WHAT FACTORS OF CULTURAL INTELLIGENCE PREDICT TRANSFORMATIONAL LEADERSHIP: A STUDY OF INTERNATIONAL SCHOOL LEADERS

by

Emerson K. Keung

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

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APPROVED BY:

Amanda Rockinson-Szapkiw, Ed.D. Chair July 22, 2011

Patrick Eggleton, Ph.D., Committee July 22, 2011

Lucinda West, Ph.D., Committee July 22, 2011

Scott Watson, Ph.D., Associate Dean, Advanced Programs July 22, 2011

ABSTRACT

Emerson K. Keung, WHAT FACTORS OF CULTURAL INTELLIGENCE PREDICT TRANSFORMATIONAL LEADERSHIP: A STUDY OF INTERNATIONAL SCHOOL LEADERS (under the direction of Dr. Amanda Rockinson-Szapkiw, Ed.D.) School of Education, July, 2011

International schools are a microcosm of the globalization that is occurring throughout the world. Effective leadership is critical to ensure that schools are successful in accomplishing their missions. This study examines if there is a relationship between cultural intelligence and effective leadership, defined as transformational leadership, in international school leaders, and if so, what factor(s) of cultural intelligence best predicts transformational leadership in international school leaders. International school leaders received an online survey that included the Cultural Intelligence Scale and the Multifactor Leadership Questionnaire 5X. Standard multiple regression analysis was used. The results indicate that there is a significant positive relationship between cultural intelligence and transformational leadership in international school leaders. The four factors of cultural intelligence significantly predict transformational leadership and all five factors of transformational leadership in international school leaders. Cultural intelligence should be an important consideration in the selection, training, and professional development of international school leaders, in integrating cultural intelligence into Higher Education curriculum, and in domestic educational contexts.

Descriptors: Cultural Intelligence, Transformational Leadership, International Schools, Intercultural Effectiveness

Dedication

To my wife, Miriam, and two children, Emma and Kennedy. Your encouragement over four years and three countries enabled me to complete this research.

Acknowledgments

I gratefully acknowledge the expertise of my chair, Dr. Amanda Rockinson-Szapkiw, who is always conscientious, knowledgeable, and thorough, but also humorous, positive, and encouraging. I also acknowledge my committee members, Dr. Patrick Eggleton and Dr. Lucinda West, whose commitment despite challenging time zones and schedules made their help even more of a gift. My utmost thanks and respect for all you do.

I especially thank my wife, Miriam, for edifying, encouraging, and challenging me. As iron sharpens iron, so you have sharpened me.

My special thanks to my six year old daughter, Emma, who daily remembered Daddy's doctorate, and whose patience, understanding, love, and comic relief were a blessing during the process. My one year old son, Kennedy, fueled my work with his many kisses.

I also extend thanks to my parents, Yat-Hang and Grace Wai-Ying Keung, whose living examples showed me that goals are achieved by hard work and diligence.

Beatrice Porter deserves thanks and recognition. This work is also the result of your help and support.

I extend my sincere appreciation to the international school leaders who participated in this study. The number of participants who were willing to take the time during the end of the school year to complete the survey and write personal notes of encouragement to an anonymous researcher is illustrative of the fact that educators care and desire to make a difference. The vision and dedication of these leaders are admirable.

To the many other inspirational leaders with whom I have had the privilege of working, thank you for your living models of culturally intelligent leadership.

Finally, I am grateful to the memory of Dr. Jill Jones who said and lived, “Anything worth achieving is worth sacrifice”.

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Cultural Intelligence Scale (CQS)

Global Leadership and Organizational Behavior Effectiveness (GLOBE)

International School Services (ISS)

Multifactor Leadership Questionnaire (MLQ)

CHAPTER ONE: INTRODUCTION

Globalization is a reality that is facing educational institutions, businesses, and multinational organizations (Moon, 2010b; Ruby, 2005; van Woerkom & de Reuver, 2009). This phenomenon manifests itself as an increasing interconnectedness and interdependence of people, organizations, and countries across national borders (Meyer, 2007). Export trade of goods and services more than doubled to 31% of the global gross domestic product in 2006; this is from 14% in 1970 (Smith, Shrestha, & Evans, 2010). It has been predicted that 80% of the world output will be in global markets by 2029 (Bryan, Rall, Fraser, & Oppenheim, 1999).

International schools are a microcosm of the globalization that is occurring throughout the world. By 2007, the number of international schools had grown exponentially to two million students in 187 countries being educated in 4,563 schools (Bunnell, 2008). The numbers continue to climb with 100 schools being added per month (Bunnell, 2008). As a result of globalization, not only has the number of international schools grown, but also cultural diversity is increasing in their student bodies and staff populations (Walker & Cheong, 2009; Walker & Riordan, 2010). Accompanying the expansion of multinational companies is a highly mobile multicultural student body (Murakami-Ramalho & Benham, 2010; van Woerkom & de Reuver, 2009). International schools are no longer educating the "colonial elite" but rather the "cosmopolitan" elite. Local wealthy families are choosing international schools for their children for the globally focused education, English language expertise, and different pedagogical choices (Walker & Cheong, 2009). Interest in international schools has grown; however,

there has not been a concomitant increase in the empirical research on international schools (Bunnell, 2006a; Bunnell, 2008). Therefore, the context of this study will be international schools. Specifically, this study will focus on leadership within international schools and determine the role that cultural intelligence plays in effective leadership.

Effective Leadership

Empirical research on effective schools has identified transformational leadership as a critical factor (Bass & Riggio, 2006; Leithwood & Jantzi, 2005). Transformational leadership is comprised of five factors: (a) idealized influence (attributed), (b) idealized influence (behavior), (c) inspirational motivation, (d) intellectual stimulation, and (e) individualized consideration (Bass & Bass, 2008; Bass & Riggio, 2006).

Idealized influence refers to the behaviors and elements that are attributed to leaders that allow them to be admired and respected as role models. Inspirational motivation is the leaders' behaviors that inspire and motivate their followers. Intellectual stimulation speaks to the importance of encouraging creativity, innovation, and reframing problems. Individualized consideration is the ways in which leaders mentor, support, and focus on the individual needs of followers (Bass & Riggio, 2006).

Transformational leadership has been linked to a number of individual and organizational outcomes for schools. At the individual level, transformational leadership has a positive relationship with teacher commitment and job satisfaction (Bogler, 2001; Ross & Gray, 2006; Silins & Mulford, 2002). At the organizational level, transformational leadership impacts school culture, organizational planning, and strategies for change (Barnett & McCormick, 2003; Barnett & McCormick, 2004; Leithwood et al., 2004). Both individual and organizational level variables have been

shown to make a significant contribution to student learning (Leithwood & Jantzi, 2005). Transformational leadership has been shown to be positively related to the student outcome of school engagement (Leithwood, Riedlinger, Bauer, & Jantzi, 2003; Silins, Mulford & Zarins, 2002), that is, participation in class and identification with school as a worthwhile place to be. School engagement is a strong predictor of student achievement (Fredricks, Blumenfeld & Paris, 2004). Research on transformational leadership and its relevance to school leadership, especially in United States public schools, is well documented (Leithwood & Jantzi, 2005; Leithwood, Tomlinson, & Genge, 1996). In contrast, the research on transformational leadership in international schools is quite limited. A search of the EBSCO database using the key words transformational leadership and internationals schools found only one study. The study did establish that a more transformational style of leadership is linked to increasing teacher retention in international schools (Mancuso, Roberts, & White, 2010). Due to the limited research in the area of effective international school leadership, specifically transformational leadership, it is clear that more research is needed, especially regarding the factors that contribute to effective leadership.

Cultural Intelligence

Culture is a factor that needs to be considered when studying the effectiveness of international school leaders and their highly diverse multicultural contexts. The business literature has established that one aspect of effective leadership in multicultural contexts is cultural intelligence (Alon & Higgins, 2005; Ang & Inkpen, 2008; Deng & Gibson, 2009). Cultural intelligence is "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). It is comprised of four factors. Metacognitive cultural intelligence is the process that an individual uses to attain and to understand cultural knowledge. Cognitive cultural intelligence refers to an individual's knowledge about cultures and how they are similar and different (Ang et al., 2006). Motivational cultural intelligence is "magnitude and direction of energy applied towards learning about and functioning in cross-cultural situations" (Ang et al., 2006, p. 101). Behavioral cultural intelligence is the capability to enact appropriate verbal and nonverbal actions in a multicultural context (Ang et. al, 2006).

Empirical research in the business domain has identified a number of individual and interpersonal outcomes linked with cultural intelligence that are particularly germane to individuals who are functioning in situations characterized by cultural diversity. These benefits include task performance, cultural judgment and decision making, multicultural team effectiveness, intercultural negotiation, organizational innovation, and cross cultural adjustment (Ang et al., 2007; Elenkov & Manev, 2009; Imai & Gelfand, 2010, Rockstuhl & Ng, 2008; Templer, Tay, & Chandrasekar, 2006). If cultural intelligence is important to functions and outcomes related to effective leadership in the business realm, the same may hold true in the educational realm.

Problem Statement

International schools have experienced an increasing amount of diversity due to globalization. Effective leadership is critical to ensure that these schools are successful in accomplishing their missions (Leithwood & Jantzi, 2005). Transformational leadership is important for effective school leadership (Leithwood & Jantzi, 2005), and research is

beginning to demonstrate that transformational leadership leads to positive outcomes in the international school setting (Mancuso et al., 2010). A better understanding of the factors that contribute to and predict transformational leadership, particularly in international school leadership, would be helpful in the selection and training of school leaders. One aspect of effective leadership in multicultural business contexts is cultural intelligence (Alon & Higgins, 2005; Ang & Inkpen, 2008). Thus, cultural intelligence may be an important predictor of transformational leadership in international school leaders. However, in my review of the literature, no empirical studies were found that examined the relationship between cultural intelligence and transformational leadership in international school leaders. This study will fill this gap in the literature.

Purpose Statement

The purpose of this study is to determine if there is a relationship between cultural intelligence and transformational leadership in international school leaders, and if so, what factor(s) of cultural intelligence best predicts transformational leadership in international school leaders.

Significance of the Study

The results from this study offer a number of theoretical and practical implications. As a comparatively "young" construct in the field of cultural competence, expansion of the nomological network on cultural intelligence and the addition of empirically based evidence is valuable (Gelfand, Imai, & Fehr, 2008). The nomological network can be represented through four major relationships: distal factors, intermediate or intervening variables, other correlates, and situational factors (Ang & Van Dyne,

2008). This study adds to the expanding nomological network of cultural intelligence by determining which factor (metacognitive, cognitive, motivation, behavior) best predicts transformational leadership in international school leaders. It also answers the challenge to consider cultural intelligence as a multidimensional construct and examine what specific dimensions of cultural intelligence have relevance to different outcomes (Ang et al., 2007).

The majority of research on cultural intelligence has been focused on conceptual articles theorizing the conceptual distinctiveness of cultural intelligence (Ng & Earley, 2006), the relationship between cultural intelligence and forming accurate judgments (Triandis, 2006), cultural intelligence as helpful in expecting and addressing the unexpected (Brislin, Worthley, & MacNab, 2006), and cultural intelligence as the foundation for a fusion model of team collaboration (Janssens & Brett, 2006). Empirical evidence is needed to support these conceptual theorizing articles (Ang at al, 2007). This study establishes the importance of cultural intelligence in international school leaders by linking the relatively new construct of cultural intelligence with the "classical" construct of transformational leadership. It also contributes further research into the factors that predict transformational leadership (Bass & Riggio, 2006).

There are also three practical implications that emerge from this research. The selection of individuals for overseas assignment has been typically based on job knowledge and technical competence (Sinangil & Ones, 2001). However, this research adds support to the premise that cultural intelligence is an important criterion in the selection of individuals for school leadership assignments in culturally diverse contexts (Livermore, 2010; Templer et al., 2006).

Another practical implication is in the area of training for intercultural competence in school leaders. The primary focus of most intercultural training has been on knowledge or the cognitive aspect of cultural intelligence (Earley & Peterson, 2004). Cultural intelligence is a multidimensional construct that is based on individual capabilities. These four factors of cultural intelligence are malleable and can be strengthened through a variety of training interventions (Ang et al., 2007; Earley & Peterson, 2004; Elenkov & Manev, 2009). Therefore, this study provides empirical evidence that training in the area of intercultural competence for school leaders should give consideration to all four factors of cultural intelligence.

One final implication of this study is that it may also lead to insights for school leadership in domestic contexts that are characterized by cultural diversity (Murakami-Ramalho, 2008; Walker & Shuangye, 2007). For example, the United States of America continues to increase in racial and ethnic diversity. Minorities will become the majority by 2042. The increase in diversity will be seen much quicker in the US educational system, as minority and majority children will be equal by 2023 (United States Census Bureau, 2008).

Research Questions

The following is the primary research question for this study:

Which factor of cultural intelligence best predicts the transformational leadership style in international school leaders?

Five corresponding research questions that examine the factors of transformational leadership were used:

Which factor of cultural intelligence best predicts the transformational leadership factor of idealized influence (attributed) in international school leaders?

Which factor of cultural intelligence best predicts the transformational leadership factor of idealized influence (behaviors) in international school leaders?

Which factor of cultural intelligence best predicts the transformational leadership factor of inspirational motivation in international school leaders?

Which factor of cultural intelligence best predicts the transformational leadership factor of intellectual stimulation in international school leaders?

Which factor of cultural intelligence best predicts the transformational leadership factor of individualized consideration in international school leaders?

Null Hypotheses

The following are the null hypotheses:

H1: There is no statistically significant predictive relationship between cultural intelligence and transformational leadership style in international school leaders.

H2: There is no statistically significant predictive relationship between cultural intelligence and the transformational leadership factor of idealized influence (attributed) in international school leaders.

H3: There is no statistically significant predictive relationship between cultural intelligence and the transformational leadership factor of idealized influence (behaviors) in international school leaders.

H4: There is no statistically significant predictive relationship between cultural intelligence and the transformational leadership factor of inspirational motivation in international school leaders.

H5: There is no statistically significant predictive relationship between cultural intelligence and the transformational leadership factor of intellectual stimulation in international school leaders.

H6: There is no statistically significant predictive relationship between cultural intelligence and the transformational leadership factor of individualized consideration in international school leaders.

Identification of Variables

Cultural Intelligence

The predictor variables in this study will be four factors of cultural intelligence. Cultural intelligence is "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; see also Earley & Ang, 2003). Cultural intelligence is comprised of the following four factors: metacognitive cultural intelligence, cognitive cultural intelligence, motivational cultural intelligence, and behavioral cultural intelligence.

The Cultural Intelligence Scale (CQS) developed by Ang et al. (2007) will be used to measure these four factors of cultural intelligence. The CQS uses 20 items that describe individuals' capabilities to be culturally intelligent in each of the four factors and asks the individuals to use a scale from one to seven to assess their agreement with the statements.

Transformational Leadership

The criterion variable in this study will be transformational leadership. Transformational leadership is comprised of five factors: (a) idealized influence (attributed), (b) idealized influence (behavior), (c) inspirational motivation, (d) intellectual stimulation, and (e) individualized consideration (Bass & Bass, 2008; Bass & Riggio, 2006). Transformational leadership style will be assessed with the Multifactor Leadership Questionnaire (Form 5X) (MLQ). The MLQ is the most widely accepted instrument used to assess transformational leadership (Bass & Riggio, 2006).

International School Leaders

The participants in this study will be international school leaders. These will be defined as individuals who are in leadership positions such as a director, principal, vice principal, head of department, level coordinator, or similar position that is formally designated by the school (Walker & Cheong, 2009).

International Schools

The setting for this study will be international schools. While there is no universal definition for an international school (Blandford & Shaw, 2001), this study uses those schools that are associated with International Schools Services and/or American-sponsored overseas schools. These schools share a number of the following characteristics: cultural diversity in the student body and staff (Roberts, 2010, Walker & Cheong, 2009), cultural distance between the international school and local host culture, and a high student and staff turnover leading to a highly transient environment (Murakami-Ramalho & Benham, 2010).

International School Services Schools

International School Services (ISS) schools exist "to provide a comprehensive college preparatory accredited American/International educational program that ensures all students will become accomplished learners of good character while serving as responsible leaders within a culturally diverse global community" (ISS, 2011a, para. 3).

American-sponsored Overseas Schools

American-sponsored overseas schools are schools that "have received assistance and support from the U.S. Government under a program administered by the Office of Overseas Schools, U.S. Department of State" (United States Department of State, 2011, para. 1).

Research Plan

A list of potential participants was created from the websites of ISS and American Sponsored Overseas Schools. The director who was listed for each international school was chosen as a potential participant. An initial email was sent to the director of each school requesting their voluntary participation in the study. The letter requested that the director complete the online survey. Two further reminder emails were sent to schools that did not respond. This process was adapted from the process suggested by Dillman (2007).

The online survey included an informed consent, questions regarding demographics, the CQS, and the MLQ 5X. The study used a multivariate correlational research design as it is especially appropriate for non-experimental research in which variables exist naturally and are not deliberately controlled or manipulated (Tabachnick & Fidell, 2007). The data were analyzed with SPSS. Standard multiple regression was used for data analysis. Standard multiple regression can be used to determine how well a

number of predictor variables predict the outcome of a criterion variable (Tabachnick & Fidell, 2007). This study examined which of the four factors of cultural intelligence best predicted the five factors of transformational leadership, making standard multiple regression a cogent choice for data analysis.

CHAPTER TWO: LITERATURE REVIEW

Introduction

International schools are a microcosm of the interconnectedness and interdependence of people, organizations, and countries that is occurring worldwide (Meyer, 2007; Moon, 2010b; Walker & Cheong, 2009). Globalization has led to an increase in the diversity of students and staff of international schools (Walker & Riordan, 2010). There is a lack of research in the area of international schools, particularly about international school leaders (Bunnell, 2008). Empirical research has shown that transformational leadership is important in effective schools (Leithwood & Jantzi, 2005). Cultural intelligence is an important factor of effective leadership in multicultural settings (Alon & Higgins 2005; Ang & Inkpen, 2008). Thus, cultural intelligence may be a predictor of transformational leadership in international school leaders. This study seeks to discover if there is a relationship between cultural intelligence and transformational leadership in international school leaders and if so, what aspect(s) of intercultural effectiveness best predicts transformational leadership in international school leaders. This understanding would be helpful in the selection and training of leaders for international schools. It may also lead to insights for leadership in domestic contexts characterized by cultural diversity.

The following literature review provides an overview of the theoretical literature and empirical studies on cultural intelligence, transformational leadership, and international schools. The theoretical framework section begins with a brief overview of historical approaches to intercultural effectiveness. A thorough discussion of the

construct of cultural intelligence and its constituent four factors of metacognitive, cognitive, motivational, and behavioral cultural intelligence will follow. The conceptual distinctiveness of cultural intelligence and criticisms of cultural intelligence end the theoretical section. The literature on the outcomes of cultural intelligence will then be reviewed. A brief history and review of the theoretical frameworks of leadership, along with a definition and discussion of the universality of transformational leadership, will ensue. This will be followed by a discussion of the general and educational benefits of transformational leadership found in the literature. International school research is discussed, and the rationale for the need for more research involving international schools is stated. Finally, the research is summarized, and the gap in which more research is necessary is indicated**.**

Theoretical Framework

Aggregate versus Individual Approaches to Culture

Two major streams of research exist that focus on functioning and leading effectively in culturally diverse situations: the aggregate approach and the individual approach. Much of the research on intercultural proficiency and competence falls into the first approach (Earley & Peterson, 2004). This approach focuses on cultural values and practices (Earley & Mosakowski, 2004). Researchers from the aggregate approach include Hall, Hofstede, Hampden-Turner, Trompenaars, and Triandis.

The aggregate perspective on culture traces its roots from an anthropological tradition originating in the 1920s. It gives priority to both the identification and classification of foundational cultural values (Earley & Mosakowski, 2004). Researchers endeavored to create typologies for a country's core cultural values and include

dimensions such as time orientation (event versus clock), power distance (low versus high) orientation, and individualism versus collectivism.

Time orientation refers to a spectrum with event time orientation that values spontaneity and emphasizes social relationships on one end and clock time orientation that values efficiency and emphasizes punctuality on the other end (Livermore, 2010). Low power distance cultures view each person as having equal rights; followers are willing to question and to challenge authority. This is in contrast to high power distance cultures where those in leadership are entitled to privileges, and followers are willing to accept and to support the views of superiors (Livermore, 2010). Individualistic oriented cultures emphasize individual identity, making individual decisions and working alone; collectivistic cultures emphasize group identity, making group decisions, and working with others (Livermore, 2010).

The aggregate approach to functioning effectively in a culturally diverse setting calls for the *sojourner* to accumulate culture specific information on the core cultural values such as time orientation and power distance and also behaviors that might be encountered (Earley & Peterson, 2004). This approach to culture served as a useful beginning to an analysis of culture and understanding how to gain intercultural effectiveness and competence. However, the aggregate approach to culture is not without criticism.

The aggregate approach has been criticized for its ecological fallacy (Hofstede, 1991), that is, taking cultural values or dimensions (i.e., time orientation, low power distance, etc.) that have been generalized from a culture and making the assumption that those particular values can be applied to all individuals within that given culture (Earley

& Mosakowski, 2004). This approach fails to recognize that cultural values exist along a continuum and can be viewed as a distribution of behaviors. Two individuals from the same culture can hold very different views on cultural values (Bhawuk, Landis, & Munusamy, 2009). In addition to the error of ecological fallacy, there has been concern regarding the actual link between cultural values and individual action. Triandis (1972) stated that, although much of the focus has been on the connection between cultural values and individual action, the link has not been particularly strong. For example, an individual may come from a culture that values individualism, yet the individual exhibits a collectivist orientation and focuses on the importance of group identity.

Another criticism arises from the rapidly increasing cultural diversity encountered within organizations and in the world in general through globalization. The aggregate approach to intercultural competence may be effective if a sojourner interacted with just one culture; however, a multicultural work team may represent four or five different cultures. It would be a daunting task to become knowledgeable in the various cultural dimensions, behaviors, and practices of each respective culture (Earley & Peterson, 2004; Livermore, 2010). In response to these criticisms, a second approach to intercultural effectiveness has evolved.

This second approach has been termed an individual approach to culture. It focuses on the manifestation and analysis of culture at the individual level (Earley, 2006; Earley & Mosakowski, 2004). Like the aggregate approach, it takes into consideration cultural values; however, it also emphasizes how beliefs and cognitive processes differ across cultures. The foundational principle in this paradigm is that each individual possesses a unique, psychological fingerprint containing a complex set of memories,

thoughts, feelings, and ways of thinking regarding the world around oneself (Earley & Mosakowski, 2004). While it is helpful to understand whether a person comes from an event or clock oriented culture, it is much more beneficial to know whether the individual is event or time oriented.

The concept of cultural intelligence, which will be a primary focus in this study, is subsumed under the individual approach to culture. Cultural intelligence focuses on understanding interindividual differences and the ability to adjust effectively to new and diverse cultural settings (Ang et al., 2006; Ang et al., 2007; Earley & Ang, 2003; Templer et al., 2006; Thomas, 2006; Thomas & Inkson, 2003). This approach is particularly appropriate for this study of international school leaders as cultural intelligence goes beyond a focus on cultural values to a framework that addresses individual differences. Cultural intelligence also makes use of a four factor, multidimensional approach to intercultural competence that is based on capabilities. A capabilities based model allows for training to strengthen specific areas (Earley & Ang, 2003).

Cultural Intelligence

Cultural intelligence is based on a multidimensional framework of intelligence. It is defined as "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; see also Earley & Ang, 2003). Cultural intelligence is conceptualized as four different intelligences residing within a person: metacognitive, cognitive, motivational, and behavioral (Earley & Ang, 2003; Sternberg & Detterman, 1986). Metacognitive cultural intelligence "reflects the processes individuals use to acquire and

understand cultural knowledge" (Ang et al., 2006, p. 101). Cognitive cultural intelligence is "general knowledge and knowledge structures about culture" (Ang et al., 2006, p. 101). Motivational cultural intelligence is "magnitude and direction of energy applied towards learning about and functioning in cross-cultural situations" (Ang et al., 2006, p. 101), and behavioral cultural intelligence "is the capability to exhibit appropriate verbal and nonverbal actions when interacting with people from different cultures" (Ang et al., 2006, p. 101).

Metacognitive cultural intelligence. Metacognitive cultural intelligence involves making sense of one's diverse cultural experiences and is "an individual's level of conscious cultural awareness during cross-cultural interactions" (Ang & Van Dyne, 2008, p. 5). Metacognition is a concept developed in the field of cognitive psychology, meaning thinking about thinking, or knowledge and mental thought processes about cognitive objects (Flavell, 1979). This concept can be further divided into two complementary components: metacognitive knowledge and metacognitive experience (Flavell, 1987).

Metacognitive knowledge refers to an individual's acquired world knowledge that pertains to cognitive matters and reflects three broad categories of knowledge (Flavell, 1987). The "person" aspect of metacognitive knowledge is the cognitions that an individual holds about people as thinking entities. Cognitions regarding people can be further delineated into intraindividual metacognition, a person's belief about his own capabilities; interindividual metacognition, a person's belief about another person's capabilities; and universal metacognition, a person's belief about capabilities found in all cultures (Earley & Ang, 2003; Earley & Peterson, 2004).

In addition to the "person" aspect, there is a "task" aspect of metacognitive knowledge. Task demands vary considerably according to situations and circumstances. The task aspect of metacognitive knowledge focuses on how an individual makes decisions regarding the processing of different types of information in various contexts (Earley & Ang, 2003; Earley & Peterson, 2004). For example, an individual whose native language is English will consider the "task" of learning a related language like French or Spanish to be easier than Mandarin or Cantonese Chinese.

The final category of metacognitive knowledge focuses on "strategy" variables. This category refers to the procedures an individual uses to accomplish some desired goal. Metalearning centers on how one considers various strategic options in learning how to learn (Earley & Ang, 2003; Schraw & Moshman, 1995).

Metacognitive experience is the conscious experiences that are cognitive, affective, and derived from a cognitive activity. Metacognitive experiences form the foundation of what to incorporate and also how to integrate relevant experiences to generate general mental schemas for future interactions (Earley & Ang, 2003). These experiences occur in everyday life and become easier to interpret with age and experience (Flavell, 1987).

The metacognitive framework proposed by Nelson and Narens (1995) was part of the foundational theoretical framework for the first facet of metacognitive cultural intelligence. Earley and Ang (2003) summarized this theory by postulating that there are several basic elements, including "the model of the object itself represented at a metalevel, monitoring and control of flow between levels, and at least two separate but related levels of knowledge representing memory at multiple levels" (p. 104). The two

key processes of control and monitoring are contingent upon the direction of the flow of information. Control refers to the flow of information from the metalevel to the object level; monitoring refers to the influence of the object level to the metalevel.

Metacognitive cultural intelligence reflects the mental processes that individuals use to understand cultural knowledge (Ang et al., 2007; Flavell, 1979). Metacognitive cultural intelligence also involves the awareness of self and others using the framework of metacognitive knowledge "person" aspect. It calls for individuals to consciously examine their own cultural assumptions and to be actively engaged in thinking and reflecting during the intercultural encounter to increase their cultural intelligence (Livermore, 2010). Being aware of self and others also calls for the ability to suspend judgment until further information becomes available (Triandis, 2006).

In addition to being aware of self and others, metacognitive cultural intelligence highlights the need to actively plan and strategize for the next culturally diverse experience using the framework of metacognitive knowledge "task" variables to judge the difficulty of the assignment and "strategy" variables to choose the appropriate procedures for successful intercultural interactions (Livermore, 2010). Finally, metacognitive cultural intelligence stresses the importance of checking, revising, and adapting assumptions and mental schemas after the culturally diverse experience, which also corresponds with the application of metacognitive experience (Brislin et al., 2006; Livermore, 2010; Nelson & Narens, 1995). For example, a culturally intelligent leader who needs to give negative feedback to a follower in a multicultural context will review and reflect upon the experience afterwards and use the information gleaned to inform future encounters.

Cognitive cultural intelligence. The second facet of cultural intelligence is cognitive cultural intelligence. Cognitive cultural intelligence "reflects knowledge of the norms, practices, and conventions in different cultures acquired from education and personal experiences" (Ang et al., 2007, p. 338; see also Earley & Ang, 2003). Cognitive cultural intelligence calls for the appreciation of the similarities found between various cultures and an understanding of how cultures are different (Brislin et al., 2006; Imai & Gelfand, 2010). The field of cultural anthropology has established a wide variation in cultures. However, researchers have also recognized that all cultures share a number of common features known as cultural universals (Murdock, 1987; Triandis, 1994).

Cultural universals are shared by humanity as every culture has similar fundamental needs. Nine major categories of cultural universals have been proposed: material culture; arts, play and recreation; language and nonverbal communication; social organization; social control; conflict and warfare; economic organization; education; and world view (Cleaveland, Craven, & Danfelser, 1979). For example, the cultural universal of education encompasses how a society enables the transmission of knowledge from one generation to another (Ang & Van Dyne, 2008). A culture can hold a formal view of education that emphasizes schools, books, and teachers as professionals, or an informal view of education in which wisdom is transmitted from extended family members, siblings, and parents (Livermore, 2010). Cultures can also differ in educational methods (rote versus active learning), the importance of academic research versus conventional or sage wisdom, and the value of academic credentials compared to work experience (Livermore, 2010).

In addition to the understanding of cultural universals, cognitive cultural intelligence reflects knowledge of the basic frameworks of cultural values (Hofstede, 2001; House, Hanges, Javidan, Dorfman, & Gupta, 2004). Cultural values or norms are what a culture deems important and reflect what an "ideal" individual in that culture believes (Earley & Mosakowski, 2004). Cultural values include time orientation (event versus clock), context (high versus low), individualism versus collectivism, power distance (high versus low), uncertainty avoidance (high versus low), masculinity versus femininity, orientation (long term versus short term), performance orientation, and humane orientation (Hofstede, 2001; House et al. 2004; Livermore, 2010).

Cognitive cultural intelligence is based upon the traditional view that cognition can be delineated by three general types of knowledge: declarative, procedural, and conditional knowledge (Schraw & Moshman, 1995). Declarative knowledge focuses on knowing about things or information about the characteristics of an entity (Earley, 2002). This type of knowledge refers to knowledge regarding oneself, others, and objects. Declarative knowledge is the content of an individual's memory based upon various experiences including the characteristics of an individual's environment (Earley & Ang, 2003).

Procedural knowledge can be defined as knowledge regarding how to execute actions or the way something functions (Earley, 2002). It focuses on knowing how to do things. Those high in procedural knowledge can execute actions automatically, sequence strategies effectively, and apply qualitatively better strategies than others (Earley & Ang, 2003). Conditional knowledge reflects knowing when and why to employ particular cognitive actions (Earley & Ang, 2003). The threefold framework of declarative,

procedural, and conditional knowledge can be used to frame the types of knowledge a culturally intelligent person must have.

Cognitive cultural intelligence is important as culture plays a critical role in influencing how an individual thinks and behaves. A general awareness of the similarities and differences in cultural universals and cultural values allows for increased intercultural effectiveness (Ang & Van Dyne, 2008; Earley & Ang, 2003). The majority of approaches to intercultural effectiveness emphasize this facet of cultural intelligence (Earley & Mosakowski, 2004; Earley & Peterson, 2004). While valuable, the cognitive cultural intelligence facet must be combined with the other three factors of cultural intelligence to optimize intercultural effectiveness (Van Dyne, Ang, & Livermore, 2010).

Motivational cultural intelligence. The third facet of cultural intelligence is motivational cultural intelligence, which is defined as an individual's "capability to direct attention and energy toward learning about and functioning in situations characterized by cultural differences" (Ang et al., 2007, p. 338). These motivational capacities regulate and provide *agentic* control of emotion, cognition, and behaviors that lead to effective intercultural encounters (Kanfer & Heggestad, 1997).

The theoretical base for motivational cultural intelligence is in the expectancy-value theory of motivation (DeNisi & Pritchard, 2006; Eccles & Wigfield, 2002). This theory postulates that motivation of and degree of energy focused on a particular task is a function of two elements: (a) the "expectancy" component, which reflects the expectation of an individual of successfully accomplishing the task (Ang et al., 2007; Ang & Van Dyne, 2008); and (b) the "value" component, which reflects the value associated with successfully completing the task (Ang et al., 2007; Ang & Van Dyne, 2008).

Motivational cultural intelligence is the extent to which one believes or expects that he or she is capable of interacting effectively with others from a different cultural background and his or her interest (or value) in engaging other cultures (Earley & Ang, 2003; Templer et al., 2006).

The concept of self efficacy plays an integral role in the first element of expectancy in the expectancy-value theory of motivation. Self efficacy is defined as "a judgment of one's capability to accomplish a certain level of performance" (Bandura, 1986, p. 391). Self efficacy is viewed as an individual's confidence in his ability to be culturally intelligent (Livermore, 2010).

Self efficacy regarding intercultural effectiveness can be modified through four sources (Bandura, 1994; Earley & Ang, 2003). Authentic mastery experiences strengthen self efficacy as an individual perseveres through setbacks and obstacles but emerges stronger through successful intercultural interactions (Bandura, 1994; Earley & Ang, 2003). Vicarious experiences, in which an individual views the actions and successful intercultural task outcomes of someone who is similar to himself, also develops self efficacy (Bandura, 1994; Earley & Ang, 2003). Increasing one's confidence can be a result of social persuasion; for example, an individual receives verbal encouragement from another regarding his cultural intelligence capabilities and the likelihood of efficacious intercultural experiences (Bandura, 1994; Earley & Ang, 2003). The final means of developing self efficacy is managing physiological arousal. Individuals rely on their physical and emotional states for feedback regarding their self efficacy; therefore, it is important to encourage positive evaluations and inferences regarding stress, fatigue,

and anxiety that arise from intercultural interactions (Bandura, 1994; Earley & Ang, 2003).

Individuals with high self efficacy are willing to engage in new cultural experiences and persevere and overcome obstacles, setbacks, and failures (Earley & Peterson, 2004). Highly efficacious people are able to immerse themselves in another culture effectively as they do not need constant rewards to support their efforts in navigating intercultural experiences (Earley, 2002). Rewards may not only be delayed, but they can even appear in a form that is not culturally familiar (Earley, 2002). Finally, cultural efficacy has a positive effect on problem solving and strategic planning (Earley & Peterson, 2004; Locke & Latham, 1990).

The concepts of extrinsic and intrinsic motivation or value play an integral role in the second element of value in the expectancy-value theory of motivation. Extrinsic motivation refers to the tangible benefits that an individual derives from intercultural encounters (Van Dyne et al., 2010). They are the instrumental benefits that are received from being culturally intelligent and can include such things as career advancement, creativity and innovation, expansion of global networks, and salary and profit (Livermore, 2010).

Intrinsic motivation is the intangible benefits that come from successful intercultural experiences (Van Dyne et al., 2010). It is the value an individual places on the enjoyment and sense of satisfaction from being culturally intelligent (Van Dyne et al., 2010). The *triple bottom line* has been used to denote having benchmarks other than just fiscal profit (Macdonald, 2009). Extrinsic motivation is a valid form of motivation; however, intrinsic motivation is needed to sustain motivational cultural intelligence (Ang

& Van Dyne, 2008; Deci & Ryan, 1985). Cultural intelligence calls for a deeper, altruistic motive to the point that "cultural intelligence cannot exist apart from true love for the world and for people" (Livermore, 2010, p. 57).

Motivational cultural intelligence is a critical factor of cultural intelligence because it is the drive that triggers an individual's attention and effort, actuates, and channels one's cultural knowledge and metacognitive strategies into guided action in diverse intercultural encounters (Ang & Van Dyne, 2008; Templer et al., 2006). Motivation is a central part of cultural intelligence in spite of the general literature regarding intelligence neglecting personal motivation as part of the construct of intelligence (Thomas et al., 2008). Motivation is foundational in adaptation and effective engagement in a culturally diverse setting as both "intelligent" and "motivated" action is needed (Earley & Ang, 2003). As important as declarative knowledge, procedural knowledge, and conditional knowledge are, these "facts" only become useful if an individual is sufficiently motivated (Earley & Ang, 2003).

Behavioral cultural intelligence. The fourth facet of cultural intelligence, behavioral cultural intelligence, is an individual's "capability to exhibit appropriate verbal and non verbal actions when interacting with people from different cultures" (Ang et al., 2007, p. 338). The metacognitive, cognitive, and motivational aspects of cultural intelligence must be complemented by appropriate verbal and nonverbal actions (Hall, 1959). It is impossible to access an individual's latent thoughts, feelings, or motivation, which highlights the importance of culturally sensitive outward manifestations of vocal, facial, and other outward expressions (Ang & Van Dyne, 2008; Earley & Ang, 2003).

Three core assumptions underlie the concept of behavioral cultural intelligence: (a) behaviors are overt or external actions as opposed to covert or internal behaviors (b) behaviors occur in the social context of interpersonal or interactional situations, and (c) behaviors are mindful, strategic, purposive, and motive-oriented contrasted with behaviors that are non-conscious, passive, and less agentic (Earley & Ang, 2003).

The theoretic foundation for behavioral cultural intelligence is grounded in the self presentation and impression management theory (Earley & Ang, 2003; Goffman, 1959). This theory postulates that "a basic motive of individuals in social situations is to present themselves to others in a favorable manner" (Earley & Ang, 2003, p. 181). Individuals must have the awareness of how they are being evaluated and perceived by others (Earley & Ang, 2003). This awareness can be distinguished by levels of impression monitoring (Leary, 1996):

- impression oblivion in which the individual is unaware at any level (Leary, 1996).
- preattentive or unconscious impression scanning, which refers to the individual's awareness of others forming impressions at an unconscious level while devoting one's attention to other things (Leary, 1996).
- impression awareness in which an individual is consciously aware that others are forming impressions and at times makes cognitive choices to manage those impressions (Leary, 1996).
- impression focus in which the entire cognitive focus of an individual is on presenting himself favorably to others (Leary, 1996).

A behaviorally culturally intelligent individual functions at the third level of impression awareness. Impression focus causes an individual to become dysfunctional as impression monitoring becomes excessive (Earley & Ang, 2003).

Behavioral cultural intelligence reflects the capability of an individual to adapt one's verbal and nonverbal behaviors to engage others in an intercultural situation and be perceived in a favorable manner (Earley, 2002; Earley & Ang, 2003). Verbal behaviors include the meaning of words, language acquisition, and speech acts. Words are a powerful medium to communicate and can be used to cast vision, encourage others, exchange ideas, and foster collaboration. However, the same words used in one culture or context to encourage and affirm others may actually discourage and have the opposite effect in another culture or context (Livermore, 2010). A culturally intelligent leader will enact the appropriate verbal behaviors to engender the intended positive outcomes.

Adapting verbal behavior also includes the acquisition of a new language. Language contains and conveys a multitude of subtleties about a culture that without a reasonable level of proficiency in the language will have low behavioral cultural intelligence (Earley 2002; Earley & Ang, 2003). Verbal behaviors also include speech acts that serve particular functions in communication such as apologies, complaints, compliments/responses, refusals, requests, and thanks (Ishihara, 2007). A speech act can contain just one word or several words or sentences (Ishihara, 2007). Each speech act has culturally embedded norms that are reflected even when using a common language (Livermore, 2010). The speech act of requests can demonstrate cultural variances from one culture to another. For example, the power of suggestion may be used to initiate a

request on one end of the spectrum compared to a direct form on the other end (Livermore, 2010).

Individuals with high behavioral cultural intelligence will also adapt their nonverbal behaviors in situations of cultural diversity (Earley & Ang, 2003). Nonverbal behavior can include paralanguage, physical appearance, facial expressions, kinesics, proxemics, haptics, and chronemics (Earley & Ang, 2003; Livermore, 2010). Paralanguage can be interpreted differently among cultures. Silence can be extremely uncomfortable in a low context culture as it denotes absence of communication; however, high context cultures value silence as a sign of respect and a means of contemplation and even prefer it to conversation (Earley & Ang, 2003). Paralanguage also includes the tone of voice, rate of speaking, variety of inflection, lexical diversity, and overall loudness (Giles & Street, 1994; Smith & Shafer, 1995).

Physical appearance and interpersonal attractiveness can influence the perception of an individual, and congruence with the target culture can enhance communication effectiveness (Earley & Ang, 2003). The meaning of facial expressions can also differ between cultures. Behaviorally culturally intelligent individuals will exercise extreme caution in making inferences on the meaning of facial expressions (Livermore, 2010). A culturally intelligent individual understands the importance of communicating through the use of emblems, gestures, and body movements. Different gestures can have similar meanings, and the same gesture can have different meanings, once again highlighting the importance of suspending judgment and waiting for further information to triangulate tentative conclusions (Triandis, 2006).

Personal space preferences are affected by a number of factors including density of population, formal versus intimate relationships, and cultural norms. Successful intercultural interactions require sensitivity to these differences (Altman & Chemers, 1980; Altman & Vinsel, 1977; Earley & Ang, 2003). Cultures differ in their use and interpretation of touch; therefore, culturally intelligent individuals change their behavior accordingly (Livermore, 2010). An area of conflict between cultures can arise in how time is viewed: monochronically, which views time as limited and linear, or polychronically, which sees it as plentiful and flexible (Hall, 1993; Levine, 1997). Expectations in planning and collaboration must be managed in light of how time is viewed (Livermore, 2010).

Individuals with high behavioral cultural intelligence display appropriate behaviors in culturally diverse situations. They are able to draw upon their wide range of verbal and nonverbal capabilities and exhibit culturally proficient words, tones, facial expressions, and gestures (Gudykunst, Ting-Toomey, & Chua, 1988). Behavioral cultural intelligence is important as verbal and nonverbal actions are the most salient features of intercultural interactions (Ang et al., 2007).

Conceptual Distinctiveness of Cultural Intelligence

To further understand the construct of cultural intelligence, it is helpful to understand what it is not and to ensure it is not confused with similar terminology. Herrnstein and Murray's (1994) The Bell Curve postulated that different cultures possess greater intelligence than others. Cultural intelligence does not refer to the relative intelligence of different cultures. Cultural intelligence is viewed on the individual level with differences and characteristics in the same manner as cognitive intelligence in the

traditional sense. Therefore, “reference to cultural intelligence as if some cultural groups, societies, or nations are ‘more culturally intelligent’ than others is wholly inaccurate” (Earley & Ang, 2003, p. 6).

Cultural intelligence is also not a minor adaptation of emotional or social intelligence (Earley & Ang, 2003). Emotional intelligence is defined as “the ability to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth” (Mayer & Salovey, 1997, p. 5). Emotional intelligence encompasses a variety of attributes that allow an individual to read and react to the affective states of other culturally congruent individuals and to self regulate emotions (Earley & Peterson, 2004). Emotional intelligence also presumes some familiarity in an individual’s culture and context that may not be the case across many cultures. Emotional intelligence does not include a cultural component; hence, someone of high emotional intelligence in one culture can have low emotional intelligence in another culture (Earley & Ang, 2003). Emotional intelligence focuses on the regulation of emotion while cultural intelligence is broader in scope, focusing on metacognitive, cognitive, motivational, and behavioral factors (Earley & Ang, 2003; Mayer & Salovey, 1997).

Social intelligence is the capability of an individual to interact with others (Kihlstrom & Cantor, 2000). A person with high social intelligence can perform actions like problem solving with others (Earley & Peterson, 2004). Social intelligence does not take into consideration cultural contingencies (Earley & Ang, 2003). Neither social nor emotional intelligence offers an adequate discussion of intercultural contexts and how the

construct might be expanded to address the complexities of cultural diversity (Earley & Peterson, 2004). Emotional and social intelligence are limited to and products of one's own culture.

Additionally, cultural intelligence differs from other intercultural competencies, and the scales that measure them in a number of important ways. Various models include one of the four factors of cultural intelligence (see Table 1). However, no other intercultural competency model is based on contemporary theories of intelligence nor includes all four aspects of intelligence (Ang et al., 2007, Ang & Van Dyne, 2008).

Table 1

Intercultural Competency Scales

Metacognitive Aspect	Cognitive Aspect	Motivational Aspect	Behavioral Aspect
Cross-Cultural Adaptability Inventory (CCAI) (Kelly & Meyers, 1995) Intercultural Development Inventory (IDI) (Hammer & Bennett, 1998)	Cultural Shock Inventory (CSI) (Reddin, 1994), Culture-General Assimilator (CGA) (Cushner & Brislin, 1996);	Multicultural Awareness-Knowledge-Skills Survey (MAKSS)	Intercultural Sensitivity Inventory (ISI) (Bhawuk & Brislin, 1992), Overseas Assignment Inventory (OSI) (Tucker, 1999)

Several intercultural competency scales mix malleable competencies with stable personality characteristics (CCAI, CSI, IDI, MAKSS, and OAI) that can obscure the validity and precision of the constructs (Ang et al., 2007, Ang & Van Dyne, 2008). Cultural intelligence is based on capabilities that can be enhanced through training,

experience, and education (Earley & Peterson, 2004; Ng, Van Dyne, & Ang, 2009) Cultural intelligence is not culture or country specific like the Culture Specific Assimilator model. Cultural intelligence does not focus on specific knowledge or behaviors for a particular country or culture; rather, it emphasizes developing a broad framework of understanding, skills, and behaviors needed to engage a culturally diverse world (Earley & Ang, 2003; Livermore, 2010). Cultural intelligence offers parsimony, theoretical synthesis, coherence, and theoretical precision, identifies missing cultural competencies, and connects research across disciplinary borders (Gelfand et al., 2008). The cultural intelligence model, however, is not without criticism.

Criticisms of Cultural Intelligence

A survey of the literature revealed few criticisms of the concept of cultural intelligence (Elenkov & Manev, 2009). Three common objections to cultural intelligence exist. One objection states that it is inappropriate and untenable to judge a culture and categorize it as civilized or primitive, low or high, or good or bad as all cultures are relative in their values (Hampden-Turner & Trompenaars, 2006). While cultural relativism is preferred to ethnocentrism or cultural superiority, cultures do differ. These differences can lead to varying levels of performance that cannot be ignored (Hampden-Turner & Trompenaars, 2006). Cultures are both relative in their adaptation to their environmental circumstances and capable of converging on values common to all cultures, which leads to universal validity (Hampden-Turner & Trompenaars, 2006). The first objection is addressed by the synergy hypothesis in which contrasting values are synergized (Benedict, 1934; Hampden- Turner & Trompenaars, 2006; Ng & Earley, 2006).

Cultural intelligence is disparaged as a postmodern concept and, therefore, a step backwards when scientific objectivity and verifiable propositions are what is required (Hampden-Turner & Trompenaars, 2006). Cultural intelligence, with its focus on multiple diverse perspectives of the world that are all legitimate, could be viewed as an antithesis to the empirical, quantitative, data-driven search for one objective reality. This criticism is addressed by the complementary hypothesis in which a proximal objectivity can emerge as the phenomenon is viewed from multiple perspectives, with each view reflecting a different side and different reality but all perspectives converging for a fuller, complementary description (Hampden-Turner & Trompenaars, 2006; Ng & Earley, 2006). This convergence for an objective description is possible as cultural values are not random or arbitrary; rather, cultural values contrast as different ends of a spectrum (Hall, 1987, Hofstede, 1980).

The final objection argues that any attempts to study and categorize cultures are only crude stereotypes that are inferred from superficial characteristics of a culture and completely overlook the subtler and deeper realities (Hampden-Turner & Trompenaars, 2006). This objection is addressed by the latency hypothesis that contends that the dominant values or stereotypes of a culture are true but that culturally intelligent individuals perceive the dominant values and probe deeper to examine and comprehend the latent values that are complementary (Hampden-Turner & Trompenaars, 2006; Ng & Earley, 2006). Stereotypes can be a starting point when used descriptively and not judgmentally and with the expectation that individuals from the same culture will vary in their cultural values (Livermore, 2010).

These three common criticisms are addressed by considering the synergy hypothesis, complementary hypothesis, and latency hypothesis (Hampden-Turner & Trompenaars, 2006). In addition, cultural intelligence is based upon a unified theoretical and empirical research based framework that overcomes the narrow perspective of the aggregate approach (Gelfand et al., 2008). Cultural intelligence has also been linked to a number of positive outcomes in the business domain. These outcomes may also be beneficial for international school leaders and add impetus to determining if there is a predictive relationship between cultural intelligence and transformational leadership.

Review of the Literature

Outcomes of Cultural Intelligence

Construct validity for cultural intelligence has advanced in two broad areas: measurement and substantive issues (Ng & Earley, 2006). Cultural intelligence is a nascent construct with research primarily focused on conceptual theorizing (Ang et al., 2007; Sternberg & Grigorenko, 2006). Empirical research on this relatively new construct has been steadily growing. This research has identified a number of individual and interpersonal outcomes linked with cultural intelligence that are particularly germane to individuals who are functioning in situations characterized by cultural diversity. These outcomes include task performance, cultural judgment and decision making, multicultural team effectiveness, intercultural negotiation, organizational innovation, and cross cultural adjustment (Ang et al., 2007; Elenkov & Manev, 2009; Imai & Gelfand, 2007, Rockstuhl & Ng, 2008; Templer et al., 2006).

Task performance. Empirical research has established that cultural intelligence, specifically metacognitive cultural intelligence and behavioral cultural intelligence, is

positively related to enhanced task performance in culturally diverse situations (Ang et al., 2007; de la Garza Carranza & Egri, 2010; Rose, Ramalu, Uli, & Kumar, 2010). Task performance is dependent on the four factors of knowledge, skills, abilities, and motivation. These four factors are employed to fulfill role-defined behavior such as formal employment responsibilities (Campbell, 1999).

A study of 98 international managers and 103 foreign professionals demonstrated that metacognitive cultural intelligence and behavioral cultural intelligence were important predictors in successful task performance (Ang et al., 2007). Task performances for the international managers were evaluated through a problem solving simulation whereas the foreign professionals were assessed through supervisor ratings of two in-role responsibilities (Ang et al., 2007).

Rose et al. (2010) examined 332 expatriate business professionals in Malaysia and their self-reported levels of task performance through a correlational research design. This study demonstrated similar results regarding the importance of metacognitive and behavioral cultural intelligence (Rose et al., 2010). Furthermore, a study of 122 executives of small businesses in Canada found that overall cultural intelligence was positively related to task performance as defined as corporate reputation and employee commitment (de la Garza Carranza & Egri, 2010).

Metacognitive cultural intelligence allows an individual to be able to accomplish tasks effectively through the awareness and strategic implementation of cultural knowledge and the ability to use reflection in preparation for future interactions (Earley & Ang, 2003). Behavioral cultural intelligence facilitates task performance as individuals

modify their verbal and nonverbal behaviors to decrease misunderstandings and respectfully engage others in a culturally sensitive manner (Earley & Ang, 2003).

Cultural judgment and decision making. Cultural intelligence has been shown to be important in making effective cultural judgments and decisions (Ang et al., 2007; Mannor, 2008). Leaders are faced with a multitude of decisions ranging from the mundane logistical decision of when and where to have a meeting to matters of critical importance such as a contingency issue like school violence (Livermore, 2010). The proper evaluation and interpretation of cultural issues is paramount to effective cultural judgment and decision making (Mendenhall & Oddou, 1985). These judgment and decision making tasks involve agentic and motivated reasoning, evaluation of information, and comparison of alternative outcomes (Einhorn & Hogarth, 1981).

Research supports metacognitive and cognitive cultural intelligence as being positively related to cultural judgment and decision making effectiveness (Ang et al., 2007; Mannor, 2008). The importance of cultural intelligence in decision making for top executives was part of the foundation of the strategic global leadership theoretical model put forth by Mannor (2008). Empirical research conducted by Ang et al. (2007) demonstrated that metacognitive and cognitive cultural intelligence are important predictors in cultural judgment and decision making. The participants were 235 undergraduate students from the United States, 359 undergraduate students from Singapore, and 98 international managers. The participants evaluated cross-cultural decision making scenarios. A correlational research design was employed (Ang et al., 2007).

Metacognitive cultural intelligence allows individuals to move beyond stereotypes and to understand the subtle nuances and variability that occur at the individual level in all cultures leading to better evaluation and assessment of options for decisions (Hampden-Turner & Trompenaars, 2006). Cognitive cultural intelligence enables individuals to use elaborate mental schemas on how cultures are similar and how they are different in order to identify and understand fundamental issues and develop exceptional solutions (Ang et al., 2007).

Multicultural team effectiveness. Research has indicated that individuals with high metacognitive, cognitive, and behavioral cultural intelligence enhanced interpersonal trust in multicultural teams (Moynihan, Peterson, & Earley, 2006; Rockstuhl & Ng, 2008; Shokef & Erez, 2006). Trust is an integral part in multicultural team effectiveness (Gregory, Prifling, & Beck, 2009; Rockstuhl & Ng, 2008). Culturally intelligent individuals are able to attenuate the impact of cultural differences by being aware of cultural differences, adjusting mental schema to increase intercultural interaction effectiveness and maintaining a broad repertoire of behaviors to minimize the cultural distance with other team members (Brislin et al., 2006; Triandis, 2006).

Rockstuhl and Ng (2008) investigated the effects of cultural intelligence on multicultural team effectiveness through the use of a correlational research design. The 259 participants were local and exchange students from a business school in Singapore. The study found that cultural intelligence could mitigate detrimental effects of cultural diversity on interpersonal trust thereby increasing team effectiveness (Rockstuhl & Ng, 2008). A study of Master of Business Administration (MBA) students found that cultural intelligence was positively correlated with team performance and trust, lending further

support for the importance of cultural intelligence for multicultural teams (Moynihan et al., 2006).

Multicultural teams are composed of individuals that differ in age, gender, race, cultural background, tenure, education, or function (Flaherty, 2008).The classification of in group versus out group membership becomes important in team effectiveness as those viewed as in group members will be viewed as more trustworthy (Brewer, 1981). High cultural intelligence allows a leader to be viewed as an in group member increasing team effectiveness.

Intercultural negotiation. Intercultural negotiation is an important core skill for any individual functioning in a multicultural environment (Adler, 2002; Bernard, 2009). Empirical evidence has shown that cultural intelligence is a predictor of intercultural negotiation effectiveness (Imai & Gelfand, 2010). The study consisted of 75 American and 75 East Asian undergraduate or graduate students at a large public university. The cross-cultural dyad engaged in a negotiation simulation which was recorded and later transcribed and coded for analysis. Results indicated that culturally intelligent individuals have more cooperative motives and possess high epistemic motivation, which leads them to use more effective integrative negotiation processes to achieve superior outcomes (Imai & Gelfand, 2010). Specifically, motivational cultural intelligence most strongly predicts intercultural negotiation effectiveness.

Individuals with high motivational cultural intelligence have a high interest in functioning effectively in situations characterized by cultural diversity and also possess the needed self-efficacy to persevere in the light of obstacles and difficulties that

accompany intercultural negotiations (Imai & Gelfand, 2010; Klafehn, Banerjee, & Chiu, 2008; Livermore, 2010).

Organizational innovation. Innovation in organizations can create and maintain competitive advantages that lead to successful performance (de la Garza Carranza & Egri, 2010; Elenkov & Manev, 2009; Livermore, 2010). Organizational innovations can be defined as the introduction of organizational structures, training programs, and planning processes (Damanpour & Evan, 1984; Kimberly & Evanisko, 1981).

A study of 213 senior expatriate managers and 1056 subordinates representing all 27 European Union countries established the relationship between cognitive and behavioral cultural intelligence and the rate of organizational innovation (Elenkov & Manev, 2009). Cognitive cultural intelligence is an individual's knowledge of how cultures are similar and how they differ, which can facilitate the implementation of organizational innovations in a culturally sensitive manner (Elenkov & Manev, 2009). Behavioral cultural intelligence is the adaption of verbal and nonverbal behaviors to adapt to another culture. This accommodation of culturally correct behavior can lead to increased credibility, decreased cultural distance, and fostering of collaboration and trust which facilitates organizational innovation (Elenkov & Manev, 2009).

Cross-cultural adjustment. Cross-cultural adjustment is critical for successful overseas experiences as individuals must gain a degree of psychological comfort and some familiarity with the new environment to be effective as sojourners (Black, 1990). Studies have indicated that motivational and behavioral cultural intelligence are positively related to cross-cultural adjustment (Ang et al., 2007; Dagher, 2010; Ramalu, Rose, Kumar, & Uli, 2010**;** Templer et al., 2006). Cross-cultural adjustment is comprised

of three dimensions: general adjustment, interaction adjustment, and work adjustment (Black & Stephens, 1989). General adjustment is the adaption to the new culture and living conditions. Interaction adjustment is the ability to engage in interpersonal relationships with the host country nationals. Work adjustment denotes adapting to the expectations and requirements of the new local work culture (Black & Stephens, 1989).

The relationship between cultural intelligence and cross-cultural adjustment was examined in a study of 332 expatriate business professionals in Malaysia (Ramalu et al., 2010). The participants completed the Expatriate Adjustment Scale (Black & Stephens, 1989), which measures the three dimensions of cross-cultural adjustment. The results were consistent with Ang et al., (2007) and Templer et al. (2006) in the importance of motivational cultural intelligence in cross-cultural adjustment. A study of 71 Arab expatriate business professionals working in the United States reported the positive relationship of motivational cultural intelligence and cross-cultural adjustment (Dagher, 2010).

Individuals who have high motivational cultural intelligence desire to explore and experience diverse cultures and have the self-efficacy in their abilities to adjust to their new work, life, and social environment (Ang et al., 2007; Dagher, 2010; Ramalu et al., 2010; Templer et al., 2006). Behavioral cultural intelligence is also needed to be able to translate the desire to adjust to work, life, and social situations into culturally congruent actions (Dagher, 2010). A wide repertoire of behaviors is needed to be able to adjust successfully and meet the myriad of demands of living and working in a new culture (Earley & Ang, 2003; Lee & Sukoco, 2010).

These outcomes speak to the importance of leaders having high cultural intelligence. The context in which the above research occurred is predominantly the business and global leadership domains. A search of EBSCO Host database using the key words “cultural intelligence” and “international school” returned just one item. The article by Roberts (2010) employed neither a quantitative nor qualitative research design but was a theoretical and practical article on the benefits of cultural intelligence for international school leaders and teachers.

Further research is needed on cultural intelligence and international school leadership. Empirical research is needed to determine the relationship between cultural intelligence and leadership in the international school domain. It would be of additional benefit to international school leaders to determine the predictive ability of cultural intelligence to transformational leadership. This relationship would have practical implications for both selection and training of international school leaders and theoretical implications on the concepts of cultural intelligence and transformational leadership.

Leadership

The construct of leadership received increased attention in research in the last half of the 20th century and beyond. A literature review in 1948 found 124 articles, books, and abstracts on leadership (Stogdill, 1948) contrasted with 188 articles alone on leadership in just one journal, Leadership Quarterly (1990-1999) (Bass & Bass 2008). This voluminous body of research has led to over 65 different theories and approaches to conceptualizing and classifying leadership (Fleishman et al., 1991). Definitions of leadership have evolved and expanded and reflect the purpose of the study, individual

perspectives of the researcher, and the substantive aspects of leadership in focus (Bass & Bass, 2008; Yukl, 2010).

An appropriate definition of leadership has been stated by the distinguished, Bernard Bass:

> Leadership is an interaction between two or more members of a group that often involves a structuring or restructuring of the situation and of the perceptions and expectations of the members. Leaders are agents of change, whose acts affect other people more than other people's acts affect them. Leadership occurs when one group member modifies the motivation or competencies of others in the group. Leadership can be conceived as directing the attention of other members to goals and the paths to achieve them. (Bass & Bass, 2008, p. 25)

Numerous definitions for leadership exist, as do a myriad of theories and approaches. Major theoretical frameworks include the trait approach, which emphasizes the attributes of a leader like innate characteristics, personality, motives, and values. Most research up to the late 1940s focused on determining the key traits and characteristics of a leader (Bass & Bass, 2008; Yukl, 2010). The behavioral approach encompassed research up to the late 1960s. This framework focused on the actual behaviors that leaders exhibited (Bass & Bass, 2008; Yukl, 2010). The contingency-situational approach was utilized in much of the research between the late 1960s and the early 1980s. This approach focused on the interaction between leaders' and followers' traits and situations (Bass & Bass, 2008; Yukl, 2010). Since 1980, the "new" leadership approach or the transformational approach has received the most focus in the literature (Antonakis, Cianciolo, & Sternberg, 2004; Bass & Bass, 2008).

Transformational Leadership

Transformational leadership is currently one of the most popular approaches to leadership (Northouse, 2010). A recent content analysis of the research published in Leadership Quarterly revealed that transformational leadership remains the single most dominant leadership paradigm (Gardner, Lowe, Moss, Mahoney & Cogliser, 2010). The term "transformational leadership" was first used by Downton (1973). However, it was the seminal work of Burns (1978) on political leaders that propelled transformational leadership forward as an important approach to leadership and created impetus for research (Bass & Bass, 2008). Bass (1985) expanded and refined the model of transformational leadership upon which the vast majority of empirical research on transformational leadership is based (Gardner et al., 2010, Leithwood & Jantzi, 2005, Lowe & Gardner, 2001).

Transformational leadership can be defined as the following:

> The process of influencing in which leaders change their associates' awareness of what is important, and move them to see themselves and the opportunities and challenges of their environment in a new way. Transformational leaders are proactive: they seek to optimize individual, group, and organizational development and innovation, not just achieve performance "at expectations". They convince associates to strive for higher levels of potential as well as higher levels of moral and ethical standards. (Bass & Avolio, 2004, p. 95)

Transformational leadership is comprised of five factors: (a) idealized influence (attributed), (b) idealized influence (behavior), (c) inspirational motivation, (d) intellectual stimulation, and (e) individualized consideration (Bass & Bass, 2008; Bass &

Riggio 2006). Idealized influence (attributed) reflects the degree to which followers view the leader as confident, powerful, and focused on higher-order ideals and ethics (Antonakis, Avolio, & Sivasubramaniam, 2003). Idealized influence (behavior) refers to the "charismatic actions of the leader that are centered on values, beliefs, and a sense of mission" (Antonakis et al. 2003, p. 264). Inspirational motivation is the ways leaders inspire followers by envisioning an optimistic future, setting ambitious goals, and offering encouragement that the vision is achievable (Bass & Riggio, 2006). The ways that leaders challenge followers to think creatively, reframe difficult problems to find solutions, and encourage innovation is known as intellectual stimulation (Bass & Riggio, 2006). Individualized consideration is the ways in which leaders advise, support, and focus on the individual needs of followers to encourage their growth and development (Antonakis et al., 2003).

Universality of Transformational Leadership

Transformational leadership has been the focus of research that has been conducted on every continent and in almost every industrialized nation in the world (Bass & Riggio, 2006). This research suggests that transformational leadership is an effective leadership approach above and beyond transactional leadership (Bass & Riggio, 2006). Transformational leadership is also consistent with the universally desirable attributes of a leader (Den Hartog, House, Hanges, Ruiz-Quintanilla, & Dorfman, 1999; Dorfman, Hanges, & Brodbeck, 2004). The empirical evidence from the Global Leadership and Organizational Behavior Effectiveness (GLOBE) research program identified 22 desirable attributes that were universally endorsed by the 17,000 participants from 62 countries (House et al., 2004). Transformational leadership is important for international

school leaders regardless of their geographic location and is an excellent measure of effective school leaders (Bass & Riggio, 2006, Mancuso et al., 2010).

Outcomes of Transformational Leadership

Research on the efficacy of transformational leadership has established a wide variety of positive outcomes in a multitude of settings, cultures, and countries (Bass & Riggio, 2006; Wang, Oh, Courtright, & Colbert, 2011). Transformational leadership has a positive relationship with followers' commitment and loyalty to an organization, involvement in an organization, and satisfaction with leadership (Bass & Avolio, 2004; Bass & Riggio, 2006).

Empirical evidence has shown that transformational leadership has a positive relationship with performance in a variety of settings (Bass & Bass, 2008). Research has been conducted in a number of countries: China, Canada, United States, Korea, Russia, Australia, New Zealand; in a number of contexts: military, private sector, governmental, educational, and nonprofit; and in a number of professions: principals, executives, sales persons, health care workers, prison workers, and athletes (Bass & Riggio, 2006).

Educational Outcomes of Transformational Leadership

Transformational leadership has been linked to a number of individual and organizational outcomes within the school (Leithwood & Jantzi, 2005). At the individual level, transformational leadership has a positive relationship with such outcomes as teacher commitment and job satisfaction (Bogler, 2001; Ross & Gray, 2006; Silins & Mulford, 2002).

A study of 3,074 teachers from 218 elementary schools investigated the relationship between transformational leadership and teacher commitment. Teacher

commitment was determined through the use of three scales: commitment to school mission, commitment to the school as a professional community, and commitment to school-community partnerships (Ross & Gray, 2006). Results indicated that transformational leadership had both direct and indirect effects on increasing teacher commitment (Ross & Gray, 2006). Transformational leadership also impacts teacher job satisfaction (Bogler, 2001). A study of 745 elementary, middle, and high school teachers located in Israel found that transformational leadership affects teacher commitment directly and indirectly by impacting teachers' occupation perceptions (Bogler, 2001).

At the organizational level, transformational leadership is linked to school culture, organizational planning and learning, and strategies for change (Barnett & McCormick, 2004; Leithwood et al., 2004; Silins, Mulford, & Zarins, 2002). A non-experimental research design using both multilevel analysis and structural equation modeling for data analysis investigated the relationship between school culture and leadership in 41 Australian secondary schools. The 373 participants were full-time classroom teachers and heads of departments. Results highlighted the importance of transformational leadership in a supportive school culture (Barnett & McCormick, 2004). Silins et al. (2002) demonstrated that principal transformational leadership style is associated with organizational learning through a path model analysis. An assessment of England's National Literacy and Numeracy strategies using both quantitative and qualitative research methodology demonstrated that large scale change or reform calls for a transformational leadership style (Leithwood et al., 2004).

Both individual level variables such as teacher commitment and job satisfaction and organizational level variables such as school culture, organizational planning and

learning, and strategies for change have been shown to make a significant contribution to student learning (Leithwood & Jantzi, 2005).

Transformational leadership has been shown to be positively related to the student outcome of school engagement (Leithwood et al., 2003; Silins & Mulford, 2002). School engagement is defined as participation in class and identification with school as a worthwhile place to be. School engagement is a strong predictor of student achievement (Fredricks et al., 2004). Silins and Mulford (2002) developed a model that examined school context variables, internal school variables, and student outcome variables. The context for the research involved 96 secondary schools, over 3,700 teachers and principals, and more than 5,000 students. One of the findings from the analysis of the model was that increased school engagement is linked with transformational leadership (Silins & Mulford, 2002).

The research on transformational leadership and international schools is limited. A search using the key words “transformational leadership” and “international schools” in the EBSCO Host database yielded just one article by Mancuso et al. (2010). The study of 22 school heads and 248 teachers in Near East South Asia international schools evaluated and identified correlates of teacher turnover. The most important variable was the perception of the leadership style of the head of school. Transformational leadership was shown to be an important factor in increasing teacher retention in international schools (Mancuso et al., 2010). The reduction of teacher turnover can improve both continuity and student learning (Odland & Ruzicka, 2009). Empirical research on transformational leadership and schools in general is broad and well documented (Leithwood & Jantzi, 2005, Leithwood et al., 1996**)** in contrast to the singular study on

transformational leadership and international schools. There is clearly a need for further research in the area of international school leadership, specifically transformational leadership.

International Schools

It is difficult to define international schools as they can differ in phase, size, gender, curriculum, etc. (Blandford & Shaw, 2001; Bunnell, 2006b). However, international schools generally exist to meet the educational needs of culturally diverse and globally mobile student bodies. Students come from a variety of contexts, such as foreign embassies, multinational companies, military settlements, missionary/religious groups, and non-governmental organizations (Cambridge & Thompson, 2004; Murakami-Ramalho, 2008). In addition to expatriate families, students from wealthy local families are choosing to attend international schools (Brummitt, 2007, Walker & Cheong, 2009).

International schools can be characterized by a number of the following traits. The student bodies and staff are culturally diverse (Walker & Cheong, 2009). There is a highly transient environment created by high student and staff turnover as compared to national school systems (Murakami-Ramalho & Benham, 2010). Multiple constituents are involved in the educational endeavor including parents, teachers, support staff, administration, board members, passport country educational departments, host country educational departments, and sponsoring organizations (multinational organizations, missionary/religious groups) (Murakami-Ramalho & Benham, 2010). International schools are set in a local host culture which creates a cultural distance (Murakami-Ramalho & Benham, 2010). Another characteristic of an international school is multiple curricula being implemented at the same time. Schools may have two different streams:

one following the national curriculum guidelines and another following the International Baccalaureate/Primary Years Programme curriculum (Walker & Cheong, 2009).

The growing interest in international schools since the late 1990s can be attributed to four interrelated factors (Walker & Cheong, 2009). International schools have experienced an exponential growth rate (Bunnell, 2008). For example, there were 474 international schools in Asia in April 2000 which grew to 2,057 in April 2007 for a growth rate of 334% (Brummitt, 2007). Another factor is the changing makeup of the international school. In the past, international schools were focused on educating the "colonial elite." However, the new "cosmopolitan elite" composed of wealthy local families are now also choosing international schools (Brummitt, 2007; Walker & Cheong, 2009). These families value the English language expertise, the choices of teaching methods, and the global paradigm that international schools offer (Walker & Cheong, 2009). There is also an increasing cultural diversity within national school systems and a desire for all students to have global competence and awareness (Walker & Dimmock, 2005). The final factor is the extraordinary growth of the International Baccalaureate/Primary Years Programme in both national educational systems and international schools (Walker & Cheong, 2009). While these four factors have combined to increase interest in internationals schools, there has not been a concomitant increase in the empirical research on international schools (Bunnell, 2006a). Research is beginning to grow in the context of international schools, yet oddly enough, there has been a lack of attention given to the leadership of international schools (Bunnell, 2008; Walker & Cheong, 2009).

International School Leadership

The literature in the area of general educational leadership and the importance of school leaders in effective schools is established (Day & Leithwood, 2007**;** Walker & Cheong, 2009**;** Leithwood & Jantzi, 2005; Leithwood et al., 1996). However, the body of research on international school leadership is much smaller (Bunnell, 2008; Collard, 2007; Walker & Cheong, 2009). Leadership in international schools is not limited to a single position or a single person (Walker & Riordan, 2010). The definition of international school leaders is based upon Walker and Cheong (2009) who use principal, vice principal, head of department, level coordinator, or similar position that is formally designated by the school in their study. This qualitative study of ten primary school leaders in Hong Kong involved the use of reflective journals to gain insight into international school leadership. Two major themes regarding leading international schools emerged. The first theme focused on leading for student learning, and the second theme was leading international and intercultural teams (Walker & Cheong, 2009).

Another qualitative case study explored how leaders can facilitate dynamic learning experiences in international schools (Murakami-Ramalho & Benham, 2010). The context for the study was an American International school. This school had shown stability in the administrative team and the governing board and shown success in student achievement. Multiple layers of complexity emerged from the setting of the international school which revealed the necessity of leadership working together with all constituents to create an effective teaching and learning environment (Murakami-Ramalho & Benham, 2010).

Walker and Riordan (2010) discussed how leaders can build collective capacity in intercultural schools. The theoretical article did not make use of either quantitative or qualitative research methodology. The importance of understanding culture for both leaders and staff was highlighted. Another theoretical article on international school leadership posited that culturally diverse schools require leaders that are authentic and value ongoing leadership learning. The importance of cultural understanding as part of the leadership's ongoing learning was suggested (Walker & Shuangye, 2007).

The importance of leadership in schools in general is well established. The literature on the importance of leadership in international schools is growing; however, much of the research in the area of international schools is qualitative and theoretical in nature as illustrated above. Further research that is quantitative and focused on supporting the importance of leadership in international schools is needed.

Summary

Cultural intelligence has shown a number of positive outcomes including enhanced task performance, cultural judgment and decision making, multicultural team effectiveness, intercultural negotiation effectiveness, increased innovation and cross cultural general, interaction, and work adjustment (Ang et al., 2006; Ang & Van Dyne, 2008; Elenkov & Manev, 2009; Imai & Gelfand, 2010; Templer et al., 2006). The empirical evidence suggests that cultural intelligence may be beneficial for international school leaders. In addition, there have been a number of conceptual theoretical articles that have argued for the importance of cultural intelligence in global leaders (Alon & Higgins, 2005; Ang & Inkpen, 2008; Janssens & Brett, 2006) and international school

leaders (Roberts, 2010; Walker & Cheong, 2009; Walker & Shuangye, 2007). Cultural intelligence may be an important predictor of transformational leadership.

Empirical evidence has established the effectiveness of transformational leadership in educational settings through increased teacher commitment and job satisfaction, creation of a positive school culture, implementation of strategies for change, and facilitating organizational planning (Bass & Bass, 2008; Leithwood & Jantzi, 2005). Transformational leadership has also shown a positive relationship to student engagement (Leithwood & Jantzi, 2005). The universality of transformational leadership has been shown through research in a multitude of different contexts and countries and through the GLOBE study (Den Hartog et al., 1999; House et al., 2004). The literature suggests that transformational leadership would be beneficial for international school leaders. However, transformational leadership is subject to cultural contingencies (Bass & Riggio, 2006, Leong & Fischer, 2011).

In a review of the literature, I did not locate any empirical studies that looked at the relationship between cultural intelligence and transformational leadership in international school leaders. This study would fill that gap and would add to the nomological network of cultural intelligence by examining which cultural intelligence factor (metacognitive, cognitive, motivation, behavior) best predicts transformational leadership in international school leaders. It would also add needed empirical evidence to support the conceptual theorizing articles regarding the importance of cultural intelligence in global leaders by establishing a relationship between the relatively new construct of cultural intelligence with the “classical” construct of transformational leadership. The results could also aid in the selection of individuals for assignments that

are characterized by cultural diversity. As cultural intelligence is based on capabilities and is malleable, individuals can assess their cultural intelligence and take part in training to focus on strengthening needed areas.

CHAPTER THREE: METHODOLOGY

Introduction

This research study used a correlational research design; a standard multiple regression analysis was conducted. The purpose of this study is to determine if there is a relationship between cultural intelligence and transformational leadership in international school leaders, and if so, what factor(s) of cultural intelligence best predicts transformational leadership in international school leaders. The primary research question for this study was, which factor of cultural intelligence best predicts the transformational leadership style in international school leaders?

There were five additional research questions:

- Which factor of cultural intelligence best predicts the transformational leadership factor of idealized influence (attributed) in international school leaders?
- Which factor of cultural intelligence best predicts the transformational leadership factor of idealized influence (behaviors) in international school leaders?
- Which factor of cultural intelligence best predicts the transformational leadership factor of inspirational motivation in international school leaders?
- Which factor of cultural intelligence best predicts the transformational leadership factor of intellectual stimulation in international school leaders?
- Which factor of cultural intelligence best predicts the transformational leadership factor of individualized consideration in international school leaders?

The research questions were addressed using standard multiple regression to determine which factor of cultural intelligence best predicts transformational leadership style in international school leaders.

Participants

The participants were a purposive sampling of international school leaders in formal leadership roles. Leaders were defined as directors, principals, vice principals, heads of departments, level coordinators, or similar positions that are formally designated by the schools. A combined list of international schools was created from the online directory of International School Services (ISS) and American-sponsored overseas schools. Leaders from this list served as the sample for this study. A total of 567 leaders were invited to participate in the study. There were 36 initial email failures; however, all but one of these email failures were addressed by using an alternative email address. The one email failure that could not be resolved was due to the school no longer operating. A total of 233 leaders responded for a response rate of 41.1%. Duplicate responses from schools and incomplete surveys were removed, yielding 193 usable surveys.

Setting

The setting was ISS and American-sponsored overseas schools. These schools provide an educational program for multicultural and globally mobile student bodies. These students are from diverse contexts such as multinational companies, foreign embassies, military bases, religious groups, and non-governmental entities (Cambridge & Thompson, 2004; Murakami-Ramalho, 2008). Students from local wealthy families also attend international schools (Walker & Cheong, 2009).

International schools in this study share a number of the following characteristics. There is intercultural diversity in the student body and staff. The schools have a highly transient environment stemming from high student and staff turnover. The education process in the international schools involves multiple constituents such as parents, teachers, support staff, administration, board members, passport country educational departments, host country educational departments, and sponsoring organizations (multinational organizations, missionary/religious groups) (Murakami-Ramalho & Benham, 2010). There is a cultural distance between the international school and local host culture (Murakami-Ramalho & Benham, 2010).

International schools may implement two different curriculums concurrently. For example, one stream may follow the national curriculum guidelines while another adheres to the International Baccalaureate/Primary Years Programme curriculum (Walker & Cheong, 2009).

ISS schools are designated as such by (a) being governed and managed by ISS, (b) having a recruiting relationship with ISS, or (c) being listed in the ISS directory (ISS, 2011b). ISS schools endeavor to promote quality international education programs (ISS, 2011a). American-sponsored overseas schools are not owned or operated by the United States government. Schools that receive assistance and support via the Office of Overseas Schools, United States Department of State are denoted as “American-sponsored” overseas schools. These schools promote an American-style program (United States Department of State, 2011).

Instrumentation

Data were collected through use of two instruments. The first instrument was the Cultural Intelligence Scale (CQS). This scale was developed by Ang et al. (2007) to measure cultural intelligence with a 20 item, four-factor model. The scale "includes four items for metacognitive cultural intelligence ($\alpha = .76$), six for cognitive cultural intelligence ($\alpha = .84$), five for motivational cultural intelligence ($\alpha = .76$), and five for behavioral cultural intelligence ($\alpha = .83$)" (Ang et al., 2006, p. 110). Initial factor structure validity yielded a goodness of fit of 0.92. The CQS has also been cross validated across various samples, across time, and across countries (Ang et al., 2007; Moon, 2010a; Ward, Fisher, Lam, & Hall, 2009).

Each item on the instrument describes an individual's capability to be culturally intelligent in one of the four factors (metacognitive, cognitive, motivational, and behavioral cultural intelligence). Sample items include "I am conscious of the cultural knowledge I apply to cross cultural interactions" for metacognitive cultural intelligence, "I know the legal and economic systems of other cultures" for cognitive cultural intelligence, "I enjoy interacting with people from different cultures" for motivational cultural intelligence, and "I change my verbal behavior when a cross cultural interaction requires it" for behavioral cultural intelligence (Ang et al., 2006, p. 110). Individuals are asked to respond to each statement using a 7-point Likert scale, in which a response of one means "strongly disagree" and seven means "strongly agree." A higher score on the item indicates a higher level of cultural intelligence. A separate score is derived for each factor of cultural intelligence by summing the item scores and dividing by the number of

items in the respective section. The minimum score for each factor is 1, and the maximum score is 7.

The second instrument was the MLQ (Form 5X) (MLQ). The MLQ 5X is the most widely accepted instrument used to assess transformational leadership (Bass & Riggio, 2006). In addition to transformational leadership, the MLQ 5X also measures transactional and laissez-faire leadership or the full range of leadership model. Transformational leadership is composed of five factors: (a) idealized influence (attributed), (b) idealized influence (behavior), (c) inspirational motivation, (d) intellectual stimulation, and (e) individualized consideration (Bass & Bass, 2008; Bass & Riggio, 2006). Transactional leadership is comprised of the following three factors: (a) contingent reward leadership, (b) management-by-exception active, and (c) management-by-exception passive (Bass & Avolio, 2004; Bass & Riggio, 2006). The last factor of laissez-faire leadership represents an absence of any type of leadership. The MLQ 5x uses four descriptive statements to assess each of the nine factors for a total of 36 items. The MLQ 5X also includes nine items that measure outcomes such as the leader's effectiveness, satisfaction with the leader, and extra effort of followers. However, these were not included in this survey in order to lower the total number of questions in the online survey. Reliabilities for the MLQ 5X range from 0.74 to 0.94 (Bass & Avolio, 2004).

Each statement describes a behavior associated with a leadership style and asks the individual to assess the frequency of their use of that behavior. A 5-point Likert scale is used in which zero denotes "not at all" and a response of four means "frequently, if not always." There are four items for each factor of leadership. A separate score is derived

for each factor of leadership by summing the item scores and dividing by four. The higher the score on the statement, the higher the level of a particular factor for transformational, transactional, or laissez-faire leadership. The minimum score for each factor is 0, and the maximum score is 4. These five scores for each transformational leadership factor are then added for a total transformational leadership score. The minimum transformational leadership score is 0, and the maximum score is 20.

In this study, data using these two instruments were collected using two online survey forms. The first version of the survey had the CQS first, followed by the MLQ 5X. In the second version of the survey, the MLQ 5X was first, followed by the CQS. The first version was administered to half of the participants while the second version was administered to the other half of the participants. The purpose of having two versions of the survey was to control for testing effects. Both surveys asked demographic questions. Demographic questions were placed at the beginning of both survey forms.

Procedures

Once Liberty University Institutional Review Board approval was obtained, the research commenced. A list of participants and their email addresses was obtained from the websites of ISS and American Sponsored Overseas Schools. The director that is listed for each international school was chosen as a participant.

An initial email was sent to the director of each school requesting their voluntary participation in the study. The letter requested that a person in leadership (i.e. the director, a principal, vice principal, head of department, level coordinator, or similar position that is formally designated by the school) complete the online survey. The initial email contained a cover letter outlining the purpose of the study, confidentiality

information, who to contact with questions, and the link for the online survey. Emails were personalized with the respective institutions in the subject line and personally addressed to the director to increase response rates by attempting to show positive regard to respondents (Dillman, 2007). Emails were further personalized by the use of a post script commenting on either an event at the school, the mission or vision of the school, or the Director's Welcome or biographical information as appropriate. If a generic "info @ school address" was listed, further research of the school website or a general internet search was undertaken to locate the personal email address of the school director.

After one week, a reminder email was sent out to each school director who did not respond**.** After two weeks, one final email was sent out (Dillman, 2007). The use of the Custom ID function in Survey Monkey was employed to track which schools had responded. The Custom ID was removed from the survey data upon download in order to ensure anonymity of participants. Internet Protocol addresses were not tracked to further ensure anonymity. The time zone for each school was noted in order to have the first and second emails arrive on a Thursday afternoon. The final email was timed to arrive on a Saturday morning to vary the days for the recipient (Dillman, 2007).

The online survey included an informed consent, questions regarding demographics, the CQS, and the MLQ 5X. The letter of informed consent was hosted via the online survey system. The informed consent needed to be completed before the participant could complete the survey. The informed consent was followed by the statement, "Clicking next below I acknowledge the following: I have read and understand the description of the study and contents of this document." This process did not produce a physically signed consent form to maintain as part of the research records.

No individual monetary incentives were utilized in exchange for filling out the survey; however, survey participants could opt to add their name and contact information at the end of the survey to be entered into a random draw for a $50 USD gift certificate from a vendor of their choice. This data for the drawing was removed from the survey data upon download in order to ensure anonymity of participants. Four weeks after the initial email, the results from the online survey were downloaded into SPSS. Statistical analysis was performed using SPSS.

Research Design

This study used a multivariate correlational research design. The correlation research design was chosen as it is especially appropriate for non-experimental research where variables exist naturally and are not deliberately controlled or manipulated (Tabachnick & Fidell, 2007). The purpose of correlational research designs is discovering and expressing relationships among variables (Tabachnick & Fidell, 2007), which is the focus of this study as delineated above. This research design enabled the researcher to investigate the relationship between a criterion variable and several predictor variables (Tabachnick & Fidell, 2007). Specifically, it allowed for insight into the relationship between the five factors of transformational leadership and the four factors of cultural intelligence.

Data Analysis

Multiple regression analysis was used to determine (a) the relationship between cultural intelligence and transformational leadership style in international school leaders and (b) which factor of cultural intelligence best predicts each transformational leadership factor in international school leaders.

Multivariate statistics can be viewed as an extension of bivariate and univariate statistics. Multivariate statistics are more complex than bivariate or univariate statistics and allow for exploration into more complex real life research questions such as the relationships between a criterion variable and a number of predictor variables (Thompson, 1991). Multiple regression can be used to determine how well a number of predictor variables predict the outcome of a criterion variable (Tabachnick & Fidell, 2007). This study examined which of the four factors of cultural intelligence best predicts the five factors of transformational leadership, making multiple regression a cogent choice for data analysis.

Standard multiple regression was used. Standard multiple regression was chosen to provide information regarding the direction and strength of the relationship between cultural intelligence and transformational leadership style, and then, each factor of transformational leadership style (Tabachnick & Fidell, 2007). Standard multiple regression is an appropriate choice for this study as the research on the construct of cultural intelligence is still forming. The choice of stepwise or hierarchical multiple regression requires a strong theoretical foundation (Tabachnick & Fidell, 2007). Each predictor variable (metacognitive, cognitive, motivation, behavior) was analyzed in terms of its predictive power for each of the criterion variables (transformational leadership style and each factor of transformational leadership style) in comparison with the other predictor variables combined (Tabachnick & Fidell, 2007).

The number of participants needed to be around 108 following the rule of thumb of $N \geq 104 + m$ (m representing the four factors of cultural intelligence) (Tabachnick & Fidell, 2007). A $p < .05$ level of significance was used for data analysis in determining

whether to reject the null hypothesis (Ary et al., 2006**).** Preliminary assumption testing was conducted to examine extreme outliers, the normality, linearity, and homoscedasticity of the residuals.

CHAPTER FOUR: RESULTS

This chapter outlines the statistical procedures and findings from this study. The purpose of this study was to determine if there is a relationship between cultural intelligence and transformational leadership in international school leaders, and if so, what factor(s) of cultural intelligence best predicts transformational leadership. The chapter begins with a report of the demographics and descriptive statistics. Then, the results of the analysis for each of the following hypotheses are presented:

H1: There is no statistically significant predictive relationship between cultural intelligence and transformational leadership style in international school leaders.

H2: There is no statistically significant predictive relationship between cultural intelligence and the transformational leadership factor of idealized influence (attributed) in international school leaders.

H3: There is no statistically significant predictive relationship between cultural intelligence and the transformational leadership factor of idealized influence (behaviors) in international school leaders.

H4: There is no statistically significant predictive relationship between cultural intelligence and the transformational leadership factor of inspirational motivation in international school leaders.

H5: There is no statistically significant predictive relationship between cultural intelligence and the transformational leadership factor of intellectual stimulation in international school leaders.

H6: There is no statistically significant predictive relationship between cultural intelligence and the transformational leadership factor of individualized consideration in international school leaders.

Demographics

The study consisted of 193 international school leaders. One hundred and fifty (77.7%) of the participants were male, and 40 (20.7%) were female. Three (1.6%) did not respond to the gender question. Participants' ages ranged from 30 to 79; 13 (6.7%) were 30-39 years old, 53 (27.5%) were 40-49 years old, 76 (39.4%) were 50-59 years old, 46 (23.8%) were 60-69 years old, 4 were (2.1%) 70-79 years old, and 1 (.5%) did not respond to the age question. In terms of ethnicity, 180 (93.3%) of the participants were Caucasian, 2 (1%) were Asian, 2 (1%) were Hispanic, 1 was (.5%) African-American, 6 (3.1%) participants chose "other," and 2 (1%) did not respond to this question. One hundred and twelve (58%) participants reported American as their nationality, 28 (14.5%) reported British, 21 (10.9%) reported Canadian, 11 (5.7%) reported Australian, 19 (9.8%) reported Other, and 2 (1%) did not respond to the nationality question**.**

International school leaders who completed the survey were from 90 different countries: Argentina, Armenia, Australia, Austria, Bahrain, Belgium, Bosnia, Brazil, Bulgaria, Cambodia, Cameroon, Chili, China, Columbia, Costa Rica, Croatia, Cuba, Cyprus, Czech Republic, Dominican Republic, Ecuador, El Salvador, Ethiopia, Fiji, Finland, France, Georgia, Germany, Ghana, Greece, Guinea, Honduras, Hong Kong, Iceland, India, Indonesia, Israel, Italy, Japan, Kazakhstan, Kenya, Korea, Kuwait, Laos, Latvia, Lebanon, Lesotho, Macau, Macedonia, Malaysia, Marshall Islands, Mauritania, Mexico, Moldova, Mongolia, Mozambique, Myanmar, Nepal, Netherlands, Norway,

Papua New Guinea, Peru, Philippines, Poland, Portugal, Qatar, Romania, Russia, Rwanda, Saudi Arabia, Senegal, Singapore, Slovakia, Slovenia, South Africa, South Korea, Suriname, Switzerland, Taiwan, Tanzania, Thailand, Timor Leste, Tunisia, Turkey, Ukraine, United Arab Emirates, United States of America, Venezuela, Vietnam, and Zambia.

The highest degree of education of the participants was as follows: 11 (5.7%) Bachelor of Arts, 4 (2.1%) Bachelor of Science, 116 (60%) Master of Arts or Education or Business Administration, 33 (17.1%) Doctor of Education, 21 (10.9%) Doctor of Philosophy, 6 (3.1%) "Other", and 2 (1%) who did not respond. The number of years of service at the participants' present location ranged from one to thirty (M = 5.39, SD = 5.26).

Descriptive Statistics

The mean and standard deviation for transformational leadership are M = 16.23, SD = 1. 77. Overall, the international school leaders had a high level of transformational leadership. Table 2 displays the descriptive statistics for the other variables under study. The mean score for metacognitive cultural intelligence was 6.03, and the mean score for motivational cultural intelligence was 6.25, indicating that the participants overall had a high level of metacognitive and motivational cultural intelligence. The participants had moderately high cognitive and behavioral cultural intelligence (CQ), with 5.00 and 5.75 scores respectively.

Table 2

Summary of Means and Standard Deviations of Variables

Variable	*M*	*SD*
Metacognitive CQ	6.03	0.88
Cognitive CQ	5.00	1.10
Motivational CQ	6.25	0.88
Behavioral CQ	5.75	0.95
TL – Idealized Influence (Attributed)	2.98	0.52
TL – Idealized Influence (Behavior)	3.39	0.51
Inspirational Motivation	3.45	0.46
Intellectual Stimulation	3.20	0.47
Individualized Consideration	3.20	0.47

Hypothesis One

A standard multiple regression analysis was used to determine the ability of the four factors of CQ (metacognitive, cognitive, motivational, behavioral) to predict transformational leadership style**.**

Descriptive statistics. Table 3 displays the correlations among the predictor variables (metacognitive CQ, cognitive CQ, motivational CQ, and behavioral CQ) and the criterion variable (transformational leadership).

Table 3

Intercorrelations Among Variables

Variable	Transformational Leadership	Metacognitive CQ	Cognitive CQ	Motivational CQ	Behavioral CQ
Transformational Leadership	-				
Metacognitive CQ	.37	-			
Cognitive CQ	.35*	.55	-		
Motivational CQ	.25	.62	.41	-	
Behavioral CQ	.38**	.62	.47	.61	-

Note. *p < .05, ** p<.01

Assumption testing. Preliminary analyses were conducted to test the assumptions of no extreme outliers, normality, linearity, and homoscedasticity of the residuals. Outliers were checked using a scatter plot of the standardized residuals and an analysis of the Mahalanobis and Cook's distances. A visual inspection revealed two extreme outliers greater than +/- 3.3; however, it is not uncommon for a few outliers to appear in a large sample size (Tabachnick & Fidell, 2007). The Mahalanobis maximum value of 46.67 exceeded the critical value of 18.47; however, the maximum value of Cook's distance was 0.53, indicating that the outliers were not unduly influencing the model (Tabachnick & Fidell, 2007). Therefore, the assumption of homoscedasticity was found tenable.

The assumption of normality was checked through a visual inspection of the Normal Probability Plot of the Regression Standardized Residual. The assumption of normality was found tenable. Normality was also confirmed by the roughly rectangular

shaped distributed residuals in the scatter plot suggesting that there are no major deviations from normality.

The correlation among the independent variables was examined to assess multicollinearity. The correlation between variables is under .7 (see Table 3), suggesting no concerns of multicollinearity. This was confirmed by the analysis of the tolerance and Variance Inflation Factor (VIF) values. All four tolerance values were greater than .100 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 metacognitive CQ, cognitive CQ, motivational CQ, and behavioral CQ significantly predicted transformational leadership style, $R^2 = .20$, $adj\ R^2 = .18$, $F = (4,192) = 11.58$ $p < .01$. The multiple correlation coefficient of .45 explained that approximately 20% of the variance in transformational leadership can be accounted for by the linear combination of the four factors of CQ. While R^2 is statistically significant, its low value indicates a lower practical significance.

Each predictor variable (metacognitive CQ, cognitive CQ, motivational CQ, behavioral CQ) was examined to determine how much it contributed to the prediction of criterion variable. According to the results shown in Table 4, behavioral CQ and cognitive CQ had alpha levels less than .05. This indicates that there was a significant positive relationship between both behavioral CQ and cognitive CQ and transformational leadership. The regression coefficients of metacognitive CQ and motivational CQ were not significant, $p = .07$ and $p = .37$ respectively. This suggests that there was no positive

and significant relationship between these two predictor variables and transformational leadership. Compared to other factors, metacognitive and cognitive CQ were not significant in predicting transformational leadership.

Table 4

Contributions of Predictor Variables (N=193)

Variable	Zero-Order r	Partial r	β	SE B	B	t	p
Metacognitive CQ	.37**	.13	.18	.19	.35	1.84	.07
Cognitive CQ	.35**	.16*	.17*	.13	.28	2.18	.03*
Motivational CQ	.25**	-.07	-.08	.18	-.16	-0.90	.37
Behavioral CQ	.38**	.19**	.24**	.17	.45	2.64	.01*

Note. *p < .05, ** p<.01

Hypothesis Two

A standard multiple regression analysis was used to determine the ability of the four factors of CQ (metacognitive, cognitive, motivational, behavioral) to predict the transformational leadership factor of idealized influence (attributed) (TL-IIA).

Descriptive statistics. Table 5 displays the correlations among the predictor variables (metacognitive CQ, cognitive CQ, motivational CQ, and behavioral CQ) and the criterion variable (TL-IIA).

Table 5

Intercorrelations Among Variables

Variable	TL-IIA	Metacognitive CQ	Cognitive CQ	Motivational CQ	Behavioral CQ
TL-IIA	-				
Metacognitive CQ	.19	-			
Cognitive CQ	.22	.55	-		
Motivational CQ	.08	.62	.41	-	
Behavioral CQ	.21	.62	.47	.61	-

Note. *p < .05, ** p<.01

Assumption testing. Preliminary analyses were conducted to test the assumptions of no extreme outliers, normality, linearity, and homoscedasticity of the residuals. Outliers were checked using a scatter plot of the standardized residuals and an analysis of the Mahalanobis and Cook's distances. A visual inspection revealed two extreme outliers greater than +/- 3.3; however, it is not uncommon for a few outliers to appear in a large sample size (Tabachnick & Fidell, 2007). The Mahalanobis maximum value of 46.67 exceeded the critical value of 18.47; however, the maximum value of Cook's distance was 0.14, indicating that the outliers were not unduly influencing the model (Tabachnick & Fidell, 2007). Therefore, the assumption of homoscedasticity was found tenable.

The assumption of normality was checked through a visual inspection of the Normal Probability Plot of the Regression Standardized Residual. The assumption of normality was found tenable. Normality was also confirmed by the roughly rectangular

shaped distributed residuals in the scatter plot suggesting that there are no major deviations from normality.

The correlation among the independent variables was examined to assess multicollinearity. The correlation between variables is under .7 (see Table 5), suggesting no concerns of multicollinearity. This was confirmed by the analysis of the tolerance and Variance Inflation Factor (VIF) values. All four tolerance values were greater than .100, 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 demonstrated that the linear combination of metacognitive CQ, cognitive CQ, motivational CQ, and behavioral CQ significantly predicted TL-IIA, $R^2 = .08$, *adj* $R^2 = .06$, $F = (4,192) = 3.845$ $p < .01$. The multiple correlation coefficient of .28 explained that approximately 8% of the variance in TL-IIA can be accounted for by the linear combination of the four factors of CQ. While R^2 is statistically significant, its low value indicates a lower practical significance.

Each predictor variable (metacognitive CQ, cognitive CQ, motivational CQ, behavioral CQ) was examined to determine how much it contributed to the prediction of criterion variable. According to the results shown in Table 6, the regression coefficients of metacognitive CQ, cognitive CQ, motivational CQ and behavioral CQ were not significant, $p = .38$, $p = .08$, $p = .14$, and $p = .08$ respectively. This suggests that there was no positive and significant relationship between these four individual predictor variables and TL - IIA. It is important to evaluate the full correlation of the model and not just the individual predictors (Tabachnick & Fidell, 2007). These results do not indicate that

metacognitive, cognitive, motivational, and behavioral CQ are not useful, rather that no specific individual predictor was evident due to overlap of the four factors of cultural intelligence (Tabachnick & Fidell, 2007).

Table 6

Contributions of Predictor Variables (N=193)

Variable	Zero-Order r	Partial r	β	SE B	B	t	p
Metacognitive CQ	.19**	.07	.09	.06	.06	0.90	.37
Cognitive CQ	.22**	.13	.15	.04	.07	1.75	.08
Motivational CQ	.08**	-.11	-.14	.06	-.08	-1.48	.14
Behavioral CQ	.21**	.13	.17	.05	.09	1.74	.08

Note. *p < .05, ** p<.01

Hypothesis Three

A standard multiple regression analysis was used to determine the ability of the four factors of CQ (metacognitive, cognitive, motivational, behavioral) to predict the transformational leadership factor of idealized influence (behaviors) (TL–IIB)**.**

Descriptive statistics. Table 7 displays the correlations among the predictor variables (metacognitive CQ, cognitive CQ, motivational CQ, and behavioral CQ) and the criterion variable (TL–IIB).

Table 7

Intercorrelations Among Variables

Variable	TL-IIB	Metacognitive CQ	Cognitive CQ	Motivational CQ	Behavioral CQ
TL-IIB	-				
Metacognitive CQ	.37**	-			
Cognitive CQ	.23	.55	-		
Motivational CQ	.29	.62	.41	-	
Behavioral CQ	.32	.62	.47	.61	-

Note. *p < .05, ** p<.01

Assumption testing. Preliminary analyses were conducted to test the assumptions of no extreme outliers, normality, linearity, and homoscedasticity of the residuals. Outliers were checked using a scatter plot of the standardized residuals and an analysis of the Mahalanobis and Cook's distances. A visual inspection revealed three extreme outliers greater than +/- 3.3; however, it is not uncommon for a few outliers to appear in a large sample size (Tabachnick & Fidell, 2007). The Mahalanobis maximum value of 46.67 exceeded the critical value of 18.47. However, the maximum value of Cook's distance was 0.45, indicating that the outliers were not unduly influencing the model (Tabachnick & Fidell, 2007). Therefore, the assumption of homoscedasticity was found tenable.

The assumption of normality was checked through a visual inspection of the Normal Probability Plot of the Regression Standardized Residual. The assumption of normality was found tenable. Normality was also confirmed by the roughly rectangular

shaped distributed residuals in the scatter plot suggesting that there are no major deviations from normality.

The correlation among the independent variables was examined to assess multicollinearity. The correlation between variables is under .7 (see Table 7), suggesting no concerns of multicollinearity. This was confirmed by the analysis of the tolerance and Variance Inflation Factor (VIF) values. All four tolerance values were greater than .100 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 demonstrated that the linear combination of metacognitive CQ, cognitive CQ, motivational CQ, and behavioral CQ significantly predicted TL-IIB, R^2 = .15, *adj* R^2 =.14, F = (4,192) = 8.51 p < .01. The multiple correlation coefficient of .39 explained that approximately 15% of the variance in TL-IIB can be accounted for by the linear combination of the four factors of CQ. While R^2 is statistically significant, its low value indicates a lower practical significance.

Each predictor variable (metacognitive CQ, cognitive CQ, motivational CQ, behavioral CQ) was examined to determine how much it contributed to the prediction of criterion variable. According to the results shown in Table 8, metacognitive CQ had an alpha level less than .05. This indicates that there was a significant positive relationship between metacognitive CQ and TL-IIB. The regression coefficients of cognitive CQ, motivational CQ, and behavioral CQ were not significant, p = .96, p - .59, and p = .18 respectively. This suggests that there was no positive and significant relationship between these three predictor variables and transformational leadership. Compared to the other

factor, cognitive, motivational, and behavioral CQ were not significant in predicting TL-IIB.

Table 8

Contributions of Predictor Variables (N=193)

Variable	Zero-Order r	Partial r	β	SE B	B	t	p
Metacognitive CQ	.37**	.19*	.26*	.06	.35	2.64	.01*
Cognitive CQ	.25**	.003	.004	.04	.28	0.05	.96
Motivational CQ	.29**	.04	.05	.05	-.16	0.54	.59
Behavioral CQ	.32**	.10	.13	.05	.45	1.35	.18

Note. *p < .05, ** p<.01

Hypothesis Four

A standard multiple regression analysis was used to determine the ability of the four factors of CQ (metacognitive, cognitive, motivational, behavioral) to predict the transformational leadership factor of inspirational motivation (TL-IM)**.**

Descriptive statistics. Table 9 displays the correlations among the predictor variables (metacognitive CQ, cognitive CQ, motivational CQ, and behavioral CQ) and the criterion variable (TL-IM).

Table 9

Intercorrelations Among Variables

Variable	TL-IM	Metacognitive CQ	Cognitive CQ	Motivational CQ	Behavioral CQ
TL-IM	-				
Metacognitive CQ	.18	-			
Cognitive CQ	.22	.55	-		
Motivational CQ	.11	.62	.41	-	
Behavioral CQ	.23	.62	.47	.61	-

Note. *p < .05, ** p<.01

Assumption testing. Preliminary analyses were conducted to test the assumptions of no extreme outliers, normality, linearity, and homoscedasticity of the residuals. Outliers were checked using a scatter plot of the standardized residuals and an analysis of the Mahalanobis and Cook's distances. A visual inspection revealed one extreme outlier greater than +/- 3.3; however, it is not uncommon for a few outliers to appear in a large sample size (Tabachnick & Fidell, 2007). The Mahalanobis maximum value of 46.67 exceeded the critical value of 18.47. However, the maximum value of Cook's distance was 0.28, indicating that the outlier was not unduly influencing the model (Tabachnick & Fidell, 2007). Therefore, the assumption of homoscedasticity was found tenable.

The assumption of normality was checked through a visual inspection of the Normal Probability Plot of the Regression Standardized Residual. The assumption of normality was found tenable. Normality was also confirmed by the roughly rectangular

shaped distributed residuals in the scatter plot suggesting that there are no major deviations from normality.

The correlation among the independent variables was examined to assess multicollinearity. The correlation between variables is under .7 (see Table 9), suggesting no concerns of multicollinearity. This was confirmed by the analysis of the tolerance and Variance Inflation Factor (VIF) values. All four tolerance values were greater than .100 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 demonstrated that the linear combination of metacognitive CQ, cognitive CQ, motivational CQ, and behavioral CQ significantly predicted TL-IM, $R^2 = .07$, *adj* $R^2 = .05$, $F = (4,192) = 3.65$ $p < .01$. The multiple correlation coefficient of .27 explained that approximately 7% of the variance in TL-IM can be accounted for by the linear combination of the four factors of CQ. While R^2 is statistically significant, its low value indicates a lower practical significance.

Each predictor variable (metacognitive CQ, cognitive CQ, motivational CQ, behavioral CQ) was examined to determine how much it contributed to the prediction of criterion variable. According to the results shown in Table 10, the regression coefficients of metacognitive CQ, cognitive CQ, motivational CQ and behavioral CQ were not significant, $p = .81$, $p = .08$, $p = .42$, and $p = .05$, respectively. This suggests that there was no positive and significant relationship between these four individual predictor variables and TL - IIA. These results do not indicate that metacognitive, cognitive, motivational,

and behavioral CQ are not useful, rather that no specific individual predictor was evident due to overlap of the four factors of cultural intelligence (Tabachnick & Fidell, 2007).

Table 10

Contributions of Predictor Variables (N=193)

Variable	Zero-Order r	Partial r	β	SE B	B	t	p
Metacognitive CQ	.18**	.02	.02	.05	.01	0.24	.81
Cognitive CQ	.22**	.13	.15	.04	.06	1.74	.08
Motivational CQ	.11**	-.06	-.08	.05	-.04	-0.813	.42
Behavioral CQ	.23**	.14	.19	.05	.09	0.192	.05

Note. *p < .05, ** p<.01

Hypothesis Five

A standard multiple regression analysis was used to determine the ability of the four factors of CQ (metacognitive, cognitive, motivational, behavioral) to predict the transformational leadership factor of intellectual stimulation (TL–IS).

Descriptive statistics. Table 11 displays the correlations among the predictor variables (metacognitive CQ, cognitive CQ, motivational CQ, and behavioral CQ) and the criterion variable transformational leadership factor of (TL–IS).

Table 11

Intercorrelations Among Variables

Variable	TL-IS	Metacognitive CQ	Cognitive CQ	Motivational CQ	Behavioral CQ
TL-IS	-				
Metacognitive CQ	.32	-			
Cognitive CQ	.30	.55	-		
Motivational CQ	.21	.62	.41	-	
Behavioral CQ	.35**	.62	.47	.61	-

Note. *p < .05, ** p<.01

Assumption testing. Preliminary analyses were conducted to test the assumptions of no extreme outliers, normality, linearity, and homoscedasticity of the residuals. Outliers were checked using a scatter plot of the standardized residuals and an analysis of the Mahalanobis and Cook's distances. A visual inspection revealed two extreme outliers greater than +/- 3.3; however, it is not uncommon for a few outliers to appear in a large sample size (Tabachnick & Fidell, 2007). The Mahalanobis maximum value of 46.67 exceeded the critical value of 18.47. However, the maximum value of Cook's distance was 0.31, indicating that the outliers were not unduly influencing the model (Tabachnick & Fidell, 2007). Therefore, the assumption of homoscedasticity was found tenable.

The assumption of normality was checked through a visual inspection of the Normal Probability Plot of the Regression Standardized Residual. The assumption of normality was found tenable. Normality was also confirmed by the roughly rectangular

shaped distributed residuals in the scatter plot suggesting that there are no major deviations from normality.

The correlation among the independent variables was examined to assess multicollinearity. The correlation between variables is under .7 (see Table 11), suggesting no concerns of multicollinearity. This was confirmed by the analysis of the tolerance and Variance Inflation Factor (VIF) values. All four tolerance values were greater than .100 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 metacognitive CQ, cognitive CQ, motivational CQ, and behavioral CQ significantly predicted transformational leadership style, R^2 = .16, *adj* R^2 =.14, F = (4,192) = 8.80 $p < .01$. The multiple correlation coefficient of .40 explained that approximately 16% of the variance in transformational leadership can be accounted for by the linear combination of the four factors of CQ. While R^2 is statistically significant, its low value indicates a lower practical significance.

Each predictor variable (metacognitive CQ, cognitive CQ, motivational CQ, behavioral CQ) was examined to determine how much it contributed to the prediction of criterion variable. According to the results shown in Table 12, behavioral CQ had an alpha level less than .05. This indicates that there was a significant positive relationship between behavioral CQ and transformational leadership. The regression coefficients of metacognitive, cognitive and motivational CQ were not significant, p = .16, p = .09 and p = .37 respectively. This suggests that there was no positive and significant relationship

between these three predictor variables and TL-IS. Compared to the other factor, metacognitive, cognitive, and motivational CQ were not significant in predicting TL-IS.

Table 12

Contributions of Predictor Variables (N=193)

Variable	Zero-Order r	Partial r	β	SE B	B	t	p
Metacognitive CQ	.32**	.10	.14	.05	.08	1.41	.16
Cognitive CQ	.30**	.12	.14	.04	.06	1.70	.09
Motivational CQ	.21**	-.07	-.08	.05	-.04	-0.90	.37
Behavioral CQ	.35**	.19*	.25*	.05	.12	2.71	0.01*

Note. *p < .05, ** p<.01

Hypothesis Six

A standard multiple regression analysis was used to determine the ability of the four factors of CQ (metacognitive, cognitive, motivational, behavioral) to predict the transformational leadership style factor of individual consideration (TL–IC).

Descriptive statistics. Table 13 displays the correlations among the predictor variables (metacognitive CQ, cognitive CQ, motivational CQ, and behavioral CQ) and the criterion variable transformational leadership factor of individual consideration (TL – IC).

Table 13

Intercorrelations Among Variables

Variable	TL-IC	Metacognitive CQ	Cognitive CQ	Motivational CQ	Behavioral CQ
TL-IC	-				
Metacognitive CQ	.29	-			
Cognitive CQ	.31*	.55	-		
Motivational CQ	.20	.62	.41	-	
Behavioral CQ	.28	.62	.47	.61	-

Note. *p < .05, ** p<.01

Assumption testing. Preliminary analyses were conducted to test the assumptions of no extreme outliers, normality, linearity, and homoscedasticity of the residuals. Outliers were checked using a scatter plot of the standardized residuals and an analysis of the Mahalanobis and Cook's distances. A visual inspection revealed three extreme outliers greater than +/- 3.3; however, it is not uncommon for a few outliers to appear in a large sample size (Tabachnick & Fidell, 2007). The Mahalanobis maximum value of 46.67 exceeded the critical value of 18.47; however, the maximum value of Cook's distance was 0.37, indicating that the outliers were not unduly influencing the model (Tabachnick & Fidell, 2007). Therefore, the assumption of homoscedasticity was found tenable.

The assumption of normality was checked through a visual inspection of the Normal Probability Plot of the Regression Standardized Residual. The assumption of normality was found tenable. Normality was also confirmed by the roughly rectangular

shaped distributed residuals in the scatter plot suggesting that there are no major deviations from normality.

The correlation among the independent variables was examined to assess multicollinearity. The correlation between variables is under .7 (see Table 13), suggesting no concerns of multicollinearity. This was confirmed by the analysis of the tolerance and Variance Inflation Factor (VIF) values. All four tolerance values were greater than .100 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 metacognitive CQ, cognitive CQ, motivational CQ, and behavioral CQ significantly predicted transformational leadership style, $R^2 = .13$, $adj\ R^2 = .11$, $F = (4,192) = 6.84$ $p < .01$. The multiple correlation coefficient of .36 explained that approximately 13% of the variance in TL-IC can be accounted for by the linear combination of the four factors of CQ. While R^2 is statistically significant, its low value indicates a lower practical significance.

Each predictor variable (metacognitive CQ, cognitive CQ, motivational CQ, behavioral CQ) was examined to determine how much it contributed to the prediction of criterion variable. According to the results shown in Table 14, cognitive CQ had an alpha level of less than .05. This indicates that there was a significant positive relationship between cognitive CQ and TL-IC. The regression coefficients of metacognitive, motivational, and behavioral CQ were not significant, $p = .25$, $p = .64$, and $p = .14$ respectively. This suggests that there was no positive and significant relationship between

these three predictor variables and TL-IC. Compared to the other factor, metacognitive, motivational and behavioral CQ were not significant in predicting TL-IS.

Table 14

Contributions of Predictor Variables (N=193)

Variable	Zero-Order r	Partial r	β	SE B	B	t	p
Metacognitive CQ	.29**	.08	.12	.05	.06	1.15	0.25
Cognitive CQ	.31**	.17*	.20	.04	.09	2.42	.02*
Motivational CQ	.20**	-.03	-.04	.05	-.02	-0.46	.65
Behavioral CQ	.28**	.11	.14	.05	.70	1.48	.14

Note. *p < .05, ** p<.01

CHAPTER FIVE: DISCUSSION

Introduction

Effective leadership, specifically defined as transformational leadership, is vital to schools' success (Leithwood & Jantzi, 2005), and research is beginning to demonstrate that transformational leadership leads to positive outcomes in the international school setting (Mancuso et al., 2010). A better understanding of the factors that contribute to and predict transformational leadership in international school leaders is helpful in the selection and training of school leaders. Since international schools leaders work in highly diverse, multicultural contexts and one aspect of effective leadership in multicultural business contexts is cultural intelligence (Alon & Higgins, 2005; Ang & Inkpen, 2008; Deng & Gibson, 2009), cultural intelligence as an important predictor of transformational leadership in international school leaders needed to be examined. In my review of the literature, no empirical studies were found that examined the relationship between cultural intelligence and transformational leadership in international school leaders.

In the present study, international school leaders from a list of International School Services (ISS) and American Sponsored Overseas Schools were surveyed. The online survey included an informed consent, demographic questions, the Cultural Intelligence Scale (CQS), and the Multifactor Leadership Questionnaire (MLQ) 5X. Using standard multiple regression analyses, the ability of the four factors of cultural intelligence to predict the five factors of transformational leadership was examined.

Findings

The results of the research study demonstrated that there is a significant positive relationship between cultural intelligence and transformational leadership in international school leaders and that leaders who are more culturally intelligent also exhibit a more transformational leadership style, which suggests that individuals with high cultural intelligence are able to lead and to manage more effectively in multicultural environments. These findings are consistent with Ang and Inkpen (2008), who ascertained that cultural intelligence is important to effective leadership in multicultural environments. Deng and Gibson (2009) also corroborated this conclusion in their qualitative study of 32 western expatriate managers and 19 local managers in China. The interviews provided evidence that cultural intelligence is a key cross-cultural leadership competency for effective leaders.

When individual cultural intelligence factors were examined, behavioral cultural intelligence and cognitive cultural intelligence were found to be the best predictors of transformational leadership in international school leaders. Previous research suggests a number of reasons why behavioral cultural intelligence and cognitive cultural intelligence were the strongest predictors of transformational leadership**.** Dagher (2010) established that the factors of behavioral and cognitive cultural intelligence have a positive relationship with more effective cultural adaptation. Leaders who have adapted to their multicultural environments may be able to lead in a more transformational style whereas an individual who is struggling to adapt may have to devote more cognitive resources to adaptation and fewer resources to transformational leadership.

In addition, research has found that behavioral and cognitive cultural intelligence are also positively related to increased innovation and multicultural team effectiveness (Elenkov & Manev, 2009; Gregory at al., 2009). Behavioral cultural intelligence has been linked to increased intercultural negotiation effectiveness and task performance (Ang et al., 2007; Imai & Gelfand, 2010). Cognitive cultural intelligence has a positive relationship with cultural judgment and decision making (Ang et al., 2007). These cultural intelligence outcomes are also reflected in the five factors of transformational leadership, suggesting that leaders who encourage innovation and creativity and who are more effective in multicultural teams and intercultural negotiation, task performance, cultural judgment, and decision making would also exhibit more transformational leadership behaviors.

Although the results indicate that behavioral and cognitive cultural intelligence have the most unique contribution to transformational leadership, it is important to evaluate the full correlation of the model and not just the individual predictors (Tabachnick & Fidell, 2007). When considering all four factors of cultural intelligence, results indicated that metacognitive and motivational cultural intelligence were not significant predictors. Metacognitive and motivational correlation may be significant, but this was not evident due to overlap with the four factors of cultural intelligence (Tabachnick & Fidell, 2007).

Transformational leadership style is comprised of five factors: (a) idealized influence (attributed); (b) idealized influence (behavior); (c) inspirational motivation; (d) intellectual stimulation; and (e) individualized consideration (Bass & Bass, 2008; Bass & Riggio, 2006). In addition to the first analysis, the ability of the four cultural intelligence

factors to predict each of the five factors of transformational leadership was also examined**.**

Cultural Intelligence as a Predictor of Idealized Influence (Attributed)

The results of the second analysis indicate there is a significant relationship between cultural intelligence and the transformational leadership factor of idealized influence (attributed) in international school leaders. Idealized influence (attributed) refers to the behaviors that followers attribute to leaders that encourage followers to view them as role models (Bass & Riggio, 2006). This factor of transformational leadership reflects the degree to which leaders are viewed as confident, powerful, and focused on higher-order ideals and ethics (Antonakis et al., 2003). Leaders who are more culturally intelligent also exhibit greater transformational leadership behaviors that followers attribute to them, resulting in greater admiration, respect, and trust for that leader.

The linear combination of the four factors of cultural intelligence (metacognitive, cognitive, motivational, and behavioral) predicts the transformational leadership factor of idealized influence (attributed). There is no single factor of cultural intelligence that is the best predictor of this transformational leadership factor. Individuals with high metacognitive cultural intelligence will use cultural knowledge in order to observe and strategize culturally congruent ways to be viewed as worthy of being a leader. Cognitive cultural intelligence ensures that the attributed transformational leadership behaviors are relevant in various cultural contexts. Influence can either be augmented or mitigated through the display of appropriate or inappropriate verbal and nonverbal behaviors. As important as metacognitive, cognitive, and behavioral cultural intelligence are to

transformational leadership, without sufficient motivation to act, these capabilities are ineffectual.

Cultural Intelligence as a Predictor of Idealized Influence (Behaviors)

There is a significant relationship between cultural intelligence and the transformational leadership factor of idealized influence (behaviors) in international school leaders. Idealized influence (behaviors) are the actions that encourage followers to want to emulate their leaders (Bass & Bass, 2008). These actions are focused on values, beliefs, and a sense of collective purpose (Antonakis et al., 2003). Leaders who are more culturally intelligent also exhibit behaviors that encourage followers to view them as role models.

The results suggest that metacognitive cultural intelligence is the best individual predictor of the transformational leadership factor of idealized influence (behaviors). Metacognitive cultural intelligence is a higher order mental process that speaks to the importance of being aware of the multicultural environment, planning appropriate strategies to interact effectively with others, and checking, revising, and adapting mental schemas to continually improve intercultural interactions (Brislin et al., 2006; Earley & Ang, 2003). These capabilities allow leaders to be able to exhibit culturally appropriate behaviors towards their followers and to be viewed as worthy of being a role model. The empirical research has shown that metacognitive cultural intelligence is positively related to effective cultural judgment and decision making and task performance (Ang et al., 2007, Ramalu et al., 2010). These findings support the idea that leaders who are more competent in tasks and make better cultural judgments and decisions are also viewed by their followers with admiration and respect.

Cultural Intelligence as a Predictor of Inspirational Motivation

The results of the fourth analysis indicate there is a significant relationship between cultural intelligence and the transformational leadership factor of inspirational motivation in international school leaders. Inspirational motivation includes the behaviors that inspire followers to envision an optimistic future, set ambitious goals, and offer encouragement that the vision is achievable (Bass & Riggio, 2006). Leaders with more cultural intelligence also engage in more transformational leadership behaviors associated with the factor of inspirational motivation.

The linear combination of the four factors of cultural intelligence (metacognitive, cognitive, motivational, and behavioral) predicts the transformational leadership factor of inspirational motivation. There is no single factor of cultural intelligence that best predicts this transformational leadership factor. Individuals who are high in metacognitive cultural intelligence will be able to actively evaluate the transformational leadership behaviors that they desire to engage in to ensure that they will actually be received as motivational and culturally appropriate. Cognitive cultural intelligence allows for leaders to know what is valued and consistent with a particular culture to be able to inspire and motivate in a culturally congruent manner. Individuals with high behavioral cultural intelligence are able to display culturally appropriate actions and are flexible in their use of verbal and nonverbal behaviors in order to be viewed as motivating and inspirational. Motivational cultural intelligence is the interest and drive to be successful when interacting cross-culturally and is a critical factor in being able to sustain encouragement toward followers to achieve ambitious goals even when faced with adversity.

Cultural Intelligence as a Predictor of Intellectual Stimulation

There is a significant relationship between cultural intelligence and the transformational leadership factor of intellectual stimulation in international school leaders. Intellectual stimulation is the transformational leadership behaviors that challenge followers to be innovative, creative, and to reframe difficult problems to find solutions (Bass & Bass, 2008). Leaders who score higher in cultural intelligence also exhibit more transformational leadership behaviors associated with intellectual stimulation.

The results suggest that behavioral cultural intelligence is the best individual predictor of the transformational leadership factor of intellectual stimulation. Previous research gives some possible indications of why high behavioral cultural intelligence is associated with greater measures of intellectual stimulation. Elenkov and Manev (2009) found that behavioral cultural intelligence has a strong effect on rate of innovation in multinational expatriate business managers. This study supports the premise that leaders with high behavioral cultural intelligence encourage followers to be creative and innovative. One way behavioral cultural intelligence does this is by facilitating the correct communication of thoughts and ideas (Earley & Ang, 2003). The results from the Imai and Gelfand (2010) study indicated that behavioral cultural intelligence has a positive relationship with intercultural negotiation effectiveness. The results from the present study support their finding; those with high behavioral cultural intelligence are capable of interacting effectively in culturally diverse situations through a flexible repertoire of verbal and nonverbal behaviors, which is important for encouraging followers to reframe difficult problems to find solutions.

Cultural Intelligence as a Predictor of Individualized Consideration

There is a significant relationship between cultural intelligence and the transformational leadership factor of individualized consideration. Individualized consideration is the actions of a leader which advise, support, and focus on the individual needs of followers and facilitate their growth in reaching higher levels of potential (Antonakis et al., 2003). Leaders who are more culturally intelligent also create a supportive climate and recognize the importance of individual needs, desires, and differences.

The results suggest that cognitive cultural intelligence is the best individual predictor of the transformational leadership factor of individualized consideration. Gregory et al. (2009) found that cognitive cultural intelligence was an important factor in multicultural team effectiveness by developing trust, mutual understanding, and effective conflict resolution, which are all germane factors of individualized consideration. The results of the present study support the importance of cognitive cultural intelligence in effective interpersonal interactions. Cognitive cultural intelligence is knowledge about culture and how it impacts intercultural interactions (Ang et al., 2007). The knowledge of cultural systems, norms, and values allows leaders to be considerate of the individuality of their followers. Individuals with high cognitive cultural intelligence understand the similarities and differences across cultures and are able to have more accurate expectations and interpretations of events, all of which lead to the increased ability to focus on the individual needs of their followers. As the cognitive cultural intelligence of a leader increases, so does the utilization of behaviors that facilitate growth in their followers.

Theoretical Implications

Findings suggest a number of theoretical implications from this study. The nomological network of cultural intelligence can be described by four major relationships: distal factors, intermediate or intervening variables, other correlates, and situational factors (Ang & Van Dyne, 2008). As a relatively "young" construct in the field of cultural competence, empirical evidence and the subsequent expansion of the nomological network is particularly valuable (Gelfand et al., 2008). The findings contribute to the nomological network of cultural intelligence by identifying which factors of cultural intelligence best predict transformational leadership and its constituent factors**.**

The four factors of cultural intelligence significantly predicted transformational leadership and all five factors of transformational leadership in international school leaders. In terms of individual predictors of cultural intelligence and the five factors of transformational leadership, there were three significant relationships. The factor of metacognitive cultural intelligence was identified as best predicting the transformational leadership factor of idealized influence (behaviors). The transformational leadership factor of intellectual stimulation was best predicted by the factor of behavioral cultural intelligence. Cognitive cultural intelligence was the best individual predictor for the transformational leadership factor of individualized consideration. This study also answers the challenge to view cultural intelligence as a multidimensional construct and to investigate what specific dimensions of cultural intelligence have relevance to different outcomes (Ang et al., 2007).

The majority of research on the construct of cultural intelligence has been in the area of conceptual theorizing. Empirical evidence is needed to support these articles (Ang et al., 2007). This study provides empirical evidence for the importance of cultural intelligence in international school leaders by relating the comparably new construct of cultural intelligence with the well established construct of transformational leadership. The literature base for transformational leadership is robust (Gardner et al., 2010; Wang et al. 2011); however, this study adds to the nomological network of transformational leadership by identifying behavioral and cognitive cultural intelligence as specific factors in predicting transformational leadership in international school leaders. The study also identified metacognitive, behavioral, and cognitive cultural intelligence as being the best individual predictors for the transformational leadership factors of idealized influence--behaviors, intellectual stimulation, and individualized consideration, respectively.

Practical Implications

Since cultural intelligence been shown to lead to more effective leadership, it follows that cultural intelligence should be an important consideration in selecting international school leaders and in the training and professional development of international school leaders. Additionally, consideration should be given to integrating cultural intelligence into higher education curriculum and into domestic educational contexts.

Selection of International School Leaders

Organizations use the basic mechanism of selection to ensure that the right personnel are in the right positions (McCall & Hollenbeck, 2002). Selection for overseas assignments has been predominantly based upon technical competence and job

knowledge and not interpersonal factors such as cultural intelligence (Sinangil & Ones, 2001, van Woerkom & de Reuver, 2009). This study provides evidence that interpersonal skills such as cultural intelligence should also be considered as an important criterion in the selection of international school leaders (Templer et al., 2006; van Woerkom & de Reuver, 2009). The inclusion of an assessment of cultural intelligence should be part of the application process in the hiring of school personnel. Ideally, selection of leaders would take into consideration technical competence, job knowledge, and interpersonal skills. However, if there is an absence of the interpersonal competence necessary for a cross-cultural assignment, leaders and those selecting leaders should be encouraged to know that the cultural intelligence component is trainable.

Training International School Leaders

The primary focus of intercultural competence training has been in the area of cultural knowledge (Earley & Peterson, 2004). The emphasis on knowing different cultural systems, norms, and values corresponds to the cognitive factor of cultural intelligence. While valuable, this approach fails to recognize the importance of the other three factors of metacognitive, motivational, and behavioral cultural intelligence. Cultural intelligence emphasizes developing a broad framework of understanding, skills, and behaviors needed to engage a culturally diverse world rather than focusing on specific knowledge or behaviors for a particular country or culture (Earley & Ang, 2003; Livermore, 2010).

This study provides empirical evidence that training for intercultural competence for international school leaders should focus on all four factors of cultural intelligence.

Cultural intelligence is based on state-like individual capabilities as opposed to trait-like individual differences like personality characteristics (Ang et al., 2006). As a multidimensional construct, these four factors are malleable and able to be strengthened through a variety of training methods (Ang et al., 2007; Earley & Peterson, 2004; Ng, et al., 2009; Rockstuhl, Hong, Ng, Ang & Chiu, 2010).

Metacognitive cultural intelligence can be increased by cognitive structure analysis that systematically examines tacit assumptions and beliefs about self, others, and the world (Tan & Chua, 2003). The use of reflective journaling to document cross-cultural experiences is helpful for enhancing awareness and reflection. Metacognitive cultural intelligence can also be developed by engaging in active planning before a cross-cultural encounter (Livermore, 2010). Cognitive cultural intelligence can be addressed through the use of interventions that focus on the learning of culture-specific knowledge. The Culture Specific Assimilator model is one training intervention that can increase cognitive cultural intelligence (Earley & Peterson, 2004).

Motivational cultural intelligence can be enhanced through the development of self-efficacy. One method of building confidence is through initial mastery experiences. Individuals are encouraged to focus on several simple cultural experiences that are especially salient to them. For example, how to get on or off public transportation, purchase a cup of coffee, or buy a newspaper. Once these rituals are established, self-efficacy can provide the necessary motivation to accomplish even greater cultural challenges (Earley & Peterson, 2004). Another intervention for encouraging motivational cultural intelligence is calculating the personal and organizational cost of not being culturally intelligent (Livermore, 2010; Roberts, 2010).

The use of role play and simulations in dramaturgical exercises can be used to develop behavioral cultural intelligence (Tan & Chua, 2003; Griffer & Perlis, 2007). Individuals are encouraged to have a holistic focus toward learning the nuances of behavior and actions and utilizing cognitive, sensory, emotional, and physical processes (Earley & Peterson, 2004; Hill, 2006). Behavior modification that rewards target culture behaviors and sanctions culturally inappropriate behaviors can be used to increase behavioral cultural intelligence (Tan & Chua, 2003).

Training programs must begin with a preassessment of the individual's cultural intelligence strengths and weaknesses. This information allows training to target specific cultural intelligence factors (metacognitive, cognitive, motivational, and behavioral) and tailor intervention to individual needs (Earley & Peterson, 2004). Training programs can take a number of formats. Professional development days can be used to raise awareness of cultural intelligence. A week-long training program allows for needed factors of cultural intelligence to be strengthened more deeply. Seminars can also be conducted throughout the school year as part of ongoing professional development.

While there are a variety of training interventions, methods, and formats that target specific factors of cultural intelligence, it is important that developing cultural intelligence transcends formal training programs and becomes part of lifelong learning**.** The four stage learning process based on the experiential learning theory (Kolb, 1984) has been proposed to allow ongoing learning to occur. It is a model for global leaders to maximize leadership effectiveness across cultures (Deng & Gibson, 2009; Ng et al., 2009). The four stage learning cycle entails concrete experiences, reflective observation, abstract conceptualization, and active experimentation (Kolb, 1984). This process of

experiencing, reflecting, conceptualizing, and experimenting is ongoing and has a synergistic relationship to the four factors of cultural intelligence (Ng et al., 2009).

The literature has identified a number of creative ways to develop cultural intelligence through the use of technology. Virtual world technologies like Second Life offer authentic immersion experiences of interacting in a specific cultural context without actually traveling to that country (Siegel, 2010). Another creative way to encourage the development of cultural intelligence is through the use of film. Films can be a valuable tool for enhancing cultural intelligence as they can be visually engaging and simulate intercultural interactions (Livermore, 2010; Smith et al., 2010).

Technology can also be helpful in providing international school leaders with training that would otherwise be difficult or impossible due to their geographic locations. It allows for cultural intelligence training to be conducted regularly rather than relying upon a live expert to deliver content via a seminar once a year. The internet can be used to provide training online. Video-based instruction has shown higher retention rates in comparison with traditional text-based instruction (Chang & Smith, 2008; Choi & Johnson, 2005). Globalization has increased the need for cultural intelligence, and technology has the ability to synergize the multiple training methods and formats available to address this need.

Integrating Cultural Intelligence into Higher Education Curriculum

The training interventions discussed above can be applied while international school leaders are functioning in their positions. However, it is equally beneficial to integrate cultural intelligence training into higher education, specifically educational leadership curriculum. Cultural intelligence training is being applied in the domain of

management education with Master of Business Administration students (Smith et al., 2010). Cultural intelligence is also being integrated into the curriculum for education pre-service speech-language pathologists and educators (Griffer & Perlis, 2007; Westby, 2007). The findings of this present study that cultural intelligence leads to more effective leadership for international school leaders suggests the value of integrating cultural intelligence into higher education curriculum for educational leaders.

Domestic Application of Cultural Intelligence

The context for the study was international schools; however, the insights gained for international school leaders can inform domestic school leaders in settings that are characterized by cultural diversity (Murakami-Ramalho, 2008; Walker & Shuangye, 2007). The US educational school system will see minorities increase to the extent that minority and majority children will be equal by 2023 (United States Census Bureau, 2008). Singapore has intentionally arranged their educational system to ensure that Indian, Chinese, Malayan, and Eurasian students are all able to succeed educationally (Walker & Dimmock, 2005). Multicultural contexts are not just found in international schools but also in national school systems (Murakami-Ramalho, 2008; Walker & Shuangye, 2007; Westby, 2007). It would behoove domestic school leaders to consider the importance of cultural intelligence.

Limitations

Despite useful findings and theoretical and practical implications, limitations exist. This study used a correlational research design, which is useful in determining relationships, assessing consistency, and prediction. However, the results are not indicative of a cause and effect relationship (Tabachnick & Fidell, 2007). The

relationship between cultural intelligence and transformational leadership in international school leaders is statistically significant; however, it cannot be determined from this study that cultural intelligence causes transformational leadership.

Another limitation is in the use of self-report assessments to measure the constructs of cultural intelligence and transformational leadership. The use of a web-based survey may lead participants to be more candid in their self disclosure of intercultural capabilities and leadership behaviors (Granello & Wheaton, 2004; Van Selm & Jankowski, 2006). However, there is still the limitation of using self-report scales as they rely on the fidelity of the participants.

The use of numeric scales to quantify data on constructs such as cultural intelligence and leadership styles allows for quantitative data analysis techniques like multiple regression analysis to be employed. However, an important limitation to note is the attempt to calculate numerical correlations for qualitative data such as cultural intelligence and transformational leadership style.

A number of limitations can be attributed to the two instruments used in the survey. The multifactor leadership questionnaire (MLQ) 5X has been used extensively in research. However, the first question regarding transactional leadership was considered offensive by one participant. The survey asked participants to judge how frequently the descriptive statement applied to them. The first question asked participants if they provide others with assistance in exchange for their efforts. While participants are able to answer “Not at all,” the question may have been so contrary to their leadership style as to set them on edge or color their opinion of the rest of the survey. The cultural intelligence scale (CQS) is a valid and reliable measure and was piloted in two different countries. It

has been used for research in several different countries; however, a number of participants commented on the ambiguity and lack of clarity of some of the items.

The online survey was administered during the last two weeks in May and the first week in June, which could also be viewed as a limitation. The majority of international schools were concluding the school year or were finished by the last email invitation. A number of participants commented that the timing of the survey at the end of the school year was not ideal. This study used surveys to gather data from participants and participants who did not respond to the survey were not accounted for. Therefore, the limitation of non-ignorable non-response, specifically unit non-response, should be considered when making inferences from the results of this study (King, Honaker, Joseph & Sheve, 1998).

The thorough description of the sample and context of the study endeavored to address the external validity of the results. However, one final limitation is that the generalizability of the results is limited to international school leaders. Specifically, the results apply to leaders from International School Services schools and American-sponsored overseas schools.

Recommendations for Future Research

The limitations denoted above suggest needed areas of research. The limitation of the correlation research design can be mitigated with an experimental research design. Further research studies of both quantitative and qualitative paradigms on the constructs of cultural intelligence and transformational leadership in international school leaders would be helpful in broadening the research base and triangulating the data (Tabachnick & Fidell, 2007). A specific recommendation would be to implement a rigorous

experimental research design in which a control group would be used to evaluate the effects of cultural intelligence training. One group would receive cultural intelligence training whereas the control group would not receive any cultural intelligence training. Future research could also examine the possibility of a common personality variable that makes one strong in both cultural intelligence and transformational leadership.

The limitation of the use of self-report assessments can be addressed through 360 reviews of international school leaders with objective feedback from multiple sources, including superiors, followers, parents, boards of directors, community members, etc. In addition to the use of the CQS and MLQ, interviews, observational methods, and artifact analysis could be used in gaining a deeper understanding of cultural intelligence and transformational leadership in international school leaders (Bass & Riggio, 2006). The additional use of an external measurement of success and effectiveness such as academic achievement scores could also be used in determining the effectiveness of school leaders.

While a number of the participants commented that the timing of the survey was not ideal, the response rate of 40% is almost double the expected response rate for a survey of this nature (Shih & Fan, 2008). One participant commented that an interesting area of study would be the dynamics of getting educators to respond to research surveys.

This study could also be replicated with different sample populations such as United States school leaders or other international school organizations to enhance the generalizability of the results. Research has indicated that factors such as employment and education abroad influence cultural intelligence (Crowne, 2008). It would be beneficial to investigate other factors that may impact cultural intelligence such as years

of experience, gender, nationality, or leaders' classification as a Third Culture Kid **(**Pollock & Van Reken, 2001; Useem & Downie, 1976).

Conclusion

Historically, the field of educational leadership studies has suffered from a lack of longevity of research foci (Leithwood & Jantzi, 2005). Against this backdrop, the significant corpus of research in the domain of transformational school leadership that has accumulated over the last 20 years is impressive. What is needed is not simply another adjective preceding the term leadership but rather further empirical support to clarify the nature, causes, and consequences of transformational school leadership (Leithwood & Jantzi, 2005).

Transformational leadership represented a seminal shift in the domain of leadership and transformed the field of leadership studies (Antonakis et al., 2003; Bass, 1993; Hunt, 1999). The construct of cultural intelligence has the opportunity to transform the field of intercultural competency in the same way that transformational leadership did for leadership studies.

The domain of cultural competence suffers from *jingle and jangle fallacy* (Kelley, 1927) in which constructs are labeled similarly yet are different conceptually, and other constructs share comparable meanings but are labeled differently (Gelfand et al., 2008). While a relatively new construct, cultural intelligence offers parsimony, theoretical synthesis and coherence, and theoretical precision; identifies missing cultural competencies; and connects research across disciplinary borders (Ang et al., 2007; Gelfand et al., 2008). Further empirical studies are needed in order to provide the domain

of cultural intelligence as broad a foundation of research as transformational leadership now possesses.

This study has added to the nomological network of cultural intelligence and transformational leadership by investigating which factors of cultural intelligence best predict transformational leadership and its constituent factors. The results indicated that there is a significant positive relationship between cultural intelligence and transformational leadership in international school leaders. Cultural intelligence leads to more effective leadership in international school leaders.

The four factors of cultural intelligence significantly predicted transformational leadership and all five factors of transformational leadership in international school leaders. In terms of individual predictors of cultural intelligence and the five factors of transformational leadership, there were three significant relationships. The results identified metacognitive, behavioral, and cognitive cultural intelligence as being the best individual predictors for the transformational leadership factors of idealized influence--behaviors, intellectual stimulation, and individualized consideration, respectively.

The study also establishes the importance of cultural intelligence in international school leaders by linking the relatively new construct of cultural intelligence with the "classical" construct of transformational leadership. The conclusion that cultural intelligence leads to more effective leadership demonstrates that cultural intelligence should be an important consideration in selecting international school leaders, in training and professional development of international school leaders, in integrating cultural intelligence into higher education curriculum, and in domestic educational contexts. It is hoped that this research will encourage international school leaders to consider the

construct of cultural intelligence in the interest of effectively leading tomorrow's global leaders.

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APPENDICES

APPENDIX A

Institutional Review Board Approval Letter

Good Morning Emerson,

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. Attached you'll find the forms for those cases.
Thank you for your cooperation with the IRB and we wish you well with your research project. We will be glad to send you a written memo from the Liberty IRB, as needed, upon request.

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

APPENDIX B

Institutional Review Board Application

9/07 **RESEARCH EXEMPTION REQUEST** Ref. # _____

Liberty University
Committee On The Use of Human Research Subjects

1. Project Title: Intercultural effectiveness and transformational leadership in international school leaders

2. Please list all sources of funding. If no outside funding is used, state "unfunded":
unfunded

3a. Principal Investigator(s) *[Must be a Liberty faculty member or investigator authorized by the Chair of the Institutional Review Board. If a student is the principal investigator, the student must have a faculty sponsor. Include contact information for both the student and the faculty sponsor as appropriate]*:

Name and Title	Phone, E-mail, correspondence address
Emerson Keung	ekkeung@gmail.com

3b. Faculty Sponsor

Name and Title	Phone, E-mail, correspondence address
Dr. Amanda Rockinson-Szapkiw, Chair of Doctoral Research, Assistant Professor	School of Education, 434-582-7423, aszapkiw@liberty.edu

Liberty University, 1971 University Drive Lynchburg, VA 24503

Anticipated Duration of Study: _May 2011 to August 2011__

From To

4. Are you affiliated with Liberty University? YES ☒ NO ☐

If so, in what capacity? EdD Candidate - School of Education

5. 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 6.

YES ☐ NO ☒

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

6. Briefly describe the purpose of the study.

Globalization is a reality that is facing educational institutions, businesses, and both government and non-government organizations. International schools are a microcosm of the globalization that is occurring throughout the world. There is a lack of research in the area of international schools, particularly about international school leaders.

This study seeks to discover if there is a relationship between intercultural effectiveness and transformational leadership in international school leaders and if so, what aspect**(s)** of intercultural effectiveness best predicts transformational leadership in international school leaders.

This understanding would be helpful in the selection and training of leaders in international schools. It may also lead to insights for leadership in domestic contexts characterized by cultural diversity.

7. Provide a lay language description of the procedures of the study. Address ethical issues involved in the study (See the Avoiding Pitfalls in section of the IRB website for helpful suggestions) and how you will handle them. For example, consider issues such as how subject consent will be obtained (or explain why the study meets waiver guidelines for informed consent), how the data will be acquired, and how the data will be stored confidentially once it is collected. Please attach pertinent supporting documents: all questionnaires, survey instruments, interview questions and/or data collection instruments, consent forms, and any research proposal submitted for funding.

A list of participants and their email addresses will be obtained from the websites of International School Services and American Sponsored Overseas Schools. The director that is listed for each international school will be chosen as a participant.

An initial email will be sent to the director of each school requesting their voluntary participation in the study. The letter will request that the director or other person in leadership, (e.g. the director, a principal, vice principal, head of department, level coordinator) complete the online survey. The initial email will also contain a cover letter outlining the purpose of the study, confidentiality information, who to contact with questions, and the link for the online survey. After one week, a reminder email will be sent out to each school director**.** After two weeks, one final email will be sent out. After three weeks, a phone call will be made to school directors that have not responded. This process is adapted from the process suggested by Dillman (2007).

The online survey will include an informed consent, questions regarding demographics, the cultural intelligence scale, and the multifactor leadership questionnaire form 5X. The letter of informed consent will be hosted via the online survey system. The informed consent will need to be completed before the participant can complete the survey. The informed consent will be followed by the statement, "Signing my name digitally below indicates that I have read the description of the study and I agree to participate." This process will not produce a physically signed consent form for the researcher to maintain as part of the research records.

No individual monetary incentives will be utilized in exchange for filling out the survey; however, survey participants may add their name and contact information at the end of the survey to be entered into a random draw for a $50 USD gift certificate from a vendor of their choice. This data for the drawing will be removed from the survey data upon download in order to ensure anonymity of participants.

The study will have minimal risk; participants should neither have any more emotional or physical stress than might be encountered in daily life nor be put at financial, reputational, or legal risk. Questions regarding intercultural interactions would be customary in the culturally diverse context of an international school. Questions regarding leadership style would also be typical for those in formal leadership roles.

The online survey system used will be Survey Monkey and the data will be anonymous. The results from the online survey will be downloaded for statistical analysis. Internet Protocol (IP) addresses will not be collected. Demographic information will not lead to ability to identify participants. The large sample (500- 1,000) size and the general use of one leader rather than a specific position such as “the principal” also helps with anonymity. Data collection will not involve audio, video, digital, or image recordings. The project participants will be adults and will not involve a special population.

Data will be kept for seven years on a password protected computer system and then deleted. Hard copies will be shredded after three years. Results will be used for publication and presentation purposes. To ensure anonymity a number of safeguards in handling data will be employed. Data coding will involve the use of numbers to identify schools and results. Locked data storage for hard copies will be implemented by the use of a locked file cabinet. There will be separate locked code book storage. In regards to

computer files, password protection will be used for computer files. Up to date anti virus and firewall protection will be used. A virtual private network (VPN) will be used to safeguard data. Physical transfer of files through public areas will make use of True Crypt encryption software as another layer of added protection in case of theft.

Survey data will also be kept by the company Survey Monkey. The data center is located in the United States and is monitored and staffed 24 hours/7 days a week. Security is maintained by security guards, visitor logs, pass cards, and biometric recognition. Servers are also in locked cages.

8. Will subject's data be gathered anonymously? YES ☒ NO ☐

9. Please describe the subjects you intend to recruit. For example, minors under age 18, adults 18 and over, students, etc. Also, please describe your recruitment procedures. How will you find participants for your study? How will you contact them? Please be explicit.:

Participants will be adults over the age of 18 that are international school leaders in a formal leadership role. The maximum number of subjects for approval will be 1,000. International school leaders will be recruited through a convenience sample using a listing of all the international schools from International School Services (ISS) website and American Sponsored Overseas Schools (A/OS) website.

An initial email will be sent to the director of each school requesting their voluntary participation in the study or that a person in leadership, (e.g. i.e., the director, a principal, vice principal, head of department, level coordinator), complete the online survey. The email will also include clear information regarding the study, assurance that participation is voluntary, and contact information in case of any questions or concerns.

APPENDIX C

Informed Consent

Online Survey

You are invited to be part of a research study that is examining the relationship between intercultural effectiveness and leadership styles in international school leaders.
You were selected as a possible participant because you may fit the criteria for this study (i.e., position of leadership in an international school). Your participation in this research study will be helpful in the selection and training of leaders, and lend insight into effective leadership in international schools.

This informed consent outlines the facts, implications, and consequences of the research study. Upon reading, understanding, and signing this document, you are giving consent to participate in the research study.

Researcher:
Emerson Keung, Liberty University

Inquiries:
The researcher will gladly answer any inquiries regarding the purpose and procedures of the present study. Please send all inquiries via email to Emerson at ekkeung@gmail.com

Procedures:
You are being asked to complete an online instrument consisting of 60 questions including questions about demographics, intercultural effectiveness and leadership style. The instrument will be completed online and located on Survey monkey. The length of time needed to complete the online assessment is estimated at 15 - 20 minutes. Participation is voluntary. The researcher will take precautions to protect participant identity by not using the names of participants in his results or writing. The researcher will use the assessment results for publications and presentation purposes.

Participant Risks:
There are no foreseeable risks for taking this survey more so than what you would encounter on a daily basis. It might be possible, as a result in participating in this survey, that you would have more of an awareness of unpleasant thoughts associated with intercultural interactions and/or leadership styles. The study may involve additional risks to the participant, which are currently unforeseeable.

Participant Benefits:
Participants may benefit from increased understanding of intercultural interactions and leadership styles. Participants may gain further understanding and practical information that may be applicable to future comparable experiences. The potential publication of the

findings of this study may prove beneficial in the selection and training of international school leaders.

Compensation:
Participants will not receive any financial compensation for participation in this study.

Confidentiality:
The researchers will take precautions to protect participant identity by not linking survey information to participant identity. The researcher will not identify participants by name.

The survey will be located on Survey Monkey. Data are stored on the server and kept in a password-protected database and are not shared with anyone. It is conceivable that engineering staff at the web hosting company may need to access the database for maintenance reasons.

The researchers will store all research documentation using password-protected documents for the duration of seven years. Any hard copies of the data will be stored in a locked filing cabinet and shredded at the end of three years.

Voluntary Participation:
Participation in this study is voluntary and you may withdraw at any time without penalty.

Statement of Consent:
Liberty University, 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 one of the researchers listed above.

If I have any questions about rights or this form, I should contact the current IRB chair for Liberty University, Dr. Fernando Garzon, Liberty University, IRB Review, 1971 University Blvd., Lynchburg, VA 24502.

APPENDIX D

Participant Letters

Initial Email to Participant

Dear [School Leader],

International schools are a microcosm of the globalization that is occurring throughout the world. Surprisingly, however, not a lot of research has been conducted on international schools.

I am writing to ask your help in advancing the research on international schools, specifically in a study of intercultural interactions and leadership styles in international school leaders. You were selected as a possible participant because of your position of leadership. This information will be helpful in the selection and training of leaders, and lend insight into effective leadership in international schools.

The survey contains less than 60 multiple choice questions and takes approximately 15 – 20 minutes to complete.

Would you or another person in leadership, i.e., a principal, vice principal, head of department, level coordinator, or similar position that is formally designated by the school, kindly complete the online survey?

This email can be forwarded to the appropriate person. Just **one** response is needed from your school. The survey will close in three weeks – Tuesday, June 14, 2011

All answers are completely anonymous. This survey is voluntary and is part of my doctoral dissertation. Participants may withdraw at any time without penalty. This study is being conducted under the guidance and supervision of Dr. Amanda Rockinson-Szapkiw, aszapkiw@liberty.edu.

To participate, please go to:

http://www.surveymonkey.com/s/KEUNGB?c=390

As a small token of my appreciation, participants may respond by having their names entered into a random draw for a $50 USD gift certificate from a vendor of their choice.

If you have any questions or comments, please feel free to contact me at ekkeung@gmail.com

Thank you for your time and consideration,

Emerson Keung

Doctoral Candidate
Liberty University
School of Education

Second Email to Participant

Dear [School Leader],

I am writing to ask your help in advancing the research on international schools, specifically in a study of intercultural interactions and leadership styles in international school leaders.

The survey contains less than 60 multiple choice questions and takes approximately 10 – 15 minutes to complete.

Would you or another person in leadership, i.e., a principal, vice principal, head of department, level coordinator, or similar position that is formally designated by the school, kindly complete the online survey?

This email can be forwarded to the appropriate person. Just **one** response is needed from your school. The survey will close in two weeks – Tuesday, June 14, 2011. This survey is voluntary and participants may withdraw at any time without penalty.

To participate, please go to:

http://www.surveymonkey.com/s/KEUNGA?c=064

Thank you,

Emerson Keung

Doctoral Candidate
Liberty University
School of Education

Final Email to Participant

Dear [School Leader],

I am resending this email as I have received feedback that some of my initial emails did not reach their intended recipients.

I realize that this request comes at a very busy time of the year. I had planned to conduct the research much earlier but a number of circumstances arose that pushed the survey launch date.

To the best of my knowledge, your school year has ended but if not please do not worry about completing the survey.

A number of surveys have been completed and we believe the results will be useful in the selection and training of leaders in international schools and in understanding how leadership impacts effective schools.

The study will close shortly – Tuesday, June 14.

Would you or another person in leadership kindly complete the online survey?

This email can be forwarded to the appropriate person. Just **one** response is needed from your school.

To participate, please go to:

http://www.surveymonkey.com/s/KEUNGB?c=417

All answers are completely anonymous. This survey is voluntary and participants may withdraw at any time without penalty.

Thank you for your time and consideration.

Trust that the school year ended well.

Emerson Keung

Doctoral Candidate
Liberty University
School of Education