 46 or older
6. Indicate your ethnicity and race (Select all that apply)
    a. American Indian or Alaska Native
    b. White or Caucasian
    c. Asian
    d. Black or African American
    e. Native Hawaiian or Other Pacific Islander
    f. Hispanic or Latino
    g. Non-Hispanic or Latino
    h. Two or more races (specify _____)
    i. Other (specify _____)
7. Indicate your country of birth_____
8. Indicate if you have completed a multicultural or cross-cultural class as part of your degree program
    a. Yes
    b. No
    c. Specify the course title
9. Indicate if you have prior travel abroad experience
    a. Yes
    b. No
10. Indicate if you have lived abroad
    c. Yes
    d. No
11. In addition to English, what languages do you speak? (Select all that apply)
    a. Spanish
    b. French
    c. German
    d. Italian
    e. Chinese
    f. Navajo
    g. None
    h. Other

APPENDIX C

Cultural Intelligence Scale (CQS) Self Report

Instructions: Read each statement and carefully select the response that best describes your current capabilities. Think of yourself as you generally are now, not as you would like to be. Answer as you honestly see yourself in relation to other people you know who are the same sex as you are and generally your same age.

Select the answer that BEST describes you AS YOU REALLY ARE (1=strongly disagree; 7=strongly agree).

CQ Factor **Questionnaire Items**

CQ-Strategy:

MC1 I am conscious of the cultural knowledge I use when interacting with people with different cultural backgrounds.

MC2 I adjust my cultural knowledge as I interact with people from a culture that is unfamiliar to me.

MC3 I am conscious of the cultural knowledge I apply to cross-cultural interactions.

MC4 I check the accuracy of my cultural knowledge as I interact with people from different cultures.

CQ-Knowledge:

COG1 I know the legal and economic systems of other cultures.

COG2 I know the rules (e.g., vocabulary, grammar) of other languages.

COG3 I know the cultural values and religious beliefs of other cultures.

COG4 I know the marriage systems of other cultures.

COG5 I know the arts and crafts of other cultures.

COG6 I know the rules for expressing non-verbal behaviors in other cultures.

CQ-Motivation:

MOT1 I enjoy interacting with people from different cultures.

MOT2 I am confident that I can socialize with locals in a culture that is unfamiliar to me.

MOT3 I am sure I can deal with the stresses of adjusting to a culture that is new to me.

MOT4 I enjoy living in cultures that are unfamiliar to me.

MOT5 I am confident that I can get accustomed to the shopping conditions in a different culture.

CQ-Behavior:

BEH1 I change my verbal behavior (e.g., accent, tone) when a cross-cultural interaction requires it.

BEH2 I use pause and silence differently to suit different cross-cultural situations.

BEH3 I vary the rate of my speaking when a cross-cultural situation requires it.

BEH5 I change my non-verbal behavior when a cross-cultural interaction requires it.

BEH6 I alter my facial expressions when a cross-cultural interaction requires it.

APPENDIX D

The IPIP-NEO

International Personality Item Pool Representation of the NEO-PI-R ™

Survey Items

The following pages contain 120 phrases illustrating people's behaviors. Read each item carefully and indicate how accurately or inaccurately it describes you by using the scale provided.

Think of yourself as you generally are now, not as you wish to be in the future. Answer as you honestly see yourself in relation to other people you know. Please understand that there are no right or wrong answers, and that such measures are only indicators of behavioral style or psychological orientation, and are not definitive. Your responses will remain confidential, and will not be associated with you as an individual.

Scoring Key
0= Very Inaccurate
1= Moderately Inaccurate
2= Neither Inaccurate nor Accurate
4= Very Accurate

1. Worry about things
2. Make friends easily
3. Have a vivid imagination
4. Trust others
5. Complete tasks successfully
6. Get angry easily
7. Love large parties
8. Believe in the importance of art
9. Use others for my own ends
10. Like to tidy up
11. Often feel blue
12. Take charge
13. Experience my emotions intensely
14. Love to help others
15. Keep my promises
16. Find it difficult to approach others
17. Am always busy
18. Prefer variety to routine
19. Love a good fight
20. Work hard

21. Go on binges
22. Love excitement
23. Love to read challenging material
24. Believe that I am better than others
25. Am always prepared
26. Panic easily
27. Radiate joy
28. Tend to vote for liberal political candidates
29. Sympathize with the homeless
30. Jump into things without thinking
31. Fear for the worst
32. Feel comfortable around people
33. Enjoy wild flights of fantasy
34. Believe that others have good intentions
35. Excel in what I do
36. Get irritated easily
37. Talk to a lot of different people at parties
38. See beauty in things that others may not notice
39. Cheat to get ahead
40. Often forget to put things back in their proper place
41. Dislike myself
42. Try to lead others
43. Feel others' emotions
44. Am concerned about others
45. Tell the truth
46. Am afraid to draw attention to myself
47. Am always on the go
48. Prefer to stick with things that I know
49. Yell at people
50. Do more than what is expected of me
51. Rarely overindulge
52. Seek adventure
53. Avoid philosophical discussions
54. Think highly of myself
55. Carry out my plans
56. Become overwhelmed by events
57. Have a lot of fun
58. Believe that there is no absolute right or wrong
59. Feel sympathy for those who are worse off than myself
60. Make rash decisions
61. Am afraid of many things
62. Avoid contacts with others
63. Love to daydream
64. Trust what people says
65. Handle task smoothly
66. Lose my temper

67. Prefer to be alone
68. Do not like poetry
69. Take advantage of others
70. Leave a mess in my room
71. Am often down in the dumps
72. Take control of things
73. Rarely notice my emotional reactions
74. Am indifferent to the feelings of others
75. Break rules
76. Only feel comfortable with friends
77. Do a lot in my spare time
78. Dislike changes
79. Insult people
80. Do just enough work to get by
81. Easily resist temptations
82. Enjoy being reckless
83. Have difficulty understanding abstract ideas
84. Have a high opinion of myself
85. Waste my time
86. Feel that I am unable to deal with others
87. Love life
88. Tend to vote for conservative political candidates
89. Am not interested in other people's problems
90. Rush into things
91. Get stressed out easily
92. Keep others at a distance
93. Like to get lost in thought
94. Distrust people
95. Know how to get things done
96. Are not easily annoyed
97. Avoid crowds
98. Do not enjoy going to art museums
99. Obstruct others' plans
100. Leave my belongings around
101. Feel comfortable with myself
102. Wait for others to lead the way
103. Don't understand people who get emotional
104. Take not time for others
105. Break my promises
106. Am not bothered by difficult social situations
107. Like to take it easy
108. Am attached to conventional ways
109. Get back at others
110. Put little time and effort into my work
111. Am able to control my cravings
112. Act wild and crazy

113. Am not interested in theoretical discussions
114. Boast about my virtues
115. Have difficulty starting tasks
116. Remain calm under pressure
117. Look at the bright side of life
118. Believe that we should be tough on crime
119. Try not to think about the needy
120. Believe that people should fend for themselves

APPENDIX E

Ryff Scales of Psychological Well-Being

The following set of statements deals with how you might feel about yourself and your life. Please remember that there are neither right nor wrong answers.

Circle the number that best describes the degree to which you agree or disagree with each statement.	**Strongly Disagree**	**Disagree**	**Disagree Slightly**	**Agree Slightly**	**Agree**	**Strongly Agree**
1. Most people see me as loving and affectionate.	1	2	3	4	5	6
2. I am not afraid to voice my opinion, even when they are in opposition to the opinions of most people.	1	2	3	4	5	6
3. In general, I feel I am in charge of the situation in which I live.	1	2	3	4	5	6
4. I am not interested in activities that will expand my horizons.	1	2	3	4	5	6
5. I live life one day at a time and don't really think about the future.	1	2	3	4	5	6
6. When I look at the story of my life, I am pleased with how things have turned out.	1	2	3	4	5	6
7. Maintaining close relationships has been difficult and frustrating for me.	1	2	3	4	5	6
8. My decisions are not usually influenced by what everyone else is doing.	1	2	3	4	5	6
9. The demands of everyday life often get me down.	1	2	3	4	5	6
10. I don't want to try new ways of doing things—my life is fine the way it is.	1	2	3	4	5	6
11. I tend to focus on the present, because the future always brings me problems.	1	2	3	4	5	6
12. In general, I feel confident and positive about myself.	1	2	3	4	5	6
13. I often feel lonely because I have few close friends with whom to share my concerns.	1	2	3	4	5	6
14. I tend to worry about what other people think of me.	1	2	3	4	5	6
15. I do not fit very well with the people and the community around me.	1	2	3	4	5	6

Circle the number that best describes the degree to which you agree or disagree with each statement.	Strongly Disagree	Disagree	Disagree Slightly	Agree Slightly	Agree	Strongly Agree
16. I think it is important to have new experiences that challenge how you think about yourself and the world.	1	2	3	4	5	6
17. My daily activities often seem trivial and unimportant to me.	1	2	3	4	5	6
18. I feel like many of the people I know have gotten more out of life than I have.	1	2	3	4	5	6
19. I enjoy personal and mutual conversations with family members or friends.	1	2	3	4	5	6
20. Being happy with myself is more important to me than having others approve of me.	1	2	3	4	5	6
21. I am quite good at managing the many responsibilities of my daily life.	1	2	3	4	5	6
22. When I think about it, I haven't really improved much as a person over the years.	1	2	3	4	5	6
23. I don't have a good sense of what it is I'm trying to accomplish in my life.	1	2	3	4	5	6
24. I like most aspects of my personality.	1	2	3	4	5	6
25. I don't have many people who want to listen when I need to talk.	1	2	3	4	5	6
26. I tend to be influenced by people with strong opinions.	1	2	3	4	5	6
27. I often feel overwhelmed by my responsibilities.	1	2	3	4	5	6
28. I have a sense that I have developed a lot as a person over time.	1	2	3	4	5	6
29. I used to set goals for myself, but that now seems a waste of time.	1	2	3	4	5	6
30. I made some mistakes in the past, but I feel that all in all everything has worked out for the best.	1	2	3	4	5	6
31. It seems to me that most other people have more friends than I do.	1	2	3	4	5	6
32. I have confidence in my opinions, even if they are contrary to the general consensus.	1	2	3	4	5	6
33. I generally do a good job of taking care of my personal finances and affairs.	1	2	3	4	5	6

Circle the number that best describes the degree to which you agree or disagree with each statement.	Strongly Disagree	Disagree	Disagree Slightly	Agree Slightly	Agree	Strongly Agree
34. I do not enjoy being in new situations that require me to change my old familiar ways of doing things.	1	2	3	4	5	6
35. I enjoy making plans for the future and working to make them a reality.	1	2	3	4	5	6
36. In many ways, I feel disappointed about my achievements in my life.	1	2	3	4	5	6
37. People would describe me as a giving person, willing to share my time with others.	1	2	3	4	5	6
38. It's difficult for me to voice my own opinions on controversial matters.	1	2	3	4	5	6
39. I am good at juggling my time so that I can fit everything in that needs to be done.	1	2	3	4	5	6
40. For me, life has been a continuous process of learning, changing, and growth.	1	2	3	4	5	6
41. I am an active person in carrying out the plans I set for myself.	1	2	3	4	5	6
42. My attitude about myself is probably not as positive as most people feel about themselves.	1	2	3	4	5	6
43. I have not experienced many warm and trusting relationships with others.	1	2	3	4	5	6
44. I often change my mind about decisions if my friends or family disagree.	1	2	3	4	5	6
45. I have difficulty arranging my life in a way that is satisfying to me.	1	2	3	4	5	6
46. I gave up trying to make big improvements or change in my life a long time ago.	1	2	3	4	5	6
47. Some people wander aimlessly through life, but I am not one of them.	1	2	3	4	5	6
48. The past has its ups and downs, but in general, I wouldn't want to change it.	1	2	3	4	5	6
49. I know that I can trust my friends, and they know they can trust me.	1	2	3	4	5	6
50. I judge myself by what I think is important, not by the values of what others think is important.	1	2	3	4	5	6

Circle the number that best describes the degree to which you agree or disagree with each statement.	Strongly Disagree	Disagree	Disagree Slightly	Agree Slightly	Agree	Strongly Agree
51. I have been able to build a home and a lifestyle for myself that is much to my liking.	1	2	3	4	5	6
52. There is truth to the saying that you can't teach an old dog new tricks.	1	2	3	4	5	6
53. I sometimes feel as if I've done all there is to do in life.	1	2	3	4	5	6
54. When I compare myself to friends and acquaintances, it makes me feel good about who I am.	1	2	3	4	5	6

APPENDIX F

IRB Application

11/06 Ref. # _____

APPLICATION TO USE HUMAN RESEARCH SUBJECTS

Liberty University

Committee On The Use of Human Research Subjects

1. Project Title: THE IMPACT OF CULTURAL INTELLIGENCE ON THE CROSS-CULTURAL ADJUSTMENT OF ETHNIC MINORITY STUDENTS ATTENDING A PREDOMINANTLY WHITE UNIVERSITY AND A HISTORICALLY BLACK COLLEGE OR UNIVERSITY

2. Full Review ☐ Expedited Review X

4. Principal Investigator:
   Teresa A. Smith (Student)
   Name and Title
   correspondence address
   Phone, E-mail,

5. Faculty Sponsor (if student is PI), also list co-investigators below Faculty Sponsor, and key personnel:
   Dr. Amanda J. Rockinson-Szapkiw
   SOE (434)-582-7423
   aszapkiw@liberty.edu
   Name and Title

6. Non-key personnel:

   Name and Title
   Dept, Phone, E-mail address

7. Consultants:
   Dr. Amanda J. Rockinson-Szapkiw
   SOE (434)-582-7423
   aszapkiw@liberty.edu
   Name and Title
   Dept, Phone, E-mail address

8. The principal investigator agrees to carry out the proposed project as stated in the application and to promptly report to the Human Subjects Committee any proposed changes and/or unanticipated problems involving risks to subjects or others participating in approved project in accordance with the Liberty Way and the Confidentiality Statement. The principal investigator has access to copies of 45 CFR 46 and the Belmont Report. The principal

investigator agrees to inform the Human Subjects Committee and complete all necessary reports should the principal investigator terminate University association. Additionally s/he agrees to maintain records and keep informed consent documents for three years after completion of the project even if the principal investigator terminates association with the University.

_____

Principal Investigator Signature Date

_____

Faculty Sponsor (If applicable) Date

Submit the original request to: Liberty University Institutional Review Board, CN Suite 1582, 1971 University Blvd., Lynchburg, VA 24502. Submit also via email to irb@liberty.edu

APPLICATION TO USE HUMAN RESEARCH SUBJECTS

10. This project will be conducted at the following location(s): (please indicate city & state)

☐ Liberty University Campus

X☐ Other (Specify): NC A& T State University and UNC-Greensboro, Greensboro, NC

11. This project will involve the following subject types: (check-mark types to be studied)

☐	Normal Volunteers (Age 18-65)	☐	Subjects Incapable Of Giving Consent
☐	In Patients	☐	Prisoners Or Institutionalized Individuals
☐	Out Patients	☐	Minors (Under Age 18)
☐	Patient Controls	☐	Over Age 65
☐	Fetuses	X	University Students (Liberal Arts Dept. subject pool)
☐	Cognitively Disabled	☐	Other Potentially Elevated Risk Populations_____
☐	Physically Disabled		
☐	Pregnant Women		

12. Do you intend to use LU students, staff or faculty as participants in your study? If you do not intend to use LU participants in your study, please check "no" and proceed directly to item 13.

YES ☐ NO X

If so, please list the department and/classes you hope to enlist and the number of participants you would like to enroll.

_____ _____

In order to process your request to use LU subjects, we must ensure that you have contacted the appropriate department and gained permission to collect data from them.

Signature of Department Chair:

_____

_____

Department Chair Signature(s) Date

13. Estimated number of subjects to be enrolled in this protocol: _____500_____

14. Does this project call for: (check-mark all that apply to this study)

☐ Use of Voice, Video, Digital, or Image Recordings?

☐ Subject Compensation? Patients $_____ Volunteers $_____
Participant Payment Disclosure Form

☐ Advertising For Subjects?

☐ More Than Minimal Risk?

☐ More Than Minimal Psychological Stress?

☐ Alcohol Consumption?

X Confidential Material (questionnaires, photos, etc.)?

☐ Waiver of Informed Consent?

☐ Extra Costs To The Subjects (tests, hospitalization, etc.)?

☐ VO2 Max Exercise?

☐ The Exclusion of Pregnant Women?

☐ The Use of Blood? Total Amount of Blood _____
Over Time Period (days) ____

☐ The Use of rDNA or Biohazardous materials?

☐ The Use of Human Tissue or Cell Lines?

☐ The Use of Other Fluids that Could Mask the Presence of Blood (Including Urine and Feces)?

☐ The Use of Protected Health Information (Obtained from Healthcare Practitioners or Institutions)?

15. This project involves the use of an **Investigational New Drug** (IND) or an **Approved Drug For An Unapproved Use**.

☐ YES X NO
Drug name, IND number and company: _____

16. This project involves the use of an **Investigational Medical Device** or an **Approved Medical Device For An Unapproved Use**.
☐ YES X NO
Device name, IDE number and company: _____

17. The project involves the use of **Radiation or Radioisotopes**:
☐ YES X NO

18. Does investigator or key personnel have a potential conflict of interest in this study?
☐ YES X NO

EXPEDITED/FULL REVIEW APPLICATION NARRATIVE

A. PROPOSED RESEARCH RATIONALE (Why are you doing this study? [Excluding degree requirement])

The primary purpose of this study is to identify the relationship between personality traits, cultural intelligence and cross-cultural adjustment for ethnic minority students. The information gained will be shared with the study institutions to help them better meet their ethnic minority students' cross-cultural and academic needs.

B. SPECIFIC PROCEDURES TO BE FOLLOWED

- In a step-by-step manner, using simple, nonscientific language, provide a description of the procedures of the study and data collection process. Also, describe what your subjects will be required to do. (Note: Sections C and D deal with type of subjects and their recruitment. That information does not need to be included here.)

  A letter requesting recruitment assistance and an explanation of the study and expectations of participants will be shared with the deans of the liberal arts program at the University Appendix A). The researcher will distribute a series of emails through liberal arts faculty to junior and senior students. The email notification will provide an overview of the research and the researcher's contact information. Students will be instructed to use the link included in the email to complete the demographic questionnaire, Goldberg's (1999) Internal Personality Item Pool, an alternate version of Costa and McCrae's (1992) commercial Neuroticism, Extraversion, and Openness Personality Inventory (NEO-PI-R ^{TM}), Earley and Ang's (2003) Cultural Intelligence Scale, and Ryff (1989) Scales of Psychological Well-Being. The student responses will remain confidential and will not be

shared with the professors or other students. Student responses data will be acquired via the Internet, downloaded onto an external hard drive, and will be stored at the researcher's residence in a locked drawer once collected.

C. SUBJECTS

Who do you want to include in your study? Please describe in nonscientific language:

- The inclusion criteria for the subject populations including gender, age ranges, ethnic background, health status and any other applicable information. Provide a rationale for targeting those populations.

  Participants will be undergraduate junior and seniors students over the age of 18 enrolled in capstone courses in Fall 2010 and Spring 2011 offered by two North Carolina universities. I will identify a sample of junior and senior liberal arts students as a reflective population of students in other southern universities.

- The exclusion criteria for subjects. Students will be excluded if they do not complete all components of the survey instrument.

- Explain the rationale for the involvement of any special populations (Examples: children, specific focus on ethnic populations, mentally retarded, lower socio-economic status, prisoners)
  In the past, the cultural intelligence scale has been examined with business students and in the business arena. It has not specifically been used with ethnic minority student in a higher education institution.

- Provide the maximum number of subjects you seek approval to enroll from all of the subject populations you intend to use and justify the sample size. You will not be approved to enroll a number greater than this. If at a later time it becomes apparent you need to increase your sample size, you will need to submit a Revision Request.

  A convenience random sample will be used. Green (1991) suggests that "$N > 50 + 8$ m (where m is the number of IVs) for testing the multiple correlation and $N > 104 + m$ for testing individual predictors (assuming a medium-sized relationship)". When testing both, the larger sample size should be used (VanVoorhis & Morgan, 2007, p. 48). Thus, this study will use a minimum sample size of 135 and a maximum number of 500.

- **For NIH, federal, or state funded protocols only**: If you do not include women, minorities and children in your subject pool, you must include a justification for their exclusion. The justification must meet the exclusionary criteria established by the NIH. N/A

D. RECRUITMENT OF SUBJECTS AND OBTAINING INFORMED CONSENT

- Describe your recruitment process in a straightforward, step-by-step manner. The IRB needs to know all the steps you will take to recruit subjects in order to ensure subjects are properly informed and are participating in a voluntary manner. An incomplete description will cause a delay in the approval of your protocol application.

  A letter explaining the study and expectations of participants will be shared with the deans of the liberal arts program at the University (Appendix A). The researcher will gain contact information of faculty from the deans. The researcher will then contact the faculty via of e-mail and a conference call with capstone professors at both universities in order to gain permission and assistance in surveying junior and senior students.

  An e-mail letter will be written by the researcher and forwarded by the faculty to the students' university e-mail address. In *Mail and Internet Surveys: The Tailored Design Method 2007 Update with New Internet, Visual, and Mixed-Mode Guide,* Dillman (2007) outlines a five-point process for increasing response rate to Internet surveys. A five-point system to solicit and receive feedback from junior and senior liberal arts students on the survey instruments will be used. The students will receive five email notifications over a one-month period. If enough subjects are not available the study will be extended throughout the summer and fall terms. The email notifications will provide an overview of the research and the researcher's contact information. The notification will direct participants who voluntarily consent to participate in the study to complete an online informed consent hosted via the online survey system before completing the demographic questionnaire, Earley and Ang's (2003) Cultural Intelligence Scale, and Goldberg's (1999) Internal Personality Item Pool, an alternate version of Costa and McCrae's (1992) commercial Neuroticism, Extraversion, and Openness Personality Inventory (NEO-PI-R ^{TM}), and Ryff's (1989) Scales of Psychological Well-Being. The student responses will remain confidential and will not be shared with the study professors or other students. Student response data will be acquired via the Internet, downloaded onto an external hard drive, and will be stored at the researcher's residence in a locked drawer once collected.

  The researcher will store all research documentation on a password-protected computer database on her personal computer used for educational and university purposes for the duration of three years and will then delete the documentation from the computer database. Any hard copies of the data will be stored in a locked filing cabinet draw and shredded at the end of three years.
  Each student who completes the survey will be eligible to be entered into a drawing for three cash prizes totaling $150.00 (3-$50.00 awards).

E. PROCEDURES FOR PAYMENT OF SUBJECTS

- Describe any compensation that subjects will receive. Please note that Liberty University Business Office policies might affect how you can compensate subjects. Please contact your department's business office to ensure your compensation procedures are allowable by these policies.
  Each student who completes the survey will be eligible to be entered into a drawing for three cash prizes totaling $150.00 (3-$50.00 awards).

F. CONFIDENTIALITY

- Describe what steps you will take to maintain the confidentiality of subjects.

  The researcher will take precautions to protect participant identity by not linking survey information to participant identity. The researcher will not identify participants by name or identify the course by title or by number in any of her writings or presentations. The survey is located on SurveyMonkey.com. The site does not use encryption technologies. Data stored by Survey Monkey is in a secure location protected by pass card and biometric recognition; it is conceivable that engineering staff at the web hosting company may need to access the database for maintenance reasons. The researcher will also store all research documentation on a password-protected computer database on her personal computer used for educational and university purposes for the duration of seven years and will then delete the documentation from the computer database. Any hard copies of the data will be stored in a locked filing cabinet and shredded at the end of three years.

- Describe how research records, data, specimens, etc. will be stored and for how long.

  Student responses data will be acquired via the Internet, downloaded onto an external hard drive, and will be stored at the researcher's residence in a locked drawer once collected.

- Describe if the research records, data, specimens, etc. will be destroyed at a certain time. Additionally, address if they may be used for future research purposes.

  The data will be destroyed after three years. The raw data may be used for future research studies conducted by the researcher.

G. POTENTIAL RISKS TO SUBJECTS

- There are always risks associated with research. If the research is minimal risk, which is no greater than every day activities, then please describe this fact.

  Participants may experience emotional disequilibrium as a result of increased self-awareness. No student names and identifying information will be collected and the results will be reported only in summative form

so that no individual can be identified. The researcher upon completion will collect Internet-based surveys and no other identifiable information (IP address) will be obtained in the process.

- Describe the risks to participants and steps that will be taken to minimize those risks. Risks can be physical, psychological, economic, social, legal, etc.
- Where appropriate, describe alternative procedures or treatments that might be advantageous to the participants.
- Describe provisions for ensuring necessary medical or professional intervention in the event of adverse effects to participants or additional resources for participants.

H. BENEFITS TO BE GAINED BY THE INDIVIDUAL AND/OR SOCIETY

- Describe the possible direct benefits to the subjects. If there are no direct benefits, please state this fact.

  Increased self-awareness is a potential benefit. Participants may benefit from increased understanding of their personality traits and cultural intelligence. The potential publication of the findings of this study may prove beneficial to students, faculty, and higher education administrators as they seek to proactively improve ethnic minority students' recruitment, retention, and graduation rates. Each student who completes the survey will be eligible to be entered into a drawing for three cash prizes totaling $150.00 (3-$50.00 awards).

- Describe the possible benefits to society. In other words, how will doing this project be a positive contribution and for whom?
  The study will add to the research on cultural intelligence and ethnic minority students' cross-cultural adjustment in the higher education system. The information gained will help the institutions of higher education further define recruitment and retention processes that support diverse learners' successful matriculation.

I. INVESTIGATOR'S EVALUATION OF THE RISK-BENEFIT RATIO

Here you explain why you believe the study is still worth doing even with any identified risks.
N/A

J. WRITTEN INFORMED CONSENT FORM ***(Please attach to the Application Narrative. See Informed Consent IRB materials for assistance in developing an appropriate form. See K below if considering waiving signed consent or informed consent)***

K. WAIVER OF INFORMED CONSENT OR SIGNED CONSENT

Waiver of consent is sometimes used in research involving a deception element.
Waiver of signed consent is sometimes used in anonymous surveys or research

involving secondary data. See Waiver of Informed Consent information on the IRB website. If requesting either a waiver of consent or a waiver of signed consent, please address the following:

1. For a Waiver of Signed Consent, address the following:
   a. Does the research pose greater than minimal risk to subjects (greater than everyday activities)?
   b. Does a breech of confidentiality constitute the principal risk to subjects?
   c. Would the signed consent form be the only record linking the subject and the research?
   d. Does the research include any activities that would require signed consent in a non-research context?
   e. Will you provide the subjects with a written statement about the research (an information sheet that contains all the elements of the consent form but without the signature lines)?

2. For a Waiver of Consent Request, address the following:
   a. Does the research pose greater than minimal risk to subjects (greater than everyday activities)?
   b. Will the waiver adversely affect subjects' rights and welfare? Please justify?
   c. Why would the research be impracticable without the waiver?
   d. How will subject debriefing occur (i.e., how will pertinent information about the real purposes of the study be reported to subjects, if appropriate, at a later date?)

L. SUPPORTING DOCUMENTS *(to be attached to the Application Narrative)*

M. COPIES:

For investigators requesting **Expedited Review** or **Full Review**, email the application along with all supporting materials to the IRB (irb@liberty.edu). Submit one hard copy with all supporting documents as well to the Liberty University Institutional Review Board, Campus North Suite 1582, 1971 University Blvd., Lynchburg, VA 24502.

APPENDIX G

Informed Consent

Purpose: The purpose of this study is two-fold: (1) to examine the relationships among the Big Five personality traits, cultural intelligence factors, and cross-cultural adjustment of junior and senior minority liberal arts students attending a southern Predominantly White University (PWI) and a Historically Black College or University (HBCU) and (2) to determine the extent to which cultural intelligence effects cross-cultural adjustment. This research is being conducted by Teresa A. Smith, a doctoral student (under the direction of Dr. Amanda J. Rockinson-Szapkiw) at Liberty University.

Description of Study: As a participant, you are asked to complete the Internet-based survey designed specifically to evaluate your personality traits, cultural intelligence, and psychological well-being. It is estimated that the Internet-based survey will require approximately 40 minutes to complete. Participants self-rating about personality, cultural intelligence, and cross-cultural adjustment will provide insight into the application of the cultural intelligence model in higher education. Study results will be reported to interested parties when the study is complete by contacting the researcher using the provided contact information. Results will be published and presented.

Benefits: Increased self-awareness is a potential benefit. Participants may benefit from increased understanding of their personality traits and cultural intelligence. The potential publication of the findings of this study may prove beneficial to students, faculty, and higher education administrators as they seek to proactively improve ethnic minority students recruitment, retention, and graduation rates. Each student who completes the survey will be eligible to be entered into a drawing for three cash prizes totaling $150.00 (3-$50.00 awards).

Risks: Participants may experience emotional disequilibrium as a result of increased self-awareness. If emotional disequilibrium should occur, please contact Counseling Services, 109 Murphy Hall, 336.334.7727 for support.

No student names and identifying information will be collected and the results will be reported only in summative form so that no individual can be identified. The researcher upon completion will collect Internet-based surveys and no other identifiable information (IP address) will be obtained in the process.

Confidentiality: Completed surveys and all data will be kept in my locked office. No information that identifies you or links you to your completed surveys will ever be collected. Pseudonyms will be used to refer to your school in write-ups. All other identifying information will be removed. All information gained from individual questionnaires will be kept confidential, seen by no one other than the researcher and Dr. Amanda J. Rockinson-Szapkiw, Chair of Dissertation Committee.

The survey is located on SurveyMonkey.com. The site does not use encryption technologies; therefore, although unlikely, any information you provide could be observed by a third party while in transit. Data stored by SurveyMonkey is in a secure location protected by pass card and biometric recognition; it is conceivable that engineering staff at the web hosting company may need to access the database for maintenance reasons. The researcher will also store all research documentation on a password-protected computer database on her personal computer used for educational and university purposes for the duration of three years and will then delete the documentation from the computer database. Any hard copies of the data will be stored in a locked filing cabinet and shredded at the end of three years.

Subject's Assurance: Participation in this study is voluntary. You may refuse to participate at any time without penalty. Refusing to participate will in no way affect you or your standing in the liberal arts department. The results of this study will be available to you after May 2012 upon request.

This research project has been reviewed and approved by the Institutional Review Board of Liberty University, which ensures that research projects that involve human subjects follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the chair of the Institutional Review Board, Liberty University, 1971 University Boulevard, Lynchburg, VA 24502 or by email to irb@liberty.edu.

Statement of Consent:

Liberty University and the university where you are currently studying, their agents, trustees, administrators, faculty, and staff are released from all claims, damages, or suits, not limited to those based upon or related to any adverse effect upon you which may arise during or develop in the future as a result of my participation in this research. (Please understand that this release of liability is binding upon you, your heirs, executors, administrators, personal representatives, and anyone else who might make a claim through or under you.)

Disclosure:

Clicking below I acknowledge the following:

I have read and understand the description of the study and contents of this document. I have had an opportunity to ask questions and have all my questions answered. I hereby acknowledge the above and give my voluntary consent for participation in this study. I understand that I must be ***18 years or older to sign this informed consent and participate*** *in this study. I understand that should I have any questions about this research and its conduct, I should contact any of the following:*

If you have questions about this study, you may contact the researcher, Teresa A. Smith, at tasmith5@liberty.edu, or Dr. Amanda J. Rockinson-Szapkiw at aszapkiw@liberty.edu.

APPENDIX H

Participant Email

Dear Liberal Arts Student:

I am writing to request your help with a study about liberal arts students' cultural intelligence. The purpose is to assess the relationship between students' personality traits, cultural intelligence traits, and cross-cultural adjustment. Results from this study may highlight gaps in the university's screening and admission criteria, learning environments conduciveness for ethnically diverse learners, faculty hiring, and psychological services needed to meet the academic and social needs of ethnic minority students. You were selected because you are classified as a liberal arts student at a HBCU. Increased self-awareness is a potential benefit. Participants may benefit from increased understanding of their personality traits and cultural intelligence.

This is a correlation study, not evaluative. I wish to capture your basic cultural knowledge and sense of well-being. Participation in this study is voluntary. If you decide to participate in this study, here is what will happen:

1. You will complete the ten demographic questions.
2. You will complete the International Personality Item Pool inventory that examines your personality traits.
3. You will complete the Cultural Intelligence Scale that examines knowledge, skills, and awareness.
4. You will complete the Ryff Scales of Psychological Well-Being that examine your psychological well-being.
5. It should take you approximately 30 minutes to complete the three components of the survey.
6. Each student who completes the survey will be eligible to be entered into a drawing for three cash prizes totaling $150.00 (3-$50.00 awards).

Your answers to this voluntary survey are completely confidential to the extent permitted by the law and will only be published as summaries; therefore, no individual responses are identifiable. When you submit your completed questionnaire, your name will be deleted from the mailing list and will have no further connection to any of your responses.

Below you will find the secure URL that will link you to the survey. The survey will close on Friday, November 18, 2011. If you have any questions, please contact me at tasmith5@liberty.edu.

Thank you so much for your participation in this important study.

Sincerely,
Teresa A. Smith, Doctoral Candidate

College of Education
Liberty University

Click on this secure link https://www.surveymonkey.com/s/KY5WZMR or paste it into your Internet browser to access the survey.