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The Relationship Between Cultural Intelligence and Work Outcomes of Expatriates in China

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This is to certify that the doctoral study by

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2015

Abstract

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by

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M.Ed, Masters in Education, Temple University, 2010

MBA, International Business & Marketing, La Salle University, 2003

BA, Economics & International Studies, La Salle University, 1999

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

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Abstract

International assignment failures cost an organization roughly 3 to 4 times an expatriate's annual salary with the most expatriate failures cited for work assignments in China. Previous scholarly research identified cultural intelligence (CQ) as being influential to expatriate work outcomes. The purpose of this correlational study was to examine the relationships among a subset of CQ predictor variables and work outcome related dependent variables. Quantitative analysis regarding the relationship between CQ and work outcomes for U.S. nationals working in China does not currently exist in the scholarly research. Improvement of expatriate work outcomes and reduction of failed assignment costs is the intention. The study included self-reported measurements collected via online surveys from 88 U.S. nationals with work experience in China. Pearson correlation test results and multiple linear regression analysis indicated significant predictive relationships between CQ and work performance ($F(4, 83) = 8.202$, $p < .001$, adjusted $R^2 = .249$) and between CQ and job satisfaction ($F(4, 83) = 3.522$, $p < .05$, adjusted $R^2 = .104$). Motivational CQ had a statistically significant predictive power for work performance and job satisfaction. These findings suggest that the CQ construct may help to assess expatriate assignment readiness. The social change implications of this study include the utilization of CQ in better identification, selection, and training of employees for international assignments; improvement of expatriate work outcomes; reduction of expatriate turnover; and reduction of expatriate assignment costs.

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Dedication

To my husband, George, and two beautiful daughters, Mia and Allison. You motivate me on a daily basis to be a better wife, mother, and person. Obtaining this degree would not have been possible without all of the shared sacrifices we made. Thank you for your continued encouragement, love, support, hugs, and kisses. It helped to carry me through the most challenging times. I dedicate this to you, with all my love.

Acknowledgments

I would like to thank Dr. Godwin Igein, my doctoral study chair, for his continual support and guidance throughout this process. Your encouragement helped to keep me going when I wanted to stop. I would also like to thank the other members of my committee, Dr. Wilton Heyliger, Dr. Douglas Campbell, Dr. Reginald Taylor, Dr. Cheryl Lentz, and Dr. Freda Turner, as well as my various course peers at Walden, for their feedback and tireless pursuit of excellence. All of you encouraged me to continually demonstrate high scholarly standards and also taught me to have a lot of patience.

I would also like to thank all of the expatriates that participated in my study. I have been genuinely humbled by the outpouring of support and participant feedback that helped to improve my study. As a previous expat, who had some challenging experiences, I am happy to be part of some data-driven recommendations that can identify ways to better support the greater expat community. I would also like to thank the researchers that gave me permission to use and modify their survey scales.

Finally, I would like to thank my family and friends for their unwavering support and encouragement. Thanks for being there with me through the highs and lows of this process. I need to specifically recognize my husband, George; daughters, Mia and Allision; my mother, Danuta, late father, Miroslaw; sister, Lela; brother, Chris; my grandmother, Babcia Heronima; my uncle, Tolek; and my in-laws, Marianne and George. You have all provided me with varying levels of support along the way. I could not have accomplished this without all of your help. I love you all so very much!

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Section 1: Foundation of the Study

The United States State Department estimated 6.32 million Americans live abroad (Reker, Cico, & Mehmood, 2012), with the Chinese Census Bureau reporting that over 70,000 United States nationals worked in China as of 2010 (MacLeod, 2011). McEvoy (2011) estimated international assignments cost companies approximately three to four times an expatriate's salary, with China cited as having the most failures (Brookfield, 2012). Expatriate failure is a measure of the level of maladjustment, psychological withdrawal in a host country environment, unsatisfactory work performance during an assignment, and/or premature return of the assignment (Olsen & Martins, 2009). Expatriates are employees sent to live and work outside their native country for a designated amount of time (Lee & Donohue, 2012; McEvoy, 2011). The goal of this study was to examine sub-dimensions of cultural intelligence (CQ) including: (a) cognitive CQ, (b) metacognitive CQ, (c) motivational CQ, (d) behavioral CQ against the potential relationship between factors relating to expatriate work outcomes such as work adjustment, performance, effectiveness, and job satisfaction.

Chen, Lin, and Sawangpattanakul (2011) reported scarce quantitative data regarding potential relationships between the dimensions of CQ and work outcomes for expatriates working in China. The identification of such factors is beneficial in determining assignment readiness and additional expatriate identification, training, and support program needs (Chen et al., 2011; Varma, Pichler, Budhwar, & Kupferer, 2012; Zhang, 2013). Improvement in the factors identified in the study could decrease costs,

improve expatriate work outcomes, and improve cross-cultural communication in international business (Collins & Kriz, 2013; Gunkel, Schlägel, & Engle, 2014; McNulty, De Cieri, & Hutchings, 2013; Tait, De Cieri, & McNulty, 2014; Varma et al., 2012).

Background and Problem

Central banks and statistical offices around the world estimated that China had foreign direct investment inflows of $253 billion for 2012, based upon a gathered balance of payments statistics (Organisation for Economic Co-operation and Development [OECD], 2013). Foreign direct investment figures include the use of expatriates (Peng, 2012a). In a related study, Brookfield (2012) indicated that China has the highest number of expatriate failures. The future success of multinational corporations (MNC) relies on, in part, the identification, training, and support programs for expatriates (Gunkel et al., 2014). Tungli and Peiperl (2009) estimated up to 6% of international assignments end in premature returns, but this low percentage does not include failures associated with substandard work outcomes, inadequate cross-cultural adjustment, and turnover. Researchers identified expatriate identification, training, and support programs as potential success factors to overseas assignments (Adams, Srivastava, Herriot, & Patterson, 2013; Froese & Peltokorpi, 2011; Min, Magnini, & Singal, 2013; Zhang, 2013).

The early termination and failure of expatriate assignments causes significant financial losses; with each failure costing an organization, roughly US $200,000 (Tungli & Peiperl, 2009) or three to four times greater than their annual salary (McEvoy, 2011).

These early termination cost estimates do not include (a) the additional indirect costs associated with inadequate work outcomes, (b) failures for partnering organizations, (c) host country nationals, and (d) personal losses experienced by expatriates and their respective family members (Tungli & Peiperl, 2009). Previous scholarly research included the following factors as being influential to expatriate work outcomes: cultural intelligence and cross-cultural training (Lee & Sukoco, 2010; Malek & Budhwar, 2013; Okpara & Kabongo, 2011; Rehg, Gundlach, & Grigorian, 2012; Ward, Wilson, & Fischer, 2011). Researchers suggested the use of cultural intelligence scores to assess candidate identification and selection criteria; to determine additional requirements for cross-cultural training, organizational support, mentoring, and repatriation support; improvement of cross-cultural adjustment; and work outcomes are the intention (Fischer, 2011; Huff, 2013; Mahajan & De Silva, 2012).

Selmer and Lauring (2013) identified the following factors as related to expatriate work outcomes: work adjustment, work performance, work effectiveness, and job satisfaction. A study of potential relationships between expatriate work outcomes and cultural intelligence is beneficial in determining assignment readiness and needs for additional identification, training, and support programs. Leaders of MNCs who can identify appropriate staffing and training needs of expatriates may potentially reduce costs associated with failed assignments (McNulty et al., 2013; Minter, 2011; Peng & Beamish, 2014; Tharenou, 2013). International business school programs may benefit

from research identifying areas to strengthen the existing education of aspiring expatriates (Kim & Egan, 2011).

Problem Statement

McEvoy (2011) estimated each expatriate employee failure costs an organization roughly three to four times their annual salary. Tungli and Peiperl (2009) and Brookfield (2012) estimated that 6% to 22% of international assignments ended in premature returns as of 2009 and 2012 respectively, with the most expatriate failures cited for work assignments in China (Brookfield, 2012), and roughly 20-50% of dissatisfied expatriates voluntarily left their organization within 1 year of repatriation (Brookfield, 2012; Kempen, Pangert, Hattrup, Mueller, & Joens, 2014; Kraimer et al., 2012; McNulty et al., 2013; Nery-Kjerfve & McLean, 2012). The general business problem is expatriate failures, including premature returns, maladjustment, dissatisfaction, and inadequate work outcomes, that generate high costs for organizations and their leaders (McNulty et al., 2013; Selmer & Lauring, 2013). The specific business problem is that some leaders do not understand the relationship between CQ and the outcomes of expatriate related work in China.

Purpose Statement

The purpose of this quantitative correlational study was to examine the relationships among a subset of CQ predictor variables and work outcome related dependent variables. The independent variables were (a) cognitive CQ, (b) metacognitive CQ, (c) motivational CQ, and (d) behavioral CQ. The dependent variables were work

adjustment, work performance, work effectiveness, and job satisfaction. The targeted population included United States expatriates working in China or those who had returned from work in China with 12 months of the research study. The implications for positive social change include the potential to strengthen current expatriate identification, training, support programs, and the improvement of intercultural relations in international business (Collins & Kriz, 2013; Gunkel et al., 2014; Tait et al., 2014; Varma et al., 2012).

Nature of the Study

A quantitative methodology includes the examination of correlations to test hypotheses (Rovai, Baker, & Ponton, 2013). The use of correlations in hypotheses testing allows for generalization to a larger population of quantitative research results (Field, 2013). Qualitative research approaches lack statistically significant data needed to generalize to a larger population (Rovai et al., 2013). Previous qualitative researchers examined anecdotal and theoretical factors that may influence expatriate work outcomes, but statistically significant data on the combined influence of factors in China are sparse (Huff, 2013; Selmer & Lauring, 2013).

I selected a correlational study design for its ability to measure the degree and pattern of relationships between the study variables (Field, 2013). A descriptive design could not produce such results. Experimental and quasi-experimental designs require randomly selecting study participants, establishing control and experimental groups, applying variables thought to increase CQ like cross-cultural training, and measuring

changes in expatriate groups during and after assignments (Rovai et al., 2013). Experimental and quasi-experimental designs are longitudinal in nature rather than the cross-sectional design intended for this study (Trochim & Donnelly, 2008).

Research Question

I examined the potential relationship between sub-dimensions of the study variables of cultural intelligence and expatriate work outcomes in this doctoral study. The central research question was

> What is the relationship between the sub-dimensions of CQ and expatriate work outcomes?

Four separate regressions included testing of the central research question. The regression analysis includes testing of the ability of the sub-dimensions of the CQ independent variables in predicting the dependent variables associated with expatriate work outcomes: work adjustment, work performance, work effectiveness, and job satisfaction. Further examination of specific relationships in the study data included the following questions:

1. Is there a statistically significant relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and work adjustment?
2. Is there a statistically significant between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and work performance?

3. Is there a statistically significant relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and work effectiveness?
4. Is there a statistically significant relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, job satisfaction?

Hypotheses

Previous research regarding the expatriate factors of cultural intelligence and work outcomes did not investigate specific nuisances in China (Rehg et al., 2012). Additional research examining how these factors relate to work outcomes in China in tandem adds validity to the study constructs (Selmer & Lauring, 2013). Further examination of particular relationships in the study data results included the following hypotheses in this doctoral study:

$H1_0$: There is no significant relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and work adjustment.

$H1_a$: There is a significant relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and work adjustment.

$H2_0$: There is no significant relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and work performance.

$H2_a$: There is a significant relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and work performance.

$H3_0$: There is no significant relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and work effectiveness.

$H3_a$: There is a significant relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and work effectiveness.

$H4_0$: There is no significant relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and job satisfaction.

$H4_a$: There is a significant relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and job satisfaction.

Theoretical Framework

Earley and Ang (2003) introduced CQ based on the absence of theories connecting other types of intelligences (i.e. emotional and social intelligences) to culturally relevant situations. CQ refers to an individual's cognitive, metacognitive, motivational, and behavioral abilities in adapting and responding to culturally diverse settings and people (Earley & Ang, 2003). Earley and Ang's seminal work identified the potential influence of the cultural intelligence predictor variables. Four factors of CQ that measure an individual's ability to interpret and respond to different cultural situations include (a) metacognitive, (b) cognitive, (c) motivational, and (d) behavioral (Van Dyne et al., 2012). Meta-cognitive CQ is an individual's ability to recognize, control, and understand thinking and the thought processing (i.e., planning, monitoring, and revising) as related to cultural preferences (Van Dyne et al., 2012). Individuals demonstrate cognitive CQ through learned knowledge about different economic, legal, and social

systems of different cultures and subcultures (Van Dyne et al., 2012). Motivational CQ pertains to an individual's motivation in trying to engage, adapt, and assimilate in a culturally different environment, and behavioral CQ involves the ability to use appropriate words, tone, gestures, and facial expressions and knowledge in interactions with culturally diverse individuals (Lin, Chen, & Song, 2012; Sri Ramalu, Wei, & Rose, 2011; Van Dyne, Ang, & Koh, 2009, 2012). Further examination of CQ follows in the related literature review section.

Expatriates, who understand differences in cultural contexts and behave accordingly, may possess higher levels of cultural intelligence (Ramelli, Florack, Kosic, & Rohmann, 2013). Expatriates with higher levels of CQ experienced reduced levels of anxiety and uncertainty, higher adjustment, and better work performance outcomes (Lee, Veasna, & Wu, 2013; Malek & Budhwar, 2013; Sri Ramalu et al., 2011; Ward et al., 2011). The application of CQ provides a rationale for potential positive correlations with expatriate work outcomes, the dependent variables in this study. Expatriates' level of cultural intelligence, activation of knowledge obtained, and selection of culturally appropriate responses and behaviors may translate to positive work outcomes.

Definition of Terms

A description of significant study terms and definitions follows. The research that I conducted for the literature review defined the study terms in the following manner. The definitions include the study constructs of CQ and work outcomes.

Cultural intelligence: Cultural intelligence refers to an individual's cognitive, motivational, and behavioral abilities in adapting to culturally diverse settings and people (Earley & Ang, 2003).

Expatriate: An expatriate is an individual sent to live and work abroad or not in their native country for a designated amount of time (Lee & Donohue, 2012; McEvoy, 2011).

Expatriate failure: Expatriate failure is a measure of the level of maladjustment, psychological withdrawal in a host country environment, unsatisfactory work performance during an assignment, and/or premature return of the assignment (Olsen & Martins, 2009).

Expatriate success: Expatriate success is a measure of an individual's ability to complete an assignment, establish relationships, adjust, and perform (Harrison & Shaffer, 2005).

Job satisfaction: Job satisfaction is the emotional satisfaction felt during a particular work assignment (Selmer & Lauring, 2013; West, Nicholson, & Rees, 1987).

Repatriation: Repatriation is the processes involved in returning expatriates to their home organization or native country (Tahir & Azhar, 2013).

Work adjustment: Work adjustment is an expatriate's ability to adapt to role novelty, role ambiguity, role conflict, and role overload (Black & Stephens, 1989; Selmer & Lauring, 2013).

Work effectiveness: Work effectiveness is an individual's ability to match their behaviors with management expectations in both host and countries of origin (Selmer & Lauring, 2013; Tsui & Ohlott, 1988).

Work performance: Work performance is a measure of an employee's effectiveness in completing technical or task related responsibilities (Earley, 1987; Selmer & Lauring, 2013).

Assumptions, Limitations, and Delimitations

Assumptions

An assumption of the study was that participants accurately reflected their attitudes, behaviors, and experiences when they answered the required questions. Another assumption pertained to the factors in this study and their representativeness of experiences in the general population of U.S. expatriates working in China. I further assumed that research participants understood the previous definitions of study terms and subscribed to the same definitions.

Limitations

A significant limitation of the study was the self-report nature of the survey. The study participants could answer questions in an aspirational rather than a factual manner. Common method variance could occur because of self-reporting of the study variables. The participants might provide more positive and proactive types of responses than what occurred in their lived experience. Previous expatriate assignments occurring outside of China may have influenced self-reporting of experiences in China. To mitigate such

limitation, obtaining work outcome measures from expatriates' supervisors and peers would be an optimal study design approach in future research.

The study data was not inclusive of all factors associated with expatriate assignments and repatriation experiences. I omitted factors related to specific personality attributes from the study. Individual expatriate differences relating to current assignment duration and the total number of years of expatriate experiences can affect the generalization of research results (Kraimer et al., 2012).

The study data was cross-sectional; therefore, the results of the study cannot establish causality (Rovai et al., 2013). A longitudinal study design might be appropriate in future research to reduce participant bias from recent experiences that occur during the time of survey completion (Huff, 2013). Common method bias could occur because of the survey data collection and sampling method (Podsakoff, MacKenzie, & Podsakoff, 2012).

Perceived cultural distance between U.S. expatriates and Chinese host country nationals (HCNs) could influence the study results (Froese & Peltokorpi, 2011). Specific local behaviors and customs in China could affect survey answers for a particular region. Larger sample sizes from different regions could help to mediate local cultural differences and U.S. expatriate experiences in China (Littrell, Alon, & Chan, 2012).

The study included only two countries, the United States and China. I included multiple industries in the study. The results may not be generalizable to the entire

expatriate population that includes countries other than China and expatriates originating outside of the United States.

Delimitations

The study sample did not include expatriates from the United States on assignments outside of China. Similarly, expatriates originating from outside of the United States were not included in the study sample. I did not include specific measurements of personality traits, including the Big Five Personality scale, in the survey instrument. The scope of this doctoral study did not include detailed questions regarding spouse and family influence on expatriate work outcomes.

Significance of the Study

Contribution to Business Practice

The results from this study may contribute to scholarly literature pertaining to expatriate management and training practices. Future researchers might use the study results to explore expatriate assignment readiness, candidate identification, additional training, support program needs, and related reduction of costs. Aspiring expatriate candidates, human resource (HR) professionals managing expatriate candidates, MNCs utilizing expatriates, and internationally focused higher education business programs may identify methods for strengthening current expatriate identification, training, and support programs (Koo Moon, Kwon Choi, & Shik Jung, 2012).

Implications for Social Change

The social change implications of this study may provide managers with an additional tool in selecting and training employees for international assignments. Additional social change benefits include the improvement of the expatriate experience, lowering turnover, and reducing assignment costs. The social change benefits encompass the improvement of intercultural communications and relationship building competencies of business professionals. Positive communication and newly established relationships with international partners and expatriates may lead to increased levels of foreign direct investment (FDI) in emerging economies and domestically in the United States (Wang, Feng, Freeman, Fan, & Zhu, 2014). The inflows of FDI can potentially fuel increased economic prosperity and employment opportunities in emerging economies (Peng, 2012b). The increase in business opportunities in Brazil, Russia, China, and India (the BRICs) led to emerging middle classes in previously poor communities (Hurn, 2013). The increase of middle classes in emerging countries can lead to greater economic prosperity globally (Kim & Tung, 2013).

A Review of the Professional and Academic Literature

Statistically significant information relating to cultural intelligence and expatriate work outcomes in China is sparse in scholarly research (Rehg et al., 2012). The identification of such factors would be beneficial in determining assignment readiness and the need for additional expatriate identification, training, and support programs (Chen et al., 2011; Selmer & Lauring, 2013; Varma et al., 2012; Zhang, 2013).

Understanding how to minimize factors influencing failure may contribute to decreased costs associated with work outcomes.

One approach to investigating the gap in the research is to explore different patterns of behaviors and work outcomes in expatriates. Understanding what comprises distinct types of profiles of expatriates' and their level of CQ and work outcomes provides information regarding means of increasing future success for expatriates and organizational management (Malek & Budhwar, 2013). A detailed review of the current scholarly research concerning cultural intelligence, expatriate work outcomes, and related factors follows.

Defining Expatriates, Expatriate Success, and Failure

Expatriates are employees sent to live and work outside their native country for a designated amount of time (McEvoy, 2011). Many classifications exist for describing the expatriate population. Researchers and organizational leaders classify expatriates by the nature of the persons requesting the assignment selection, such as organizational expatriates (OEs) or self-initiated expatriates (SIEs) (Selmer & Lauring, 2012). Organizational leaders and researchers could further classify expatriates based upon the duration of the assignment, purpose of the assignment, the number of concurrent assignments and location of the work. Expatriate assignment descriptors include short-term assignments, traditional long-term, developmental training, permanent transfers, locally hired foreigners, employees on rotation, expatriates, commuters, contract employees, global nomads, and career expatriates (Brookfield, 2012; McPhail, Fisher,

Harvey, & Moeller, 2012; Mercer, 2013). Although labels may change depending on the particular situation and duration of the assignment, the overall number of expatriates in China is central to the potential influence of this study.

The Chinese Census Bureau reported over 70,000 United States nationals worked in China as of 2010 (MacLeod, 2011). The use of expatriates in China appears through the increased levels of foreign direct investments by MNCs (Brookfield, 2012). Central banks and statistical offices around the world estimate China had foreign direct investment inflows of $253 billion for 2012 based on gathered balance of payments statistics (OECD, 2013). The expatriate costs associated with foreign direct investments in China can include salary compensation, pre-departure travel and training costs, housing and living allowances, and other host country expenses (Josien, 2012). An industry report by Brookfield (2012) listed China as having the highest expatriate failure rate. International human resource managers (IHRM) expect the use of expatriates to continue increasing (Brookfield, 2012). McNulty et al. (2013) stressed the need to identify and promote factors that increased the success of expatriate assignments in order to increase levels of return on investment (ROI) for MNCs and reduce costs associated with expatriate failures.

Defining the baseline assumptions associated with successful and failed assignments necessitates understanding the baseline assumptions that constitutes expatriate success and failure. Assignment failure that stems from premature returns is not the sole definition of failure (McEvoy, 2011). Expatriate failures may originate from

assignments terminated early, but premature departures do not necessarily mean failure of the assignment (McEvoy, 2011). Early termination may result from earlier completion of assignment goals or changes in organizational needs in the home country (McEvoy, 2011). Researchers proposed a more complete definition of expatriate failure including cultural maladjustment in a host country, substandard or inferior work performance outcomes, job dissatisfaction, and premature termination of an assignment (Engle, Dimitriadi, & Sadrieh, 2012; Froese & Peltokorpi, 2011; Ghafoor & Khan, 2011; Idrees, Javed, & Ahmed, 2011). Lund and Degen (2010) and Minter (2011) identified other factors that can influence expatriate failure: (a) inappropriate selection standards, (b) learning orientation, (c) gender and race issues, (d) insufficient training, (e) cultural shock, (f) psychological withdrawal, (g) family dissatisfaction, and (h) insufficient levels of organizational support before, during, and after repatriation to the home country.

The theory behind the U-curve framework provided some explanation for issues that surround expatriate failures and the relevance associated with duration of the assignment. In Lysgaard's study, the U-curve theory includes four stages of cross-cultural adjustment: honeymoon, cultural shock, adjustment, and mastery (Liu & Lee, 2008; as cited in Lund & Degen, 2010). The first stage, the honeymoon stage, typically occurs within the first 2 months. This stage reflects an enthusiastic, proactive attitude and approach to learning about a new host country environment (Lund & Degen, 2010). The second stage, the culture shock stage, occurs between 3 and 9 months. This stage may

include increased levels of disappointment, frustrations, and outward displays of irritation toward the daily challenges of living and working in the host country environment.

The adjustment stage follows with experiences occurring between 9 and 24 months. In this stage, expatriates accept the differences and irregularities of living in the host country environment in comparison to the home country (Lund & Degen, 2010). Expatriates display reduced levels of negative attitude and outward displays of irritation as some of the enthusiasm experienced in the honeymoon stage returns. The fourth stage of mastery typically occurs after 24 months; in this stage, expatriates exhibit increased levels of contentment and achievement of success in managing the daily routines and challenges associated with life and work in the host country (Liu & Lee, 2008; Lysgaard, 1955, as cited in Lund & Degen, 2010). Duration of assignment, among other variables, can influence how expatriates approach challenges and interact with host country nationals (HCNs).

Researchers conducted a meta-analysis of the literature and identified expatriate success as relating to the ability to complete an assignment, positive relationship building, cross-cultural adjustment (CCA), and high levels of assignment performance (Lin et al., 2012a). Specific attributes including technical, managerial, communication and leadership skills, personality traits, adaptability, previous work performance, former international work experiences, and demographics, correlated with expatriate success rates. Baran, Shanock, and Miller (2012) and Lin et al. (2012a) identified the following organizational support factors associated with higher incidences of expatriate success in

meta-analysis of the literature: (a) establishing roles and expectations through a psychological contract before departure; (b) career counseling with mentors or shadowing opportunities before, during, and after assignments; (c) the availability of family and spousal support; (d) cross-cultural training before, during, and after the assignment; (e) the ability to maintain links to the home country; and (f) support and planning of repatriation.

Researchers conducted a meta-analysis to identify the use of precise selection standards, pre-departure and post-departure training, on-going support programs, and repatriation plans as influencing long-term expatriate success (Lund & Degen, 2010). Researchers suggested that expatriates with higher success rates maintain higher job satisfaction, lower turnover rates, lower withdrawal behaviors, and greater motivation (Froese & Peltokorpi, 2011). Organizations' future success in China depends, in part, on the identification, training, and support programs for expatriates. A review of additional research regarding measurements of work outcomes and CQ follows.

Measurements of Expatriate Work Outcomes

Researchers measured expatriate work outcomes in various manners including cross-cultural adjustment, job performance, job satisfaction, ROI, withdrawal intentions, and turnover intentions (Black & Stephens, 1989; Earley, 1987; Grinstein & Wathieu, 2012; Lee & Kartika, 2014; McNulty et al., 2013; Pinto et al., 2012; Selmer & Lauring, 2013; Tsui & Ohlott, 1988; West et al., 1987; Wu & Ang, 2011). Four related measures of work outcomes selected for this study and used by researchers include: (a) work

adjustment, (b) work performance, (c) work effectiveness, and (d) job satisfaction (Black & Stephens, 1989; Earley, 1987; Selmer & Lauring, 2013; Tsui & Ohlott, 1988; West et al., 1987). A detailed review of each work outcome variable follows.

Work adjustment. CCA is the relative comfort, ease, and adaptability an expatriate may encounter while living in a foreign environment, interacting with HCNs, and performing work responsibilities (Black & Stephens, 1989; Lin et al., 2012a; Peltokorpi & Froese, 2012; Sri Ramalu et al., 2011). Black and Stephens (1989) identified the three main types of CCA outcomes as (a) general, (b) work, and (c) interaction. General adjustment refers to the ease and comfort of navigating routines associated with daily life (e.g., climate, food, heath care, housing conditions, and shopping). Work adjustment is the ability of an expatriate to meet expectations, complete tasks, and demonstrate performance. Interaction adjustment is the ability to have positive communication and interaction with HCNs in and outside the place of work (Black & Stephens, 1989).

Work adjustment refers to the CCA expatriates experience within the work environment; an expatriate's ability to adapt to role novelty, role ambiguity, role conflict, and role overload (Black & Stephens, 1989; Selmer & Lauring, 2013). Some of the particular aspects included in the work adjustment measurement are (a) specific job responsibilities, (b) performance standards and expectations, and (c) supervisory responsibilities. Okpara and Kabongo (2011) concluded that various forms of cross-cultural training (CCT) had a significant positive influence on CCA, specifically work

adjustment, general conventional training ($r = .48$, $p < .01$), general experimental training ($r = .33$, $p < .05$), specific experimental training ($r = .50$, $p < .05$), and specific conventional training ($r = .45$, $p < .05$; see Table 1).

Okpara and Kabongo (2011) corroborated Black and Mendenhall's (1989) examination of nine other studies that found positive correlations between CCA and CCT. Lovvorn and Chen (2011) posited that assignment failures might relate to the lack of CQ and CCT before embarking on an international assignment. Researchers presented evidence demonstrating significant and positive relationships between CCT and CQ: cognitive CQ ($r = .68$, $p < .001$), motivational CQ ($r = .83$, $p < .001$), and behavioral CQ ($r = .73$, $p < .001$; Rehg et al., 2012). Lee and Sukoco (2010) also found CQ to have a significant relationship with CCA ($r = .71$, $p < .05$; see Table 1). An additional examination of previous scholarly research regarding work adjustment and CQ follows in subsequent sections.

Table 1.

Correlations Between Work Adjustment and Training in Prior Studies

Study Author(s), Date	Variable 1	Variable 2	Correlation *r* =	Significance Level *p* <
Okpara & Kabongo, 2011	Work adjustment	General conventional training	.48	.01
		General experimental training	.33	.05
		Specific conventional training	.48	.01
		Specific experimental training	.50	.05

Work performance. Work performance refers to the timeliness, quality, relational ability, and overall performance of expatriates (Earley, 1987). Earley introduced the work performance scale in a study measuring the influence of various forms of expatriate training. Some of the particular aspects included in the work performance measurement are: (a) overall performance, (b) ability to get along with others, (c) completion of assignments in a timely manner, and (d) quality of performance (Earley, 1987). Earley demonstrated specific types of expatriate training, specifically interpersonal training, correlated with work performance ($r = .78$, $p < .01$; see Table 2; Earley, 1987).

Table 2.

Correlations Between Performance, Adjustment, Training, and CQ in Prior Studies

Study Author(s), Date	Variable 1	Variable 2	Correlation *r* =	Significance Level *p* <
Earley, 1987	Work performance	Interpersonal training	.78	.01
Malek & Budhwar, 2013	Work adjustment	CQ	.24	.01
	Contextual work performance	CQ	.23	.01
Wu & Ang, 2011	Work adjustment	Motivational CQ	.37	.01
	Work adjustment	Behavioral CQ	.21	.01
	Contextual performance	Metacognitive CQ	.25	.01
	Contextual performance	Motivational CQ	.39	.01
	Task performance	Metacognitive CQ	.21	.01
	Task performance	Motivational CQ	.51	.01
	Task performance	Behavioral CQ	.31	.01
	Intention to complete an assignment	Motivational CQ	.51	.01
	Intention to complete an assignment	Behavioral CQ	.25	.01

Work performance definitions vary by scholars. Scholars broadly defined job or work performance as a combination of knowledge, skills, abilities, and motivation toward expected job responsibilities (CITE). Researchers defined job performance as: (a) the demonstration of task performance, (b) communication performance, (c) maintaining discipline, (d) teamwork and leadership skills, (e) managerial skills, (f) administrative

task performance, (g) the transfer of knowledge, (h) the use of technology, (i) self-efficacy, (j) stress tolerance, (k) relational ability, (l) previous international experience, (m) cultural intelligence, and (n) the development of sustained long-term relationships with HCNs (Lee & Donohue, 2012; Woods, Barker, & Troth, 2012).

Malek and Budhwar (2013) investigated the relationship among CQ awareness and the following levels of expatriate adjustment and performance: CQ and general adjustment ($r = .27$, $p < .01$), CQ and interaction adjustment ($r = .28$, $p < .01$), CQ and work adjustment ($r = .24$, $p < .01$) and CQ and contextual work performance ($r = .23$, $p < .01$; see Table 2). Wu and Ang (2011) found correlations between various work performance measurements and CQ sub-dimensions (see Table 2). I used Earley's (1987) work performance measurement scale in this study. The earlier correlations found by other researchers of work performance measurements and CQ provides justification for its use (Malek & Budhwar, 2013; Wu & Ang, 2011; see Table 2). An additional examination of previous scholarly research regarding work performance and CQ follows in subsequent sections.

Work effectiveness. Work effectiveness is an individuals' ability to match their behaviors with management expectations (Selmer & Lauring, 2013; Tsui & Ohlott, 1988). Researchers measured work effectiveness based on the supervising manager's perceptions of meeting expectations and overall performance (Tsui & Ohlott, 1988). Some of the specific aspects included in the work effectiveness measurement are: (a) management expectations in meeting roles and responsibilities; (b) management

expectations regarding job completion; and (c) management preferences for job performance. Work effectiveness correlated with work adjustment, work performance, and job satisfaction (Selmer, & Lauring, 2013; see Table 3). The correlation statistics provide justification for use of the work effectiveness measurement in this study. I modified, with permission, the questions regarding work effectiveness to a self-reported perception of managerial expectations similar to the modifications made in the Selmer and Lauring (2013) study. Selmer and Lauring (2013) obtained a Cronbach alpha of α = .90 which adds reliability to repeating this modification. Additional examination of previous scholarly research regarding work effectiveness and CQ follows in subsequent sections.

Table 3.

Correlations Between Work Effectiveness, Adjustment, and Performance in Prior Studies

Study Author(s), Date	Variable 1	Variable 2	Correlation r =	Significance Level p <
Selmer, & Lauring, 2013	Work effectiveness	Job satisfaction	.52	.001
		Work adjustment	.39	.001
		Work performance	.66	.001

Job satisfaction. Job satisfaction is the emotional satisfaction felt during a particular work assignment (Selmer & Lauring, 2013; West et al., 1987). West et al. (1987) defined job satisfaction in terms of contentment with: (a) the job, (b) work responsibilities, (c) work relationships, (d) family / life balance, and (e) value of employee contributions. Zimmerman (2008) identified multiple factors that influence job

satisfaction: (a) task environment; (b) completion of tasks and other job requirements; (c) compensation; (d) communication; (e) employee personality; (f) organizational characteristics; and (g) social relations at the workplace (Froese & Peltokorpi, 2011; as cited in Peltokorpi & Froese, 2014). Zimmerman (2008) hypothesized that levels of job satisfaction influenced motivation, absenteeism, anxiety, stress, organizational commitment, turnover, and individual job performance (Froese & Peltokorpi, 2011; as cited in Peltokorpi & Froese, 2014).

West et al. (1987) measured job satisfaction in terms of the following topics: (a) work responsibilities, (b) work performance, (c) relationship with management, (d) relationship with colleagues, (e) work life balance, and (f) organizational value of contributions. Froese, Peltokorpi, and Ko (2012) found significant positive correlations between job satisfaction and social interactions ($r = .24$, $p < .01$), job satisfaction and work adjustment ($r = .45$, $p < .01$) and job satisfaction and interaction adjustment ($r = .22$, $p < .05$; see Table 4). The findings indicate potential benefits of CCT in moderating adjustment and the variable of job satisfaction. Research regarding the potential relationship between job satisfaction and CQ is not available. The absence of this data justifies the inclusion of the variables in this study.

Table 4.

Correlations Between Job Satisfaction and Adjustment in Prior Studies

Study Author(s), Date	Variable 1	Variable 2	Correlation *r* =	Significance Level *p* <
Froese, Peltokorpi, & Ko, 2012	Job Satisfaction	Social interactions	.24	.01
		Work adjustment	.45	.01
		Interaction adjustment	.22	.01

Researchers identified other factors outside of expatriates' control that affect performance including: (a) cultural setting, (b) ethnic background, (c) gender, (d) nationality, (e) religion, (f) age, (g) educational qualifications, (h) intercultural experiences, and (i) role (Woods et al., 2012). For the purposes of this doctoral study, I used only four factors of work outcomes previously studied by multiple researchers: work adjustment, work performance, work effectiveness, and job satisfaction (Black & Stephens, 1989; Earley, 1987; Selmer & Lauring, 2013; Tsui & Ohlott, 1988; West et al., 1987). A review of additional research regarding CQ follows.

Cultural Intelligence (CQ)

Cultural intelligence (CQ) originated from theories and research on emotional and social intelligences, but previous research on these types of intelligences did not adequately address the complexities of working in cross-cultural contexts (Van Dyne et al., 2009). Earley and Ang (2003) introduced the construct of CQ based upon the gap in the literature that interpreted and explained culturally based decision-making and

behavioral differences in types of intelligences. Researchers identified four factors of CQ that measure an individual's ability to interpret and respond to different cultural situations: (a) metacognitive, (b) cognitive, (c) motivational, and (d) behavioral (Van Dyne et al., 2009). Meta cognitive CQ is an individual's ability to recognize, control, and understand thinking and thought processing (i.e., planning, monitoring, and revising) as it relates to cultural preferences (Van Dyne et al., 2009). Individuals demonstrate cognitive CQ through learned knowledge about different economic, legal, and social systems of different cultures and subcultures. Motivational CQ pertains to an individual's motivation in trying to engage, adapt, and assimilate in a culturally different environment, and behavioral CQ involves the ability to use appropriate words, tone, gestures, and facial expressions and knowledge in interactions with culturally diverse individuals (Lin, Chen et al., 2012; Sri Ramalu et al., 2011; Van Dyne et al., 2009; 2012). Van Dyne et al. (2012) highlighted additional sub-dimensions of CQ that may further delineate differences in expatriates. Examination of each component of CQ follows.

Cognitive CQ. Cognitive CQ is the attainment of culturally relevant information and knowledge (Ang et al., 2007). The building of cultural information pathways like culture-general knowledge and context-specific knowledge typifies the cognitive domain of CQ (Rockstuhl, Seiler, Ang, Van Dyne, & Annen, 2011; Van Dyne et al., 2012). Sri Ramalu et al. (2011) found that cognitive CQ correlated to CCA and contextual performance (see Table 5). Researchers suggested that expatriates, with higher levels of CQ, possess increased abilities to use the skills typically provided by supporting

practices, including training. Therefore, expatriates, with higher levels of CQ, do not require as many supporting practices and training (Wu & Ang, 2011). The indication is cognitive CQ is the first in a series of CQ building blocks to achieve higher levels of CCA.

Table 5.

Correlations Between Cognitive CQ and Work Outcomes in Prior Studies

Study Author(s), Date	Variable 1	Variable 2	Correlation *r* =	Significance Level *p* <
Sri Ramalu et al., 2011	Cognitive CQ	General adjustment	.25	.01
		Interaction adjustment	.35	.01
		Work adjustment	.11	.05
		Contextual performance	.20	.01

Metacognitive CQ. Metacognitive CQ refers to how individuals can strategize the use of cognitive CQ attained (Ang et al., 2007). Metacognitive CQ involves higher order thinking to process and cognitively modify behaviors (Rockstuhl et al., 2011): including sub-dimensions of planning, awareness, and checking (Van Dyne et al., 2012). Sri Ramalu et al. (2011) found that metacognitive CQ related to general adjustment (r = .38, p < .01), metacognitive CQ related to interaction adjustment (r = .44, p < .01), metacognitive CQ related to work adjustment (r = .20, p < .01), metacognitive CQ related to contextual performance (r = .29, p < .01), and metacognitive CQ related to specific performance (r = .15, p < .01).

Individuals who possess cognitive CQ can organize and utilize the information meta-cognitively (Ang et al., 2007). Lin, Chen, et al. (2012) identified metacognitive levels positively correlating with CCA ($r = .43$, $p < .001$). Huff (2013) demonstrated positive correlations between metacognitive CQ and work outcomes (see Table 6). The metacognitive domain represents the second area of CQ necessary for increased CCA.

Table 6.

Correlations Between Metacognitive CQ and Work Outcomes in Prior Studies

Study Author(s), Date	Variable 1	Variable 2	Correlation $r =$	Significance Level $p <$
Sri Ramalu et al., 2011	Metacognitive CQ	General adjustment	.38	.01
		Interaction adjustment	.44	.01
		Work adjustment	.20	.01
		Contextual performance	.29	.01
Lin et al., 2012b	Metacognitive CQ	Cross-cultural adjustment	.43	.001
Huff, 2013	Metacognitive CQ	General adjustment	.24	.05
		Work adjustment	.34	.05
		Interaction adjustment	.36	.05

Motivational CQ. Ang et al. (2007) associated motivational CQ with self-interest, confidence, and desire to pursue culturally related interactions. The sub-dimensions of motivational CQ refer to intrinsic, extrinsic, and self-efficacy motives to adjust (Van Dyne et al., 2012). Huff (2013) assessed the relationship between the motivational dimension of CQ and life satisfaction ($r = .50$, $p < .05$), motivational CQ and general adjustment ($r = .50$, $p < .05$), motivational CQ and interaction adjustment (r

= .50, $p < .05$), motivational CQ and work adjustment ($r = .54$, $p < .05$), motivational CQ and desire to accept future expatriate assignments ($r = .43$, $p < .05$). Other researchers confirmed the self-efficacy trait as related to dimensions of motivational CQ (MacNab & Worthley, 2012). Wu and Ang (2011) indicated motivational CQ positively relates to work-related outcomes (see Table 7). The indication is the motivational CQ domain helps to mediate the behavioral CQ domain.

Table 7.

Correlations Between Motivational CQ and Work Outcomes in Prior Studies

Study Author(s), Date	Variable 1	Variable 2	Correlation $r =$	Significance Level $p <$
Wu & Ang, 2011	Motivational CQ	General adjustment	.51	.01
		Interaction adjustment	.36	.01
		Work adjustment	.37	.01
		Contextual performance	.39	.01
		Task performance	.51	.01
		Intention to complete an assignment	.51	.01

Behavioral CQ. Behavioral CQ refers to the enactment of culturally appropriate behaviors or actions (Ang et al., 2007; Rockstuhl et al., 2011). Behavioral CQ includes sub-dimensions of verbal, non-verbal behavior, and speech acts (Van Dyne et al., 2012). Sri Ramalu et al. (2011) found that behavioral CQ correlated to adjustment and performance; behavioral CQ and general adjustment ($r = .22$, $p < .01$), behavioral CQ and interaction adjustment ($r = .33$, $p < .01$), behavioral CQ and work adjustment ($r =$

.16, $p < .01$), and behavioral CQ and contextual performance ($r = .28$, $p < .01$). Huff (2013) found a relationship between the behavioral CQ and life satisfaction ($r = .24$, $p < .05$).

Wu and Ang (2011) indicated behavioral CQ positively relates to work-related outcomes (see Table 8). Researchers theorized that increased levels of CCA adjustment further motivate individuals and potentially impact behaviors; increasing use of motivational and behavioral CQ competencies (Ang et al., 2007). Behavioral CQ is the last component in the CQ construct and signifies the highest level of cultural intelligence competencies.

Table 8.

Correlations Between Behavioral CQ and Work Outcomes in Prior Studies

Study Author(s), Date	Variable 1	Variable 2	Correlation $r =$	Significance Level $p <$
Sri Ramalu et al., 2011	Behavioral CQ	General adjustment	.22	.01
		Interaction adjustment	.33	.01
		Work adjustment	.16	.01
		Contextual performance	.28	.01
Wu & Ang, 2011	Behavioral CQ	General adjustment	.15	.01
		Interaction adjustment	.26	.01
		Work adjustment	.21	.01
		Task Performance	.31	.01
		Intention to complete an assignment	.25	.01

CCT and CQ. Lovvorn and Chen (2011) posited that assignment failures might relate to the lack of CQ and CCT before embarking on an international assignment. Cross-cultural training (CCT) referred to different types of educative services, courses, or experiences intended to improve adjustment, adaptability, and outcomes of expatriates and traveling family members (Black & Mendenhall, 1990; Earley, 1987; Tung, 1981). In a survey conducted by National Foreign Trade Council (NFTC) and Cigna Global Health Benefits (CGHB), expatriates in the Asia and Middle East regions of the world considered cross-cultural training to be one of the most important services offered by companies (CGHB, 2013). Researchers suggested that cross-cultural training intends to increase awareness, knowledge, behavior, and skills associated with culturally appropriate interactions in cross-cultural contexts and among individuals of different cultures (Black & Mendenhall, 1990). Expatriates who can understand the nuisances in cultural business practices and other customs have a greater likelihood of positive outcomes (Okpara & Kabongo, 2011).

Rehg et al. (2012) presented evidence demonstrating significant and positive relationships between self-efficacy (SSE) post CCT and CQ; cognitive CQ and SSE post CCT ($r = .26$, $p < .05$), motivational CQ and SSE post CCT ($r = .47$, $p < .001$), and behavioral CQ and SSE post CCT ($r = .36$, $p < .001$). Researchers theorized CCT, specifically pre-departure CCT, to be an important influencer of CQ as well as cross-cultural adjustment (Koo Moon, Kwon Choi, & Shik Jung, 2012). Koo Moon et al.

(2012) identified significant relationships between CCT and all domains of CQ (see Table 9).

Table 9.

Correlations Between CCT and CQ in Prior Studies

Study Author(s), Date	Variable 1	Variable 2	Correlation r =	Significance Level p <
Rehg et al., 2012	Cognitive CQ	SSE post CCT	.26	.05
	Motivational CQ	SSE post CCT	.47	.001
	Behavioral CQ	SSE post CCT	.36	.001
Koo Moon et al., 2012	Metacognitive CQ	Comprehensive CCT	.39	.01
	Cognitive CQ	Comprehensive CCT	.42	.01
	Motivational CQ	Comprehensive CCT	.32	.01
	Behavioral CQ	Comprehensive CCT	.42	.01

Researchers also found a significant and positive relationship for comprehensiveness of CCT and general adjustment ($r = .45$, $p < .01$) and comprehensiveness of CCT and work adjustment ($r = .45$, $p < .01$; Koo Moon et al., 2012). Wu and Ang (2011) suggested that CQ is a fixed assessment in time; individuals can improve CQ scores with additional CCT over time. The indication is pre-departure CQ assessments can improve with additional levels of CCT. Researchers postulated that increased levels of CQ and CCT improve cross-cultural adjustment (CCA) and work outcomes (Rehg et al., 2012). The following section highlights research regarding CCT and implications for CQ.

Methods of CCT Content and Delivery. The content and delivery of CCT can vary considerably; training platforms can focus on cognitive, affective, or behavioral competencies. Rote learning and memorization of culturally relevant conceptual material characterize cognitive platforms. Affective learning platforms require individuals to interact in situations and use decision-making rather than memorization for learning. Behavioral or experimental CCT refers to communication and interactions with locals through simulations, real scenarios, or field visits, role-playing, and other active methods of cultural knowledge application (Black & Mendenhall, 1990; Ko & Yang, 2011; Selmer, 2010; Spong & Kamau, 2012). Additional research regarding CCT content follows.

Tung (1981) identified several different types of CCT content and delivery methods intended to engage cognitive, affective, and experimental learning: (a) area studies, (b) culture assimilator, (c) language training, (d) sensitivity training, and (e) field experiences. Area studies are inclusive of cognitive learning to increase environmental and cultural orientation to the country's political, economic, social, and historical perspectives. The culture assimilator is a series of cultural situations in which the learner can assess and adopt culturally relevant reactions and communication skills. Language training refers to levels of acquired foreign language fluency and communication ability in the local language. Sensitivity training refers to the development of greater affective knowledge regarding learner attitudinal perceptions and disconnects between foreign attitudinal perceptions. Field experiences represent the immersion of expatriates in

experimental situations where learners spend time in a micro-culture in the host country prior to the assignment commencement (Tung, 1981).

Researchers theorized that local language fluency, gained from CCT, is a positive mediator of adjustment and positive interactions with HCNs (Freeman & Lindsay, 2012; Ko & Yang, 2011). Researchers demonstrated strong correlations for language proficiency, language training, and non-work and work-related adjustment (Huff, 2013; Koo Moon et al., 2012; Pinto et al., 2012; Wang & Tran, 2012; see Table 10). The implication is language proficiency, training, and adjustment correlate with positive interactions and work outcomes.

Table 10.

Correlations Between Language, Performance, and Adjustment in Prior Studies

Study Author(s), Date	Variable 1	Variable 2	Correlation *r* =	Significance Level *p* <
Koo Moon et al., 2012	Language fluency	Work adjustment	.23	.01
Huff, 2013	Language proficiency	Interaction adjustment	.37	.05
		General adjustment	.20	.05
		Desire accept another assignment	.26	.05
Pinto et al., 2012	Language fluency	Interaction adjustment	.32	.01
Wang & Tran, 2012	Language training	Adjustment	.60	.01
		Job performance	.46	.01

Research Ji (2012) found that expatriate synergy with the community and work-related involvement related to higher levels of language proficiency. Freeman and Olson-Buchanan (2013) and Selmer (2010) identified a relationship with language fluency and all three levels of cross-cultural adjustment; general adjustment ($r = .25$, $p < .05$), interaction adjustment ($r = .31$, $p < .01$), and work adjustment ($r = .22$, $p < .05$). Selmer and Lauring (2011a) demonstrated that expatriates staying for longer durations in host locations tend to demonstrate more proficiency in the host country language, higher rating work outcomes, and high levels of general adjustment and interaction adjustment (see Table 11). Moving through the latter stages of the U-curve theory of adjustment may also explain such adjustment.

Table 11.

Correlations Between Duration and Adjustment in Prior Studies

Study Author(s), Date	Variable 1	Variable 2	Correlation $r =$	Significance Level $p <$
Selmer & Lauring, 2011a	Duration in country	Work adjustment	.17	.001
		Work performance	.18	.001

Researchers provided evidence that refutes the importance of local or common language proficiency. Some global organizations use the English language as a lingua franca (ELF) with preference over the local language (Kubota, 2013; Lauring & Selmer, 2012). A comprehensive CCT program that can incorporate a language-training

component may help to decrease problems associated with work outcomes and general adjustment.

Tung (1981) suggested that comprehensive CCT should encompass various forms of cognitive, affective, and experimental delivery methods. Research conducted by Koo Moon, Kwon Choi, and Shik Jung (2012) also concluded the use of comprehensive CCT delivery improved CQ and cross-cultural adjustment (see Table 12). Selmer (2010) identified that organizations do not utilize experimental CCT consistently even though CCT demonstrates higher positive correlations with CCA (Okpara & Kabongo, 2011; see Table 12). A review of additional research regarding CCT rigor follows.

Table 12.

Correlations Between CCT and Work Outcomes in Prior Studies.

Study Author(s), Date	Variable 1	Variable 2	Correlation *r* =	Significance Level *p* <
Koo Moon et al., 2012	Comprehensive CCT	Work adjustment	.45	.01
Okpara & Kabongo, 2011	Specific experimental training	General adjustment	.52	.05
		Work adjustment	.50	.05
		Interaction adjustment	.49	.05
		Psychological adjustment	.45	.05

Rigor of CCT. Rigor of CCT refers to the total number of hours offered for the program and the use of cognitive, affective, and behavioral competencies in the delivery of the CCT content. The rigor of CCT can vary; high rigor in CCT training involves high

levels of interaction and higher order thinking versus low rigor CCT (Black & Mendenhall, 1990; Ghafoor & Khan, 2011). Low rigor CCT typically ranges in duration from 4-20 hours whereas high rigor training duration is between 60-180 hours. Examples of low rigor CCT include (a) lecture, (b) films, (c) area studies, and (d) books; high rigor CCT includes sensitivity training, simulations, field trips, and in-depth language.

The rigor of CCT programs is a leading contributor to inconsistent expatriate outcomes (Ghafoor & Khan, 2011). Idrees et al. (2011) recommended highly rigorous CCT training programs such as short-term assignments or orientation trips in order to achieve higher levels of cultural adjustment and improve outcomes of longer assignments. Organizations that provide CCT content and delivery methods with a rigor matching the type and duration of expatriate assignment may reduce failure rates and turnover; consideration of the host country's societal norms and customs is inherent in content (Idrees et al., 2011).

Timing of CCT. The different types of timing periods of CCT for expatriates include pre-departure visits, pre-departure training, post-arrival training, and sequential training (Selmer, 2010). Pre-departure visits allow expatriates and family members to gain first-hand exposure to the host environment before the final assignment departure day while pre-departure training and post-arrival training can vary quite drastically in duration and content delivered; durations can range from a few hours to months or years (Selmer, 2010). Pre-departure and post-arrival CCT can include (a) cultural orientation, (b) training related to the specific job in the host country, (c) language training, (d)

environmental or other briefings, (e) books, (f) lectures, (g) workshops, (h) simulations, (i) role playing, (j) cultural assimilators, (k) self-assessment tests, (l) counseling, and (m) others (Selmer, 2010). Sequential training provides a combination of different CCT methods in a designated sequence beginning before departure for the assignment and continuing at different stages during the assignment (Selmer, 2010).

Researchers presented conflicting results regarding the optimal timing of CCT. Wurtz (2014) presented findings demonstrating a positive relationship between expatriates having in country CCT, or post-arrival CCT and annual performance reviews (see Table 13); although no relationship to pre-departure training and performance reviews appeared. Wang and Tran (2012) presented significant relationships between job performance, adjustment, and timing of CCT (see Table 13). Differences in the comprehensiveness of pre-departure or post-arrival CCT may also explain inconsistencies in research.

Table 13.

Correlations Between CCT Timing and Work Outcomes in Prior Studies

Study Author(s), Date	Variable 1	Variable 2	Correlation $r =$	Significance Level $p <$
Wurtz, 2014	Post-arrival CCT	Performance reviews	.16	.05
Wang & Tran, 2012	Pre-departure CCT	Job performance	.47	.01
	Post-arrival CCT	Job performance	.46	.05
	Pre-departure CCT	Adjustment	.51	.01
	Post-arrival CCT	Adjustment	.60	.05

Organizational support of expatriates related to CCT. International human resource management (IHRM) is increasingly complex. Typical activities included in IHRM are employment development, staffing, compensation activities, and performance evaluations within the context of complicated international legal systems, different cultures, and intricate economic systems (Alshammari, 2012). Organizational support for expatriates can vary according to organization size, business need, and expatriate needs. Factors related to a higher propensity to use extensive types of human resource management (HRM) support procedures include high capital intensity organizations and organizations that used larger numbers of expatriates (Smale, Björkman, & Sumelius, 2012). Additional considerations about organizational support follow.

Broad definitions of organizational support include (a) support during the selection process; (b) financial compensation and other benefits; (c) training; (d) logistics relating to moving, career planning, repatriation planning, and family related support; and (e) the establishment of a support climate (Gupta, 2011; Shaffer, Singh, & Chen, 2013; Wu & Ang, 2011). Other aspects of expatriate support are informational, emotional, and instrumental which if expectations related to these types of support are unmet lead to failure (Mahajan & De Silva, 2012). The implication is low levels of support can negatively influence work outcomes.

Wu and Ang (2011) identified four main types of expatriate support: general, financial, career, and family. General assistance and family assistance can include pre-departure cross-cultural training, other pre-departure preparation needs, support in

finding schools, employment, housing, and orientation visits. Financial assistance may include (a) supplementary salary; (b) compensation for travel and transfer allowances; (c) housing stipends; (d) education and training allowances; and (e) other additional compensation payments to support a lifestyle more closely aligned to that of the home country. Career assistance can include planning before, during, and after (repatriation) the assignment (Wu & Ang, 2011). Wu and Ang recommended the use of company training, monitoring, and support programs because of the correlation with cross-cultural adjustment; company support and interaction adjustment ($r = .31$, $p < .05$).

Researchers theorized that organizational leaders who provide training and on-going support regarding role expectations, career path information, participation in networking activities that allow assignees to stay in touch with people in the home organization, coaching, mentor relationships, and career self-management can demonstrate more positive outcomes (Kim & Tung, 2013; Mahajan & De Silva, 2012). When supervisors and expatriates' goals align, assignment outcomes are reciprocal in nature. Reciprocal relationships between sending supervisors and expatriates influenced positive and negative outcomes depending upon the sending supervisors' support of the expatriate; performance and goal congruence ($r = .28$, $p < .10$) and performance and leader-member exchange ($r = .31$, $p < .10$; Pattie, Benson, Casper, & McMahan, 2013).

Researchers theorized that organizational leaders who demonstrate a commitment to training, establishing relationships, and foster open communication, can experience better management of conflict with expatriates and higher work-related outcomes (Chen,

Tjosvold, Huang, & Xu, 2011). International human resource managers need to identify when expatriates need HCN support to provide the appropriate level of organizational support and promote positive expatriate adjustment (Mahajan & De Silva, 2012). Human resources managers who can identify when expatriates need support may increase performance outcomes.

Shen and Kram (2011) identified that social and developmental networks of expatriates become more reliant on host country support the longer the expatriate is within a country. The presence of expatriates with large socially diverse networks, before embarking on an assignment, may influence greater adjustment versus expatriates that possess smaller networks (Freeman & Lindsay, 2012). Shen and Kram (2011) recommended companies provide support, resources, and training to expatriates in identifying and establishing local social support and developmental networks post-arrival and within the host country. The ability of an expatriate to establish local support networks may increase adjustment and performance.

Zhuang, Wu, and Wen (2013) believed availability of a mentor with international experience provides informal training and support, which increases adjustment and work outcomes. Host country and home country mentors are the most common types of expatriate mentors (Kim & Tung, 2013; Zhuang et al., 2013). Froese and Peltokorpi (2011) demonstrated that expatriates who worked for foreign supervisors showed higher job satisfaction than those who worked for host-country supervisors; supervisor nationality and job satisfaction ($r = .26$, $p < .01$).

The use of mentors (social support supervisor) positively related to job satisfaction (r = .34, p < .01) and social supervisor support negatively related to job stress (r = -.28, p < .001; Stroppa & Spieß, 2011), but many organizations do not use this type of organizational support and informal training. Expatriate relationships with HCNs, and specifically HCNs mentors, have positive impacts on expatriate adjustment; general adjustment and HCN friend (r = .29, p < .05; Arman & Aycan, 2013). Scandura (1992) hypothesized that expatriate mentoring provides (a) psychological, (b) social, and (c) career development support (as cited in Zhuang et al., 2013), but HCNs mentors' perceptions of similarity in values related to their willingness to help expatriates (Varma et al., 2012).

Inequalities in expatriate and HCNs compensations can result in less cooperation, distrust, and maladjustment of expatriates, which increases failure rates (Leung, Wang, & Hon, 2011b). Expatriates typically receive payment in their country of origin's salary rate, and HCNs receive compensation in the lower local host country rates. Many factors, including (a) knowledge, (b) skills, (c) organizational value, (d) equitable compensation and benefits package, and (e) adjustment related supports influence expatriate pay (Shaffer et al., 2013). Researchers hypothesized that the large discrepancy between expatriate pay and host country worker pay can lead to mistrust, low morale, uncooperativeness, poor performance, turnover, and other negative behaviors and outcomes (Leung et al., 2011b; Oltra, Bonache, & Brewster, 2013). High compensation discrepancies between expatriates and HCNs have a high incidence of negative

associations and outcomes; firm performance and disapproval of compensation gap (r = -.22, p < .01; Leung et al., 2011b). Expatriates who receive training regarding how to manage this situation could help to improve relationships with HCNs and subsequently work outcomes.

Organization training, monitoring, and support programs provide opportunities to increase expatriate adjustment and work outcomes, but many organizations do not have consistent procedures (Templer, 2010). Wu and Ang (2011) recommended the use of organizational support and monitoring using mentors, on-going training, and career planning. Additional discussion of the influence of career planning follows in the repatriation section.

Repatriation related to CCT. Repatriation involves the process of returning to the home country or country of origin (Tahir & Azhar, 2013). Repatriation procedures typically include (a) preparation, (b) physical relocation, (c) transition, and (d) readjustment, with repatriation success having a direct impact on ROI, performance, and turnover (Kang & Shen, 2013). Nery-Kjerfve and McLean (2012) identified high turnover rates for repatriates as an issue in the management of expatriate employees, estimating up to 50% of repatriates intend to leave the company upon repatriation. McNulty et al. (2013) identified duration and extensiveness of training, organization size, length of assignment, and nature of the industry as factors related to turnover; turnover of top performers occurs with expatriate dissatisfaction, lower organizational effectiveness, and lower firm outcomes.

Some reasons indicated reverse culture shock, reestablishing lost work opportunities and the reestablishment of social network connections for expatriate turnover (Nery-Kjerfve & McLean, 2012; Stroppa & Spieß, 2011; Tharenou, 2013). It is difficult to measure expatriate knowledge transfer, absorption, and intellectual capital attainment in comparison to the total costs incurred, including salary, relocation, and pre-departure training (Chang, Gong, & Peng, 2012; McNulty & Cieri, 2011; Nery-Kjerfve & McLean, 2012). Choi and Johanson (2012) posited the ease and measurability of technological knowledge transfer versus experience-based knowledge and relationship development capability; technological knowledge and experience-based knowledge both positively influence an organization's success.

Another noted repatriation concern is the job title or job role upon repatriation. Organizational commitment and career advancement opportunities for repatriates may represent lateral or demoted roles (Adams et al., 2013; Nery-Kjerfve & McLean, 2012). Organizational leaders with international experiences demonstrated longer times to reach the CEO level than expatriate assignments started later in leaders' careers (Hamori & Koyuncu, 2011).

Researchers demonstrated that negatively perceived repatriation training, support, and career prospects increase the potential of expatriate turnover and decrease performance levels for repatriated employees (Ren, Bolino, Shaffer, & Kraimer, 2013). Research results highlight correlations between career satisfaction and psychological contract breach in pay (PCB-Pay; $r = -.43$, $p < .01$), career satisfaction and perceived

underemployment (r = -.31, p < .01), career satisfaction and repatriates' perceptions of the international assignment value to their long-term career goals (IAV-Career; r = .36, p < .01), and career satisfaction and organization values the international experience (IAV-Organization; Ren et al., 2013). Lund and Degen (2010) theorized that feelings of underemployment, underutilization, or lack of appreciation of new knowledge and skills obtained abroad further increase repatriate turnover intentions.

Stroh et al. (2005) demonstrated, in meta-analysis, that failures of expatriates working in China appeared with (a) inadequate selection criteria, (b) inadequate or no cross-cultural training, (c) difficulty with cross-cultural adjustment, and (d) the absence of a repatriation plan (as cited in Lund & Degen, 2010). Other factors negatively influence expatriate failures including turnover intentions. Researchers identified the following organizational policies and procedures as potentially decreasing turnover intentions (Collings, Doherty, Luethy, & Osborn, 2011; Kim & Tung, 2013; Nery-Kjerfve & McLean, 2012): (a) debriefing opportunities upon assignment termination; (b) reverse culture shock training; (c) the use of psychological contracts; (d) career planning; (e) prearranged agreements for particular positions or training after assignment completion; (f) mentors assigned through the pre and post expatriate experience; (g) discussions regarding expectations after assignment completion; (h) the ability to maintain links to the home country; and (i) support and planning of repatriation.

Work outcomes and CCT. Expatriates perceived CCT as a key influencer in assignment success, but use of CCT in any form is low (Selmer, 2010). Researchers

identified CCT as an influencer for beneficial interactions with host country nationals (HCNs), higher levels of CQ, increased job satisfaction, and increased work performance outcomes (Ghafoor & Khan, 2011; Idrees et al., 2011; Rehg et al., 2012). Okpara and Kabongo (2011) found positive correlations specifically for training and CCA; specific experimental training and general adjustment ($r = .52$, $p < .05$); specific experimental training and work adjustment ($r = .50$, $p < .05$), and specific experimental training and interaction adjustment ($r = .49$, $p < .05$). Okpara and Kabongo also found general conventional training had significant positive correlations to CCA; general conventional training and general adjustment ($r = .45$, $p < .01$), general conventional training and work adjustment ($r = .48$, $p < .01$), and general conventional training and interaction adjustment ($r = .44$, $p < .05$).

Researchers identified highly rigorous and comprehensive forms of CCT that included short-term, orientation, or field trips as demonstrating enhanced effectiveness for expatriate adjustment vs. low rigor CCT (Koo Moon et al., 2012); comprehensiveness of CCT and general adjustment ($r = .45$, $p < .01$) and comprehensiveness of CCT and work adjustment ($r = .45$, $p < .01$). Other researchers indicated pre-departure, post-arrival, and language training as influencers of work outcomes (Ko & Yang, 2011). Researchers identified post-arrival CCT ($r = .60$, $p < .05$) as demonstrating the most positive relationship to adjustment and pre-departure CCT correlating to job performance ($r = .47$, $p < .01$; Wang & Tran, 2012). Ko and Yang (2011), Koo Moon et al. (2012), and Wang and Tran (2012) demonstrated positive outcomes of CCT on expatriate

success, but organizations still do not adopt recommendations regarding the use of CCT and improvements to existing forms of CCT (Selmer, 2010).

Cross-cultural adjustment (CCA) and CQ. Researchers identified maladjustments in host countries as influencing expatriate dissatisfaction, lower performance outcomes, withdrawal intentions, and turnover (Grinstein & Wathieu, 2012; Lee & Kartika, 2014; Pinto et al., 2012; Wu & Ang, 2011). Researchers demonstrated that expatriates with higher cultural intelligence and more international experience have greater cultural adjustment and performance (Wu & Ang, 2011). Other factors researchers identified as influencing expatriate CCA included: (a) demographics (age, gender, marital status, ethnicity); (b) personality traits; (c) family support; (d) cross-cultural training; (e) cultural intelligence; (f) organization support; (g) job level; (h) length of stay; (i) previous overseas experiences; (j) previous international experience; and (k) cultural distance (Lin et al., 2012a; Koo Moon et al., 2012; Okpara & Kabongo, 2011; Rizwan, Riaz, & Saboor, 2011).

Okpara and Kabongo (2011) concluded that various forms of CCT had a significant positive influence on CCA. Okpara and Kabongo found general conventional training had significant positive correlations to CCA; general conventional training and general adjustment ($r = .45$, $p < .01$), general conventional training and work adjustment ($r = .48$, $p < .01$), and general conventional training and interaction adjustment ($r = .44$, $p < .05$). These findings corroborated Black and Mendenhall's (1989) examination of nine other studies that found positive correlations between CCA and CCT. Specifically,

Koo Moon et al. (2012) theorized pre-departure CCT is an influencer of CQ, as well as cross-cultural adjustment, with previous international non-work experience being more influential in developing expatriates' CQ than international work experience. Researchers demonstrated that expatriates with higher cultural intelligence and more international experience have greater cultural adjustment and performance (Wu & Ang, 2011). Lin et al. (2012a) suggested an increased need for using CQ as a selection standard and providing specific types of CCT that incorporate the assessment of expatriates' level of CQ.

Scholars theorized that factors relating to CQ and cross-cultural adjustment influence expatriate success, specifically adjustment to the general environment, interaction with local communities, and expatriate work-related experiences (Sri Ramalu et al., 2011). Chen, Lin, and Sawangpattanakul (2011) observed greater feelings of culture shock had negative correlations with CQ; culture shock and CQ (r = -.23, p < .001). Culture shock also had negative correlations with performance; culture shock and performance (r = -.32, p < .001), while CQ positively correlated with performance; CQ and performance (r =.49, p < .001). Li, Mobley, and Kelly (2013) identified the positive influence of international experiences, including previous international experiences and duration of current experience, on attainment of greater CQ levels. Lee et al. (2013) demonstrated that expatriates with higher levels of CQ experienced better adjustment and performance outcomes; work adjustment and motivational CQ (r =.62, p < .01), interactional adjustment and motivational CQ (r =.61, p < .01), contextual performance

and motivational CQ (r =.96, p < .01), and contextual performance and behavioral CQ (r =.41, p < .01). Higher levels of CQ related to fewer psychological symptoms; motivational CQ and psychological symptoms (r = -.30, p < .05; Ward et al., 2011). The implication is CCA is associated with CQ.

Hofstede's cultural dimensions theory, the GLOBE project, and CQ.

Researchers explained the need for understanding CQ implications through Hofstede's cultural dimensions theory and the GLOBE project. Hofstede (1984) defined cultural distance as the differences between various countries' development, education, business practices, language, cultural values, norms, and other connections. Specific expatriate personality traits in combination with the host country's values, norms, and prototypical personality traits may influence expatriate adjustment, psychological adjustment, interactions with HCNs, self-esteem, and job satisfaction (Peltokorpi & Froese, 2014; Schiefer, Möllering, & Daniel, 2012).

Researchers presented conflicting information associated with the number of cultural dimensions and definitions of specific dimensions (Davis, Bernardi, & Bosco, 2012). Hofstede (1984) proposed six dimensions while the GLOBE project identified nine dimensions. Hofstede's cultural dimensions included (a) power distance, (b) individualism as opposed to collectivism, (c) masculinity as opposed to femininity, (d) uncertainty avoidance, (e) long-term as opposed to short-term orientation, and (f) indulgence as opposed to restraint.

The GLOBE project included the following nine dimensions: (a) performance orientation, (b) uncertainty avoidance, (c) humane orientation, (d) institutional collectivism, (e) in-group collectivism, (f) assertiveness, (g) gender egalitarianism, (h) future orientation, and (i) power distance (House, Quigley, & de Luque, 2010). The GLOBE project based six of the dimensions on Hofstede's findings. The GLOBE project added four cultural dimensions: assertiveness, gender egalitarianism, performance orientation, and humane orientation (Bertsch, 2012).

According to Hofstede (1984), HCNs of expatriates may react to situations differently based on the specific cultural dimensions of the area. Dickson, Castaño, Magomaeva, and Den Hartog (2012) demonstrated high leadership preferences for particular communication styles associated with specific cultural norms. Approaches to management style can affect how expatriates react in specific situations. The combined impact of factors relating to cultural dimensions and management style can influence the perceived role stress of expatriates (Lu, 2011, 2012).

Differences in two countries' cultures can (a) increase anxiety and stress among expatriates; (b) decrease motivation and ability to adjust; (c) decrease performance levels; (d) increase turnover intent; and (e) decrease job satisfaction (Froese & Peltokorpi, 2011). Cultural distance may be a negative predictor of expatriate outcomes. Froese and Peltokorpi (2011) showed greater cultural distances have a negative correlation with job satisfaction; cultural distance and job satisfaction ($r = -.17$, $p < .05$). Templer (2010) found a significant relationship between HCNs with higher ethnocentric attitudes as

opposed to expatriates and lower work adjustment scores; subordinate ethnocentrism and expatriate work adjustment (r = -.32, p < .001).

Discord among researchers exists regarding the reliability of cultural distance scores. Researchers demonstrated inconsistent relationships between societal values (what an individual aspires to be) and practices (how an individual actually behaves) for the Hofstede model and the GLOBE Project (Oltra et al., 2013). Researchers computed cultural distance scores on an aggregate country level, but differences exist within the specific societies of a country (Davis et al., 2012; Hofstede, 1984; House et al., 2010). Management implications do not sufficiently address the *disconnect* in behaviors when current research refers to societal values (Shi & Wang, 2011).

Previous researchers identified cultural distance as an influencer of cross-cultural adjustment of family and spouse and a contributor to assignment failure (Ghafoor & Khan, 2011). Hofstede's seminal work regarding cultural dimensions is relevant in the management of expatriates, but Josien (2012) argued that cultures become more closely associated over time. I examine specific differences between Chinese cultures and American cultures in the next section.

China has unique differences in their cultural dimensions that may influence how individuals from Chinese cultures approach conflict and management compared to other cultures (Ndubisi, 2011). Chen et al. (2011) perceived the Chinese culture as collectivistic, group-oriented, and exhibiting conflict avoidance behaviors compared to their western counterparts. Previous researchers demonstrated a higher use of

compromising strategy among Chinese nationals, which identifies China's Confucian roots in society and cultural norms for harmony; harmony identifies as another means to deal with conflict in specific cultures (Leung, Brew, Zhang, & Yan Zhang, 2011a). The achievement of harmony maintains relationships.

Eastern cultures take a conflict avoidance strategy while western cultures are less inclined to do so. Research regarding shared societal values in China does not include potential differences between regions (e.g., South or North) and social classes; cultural values held by lower socioeconomic groups differ considerably from those at higher levels (Littrell, Alon, & Chan, 2012). Previous researchers indicated significant differences in intracultural societies (regions) and preferences for managerial leader behavior within China (Littrell et al., 2012). The importance of age and education differed greatly among various regions; Macau's age and education (r = -.11, p < .05), Henan's age and education (r = .27, p < .01), Guangdong's age and education (r =.34, p < .01), and Jiangsu's age and education (r = -.10, p < .05). Expatriates aware of these differences through training and higher levels of CQ may experience better outcomes.

The business culture in China depends on the establishment of guanxi and gives much importance to mianzi (Lin, 2011; Varma, Budhwar, & Pichler, 2011). No direct English word translates the full meaning of guanxi, but scholars posited that the term is synonymous with English words relating to relationship, connection, exchange, sharing, and reciprocating while mianzi refers to the ability to save face or preserve self-image (Lin, 2011). China's ideologies of Confucianism, Taoism, and Buddhism related to

conforming, power distance, and building of trustworthy relationships, as well as establishing a connection to the concepts of guanxi and mianzi (Hofstede, 1984; Pan, Rowney, & Peterson, 2012; Varma et al., 2011). Lu (2012) noted previous researchers theorized that a lack of guanxi could prevent the establishment of positive business relationships and negotiations.

Researchers hypothesize that expatriates who understand cultural differences and act accordingly, may experience more favorable work outcomes (Kriz, Gummesson, & Quazi, 2014; Pan et al., 2012; Varma et al., 2011). Varma et al. (2011) correlated support from HCNs with perceptions of expatriates possessing guanxi and other culturally rooted ideologies; support and guanxi ($r = .42$, $p < .01$). Other researchers theorized higher levels of CCT, which includes HCN support, present with positive work outcomes (Dickson et al., 2012). In the study, I investigated the potential relationships among CQ and work outcomes. Research results may help to influence the improvement of existing expatriate CCT programs.

Expatriate identification, selection, and CQ. Researchers theorized CQ measurements are predictors for expatriate identification, selection, and assignment success (Ward et al., 2011; Wu & Ang, 2011); identify the construct of CQ as an identification and selection tool for greater expatriate success. Organizations more commonly utilize other forms of expatriate identification and selection tools. A detailed review follows.

The rationale for expatriate use varies depending on the needs of individuals requesting the assignment, requirements to fill positions, organizational development, management development, and new business development initiatives (Kang & Shen, 2013; Wang, Bullock, & Oswald, 2011). Baruch and Altman (2002; as cited in Altman & Baruch, 2012) identified five main types of expatriation reasons: global/empire, emissary/colonial, peripheral, professional, and expedient. The global/empire type occurs in a large MNC where expatriate assignments are a necessary component for career advancement. The emissary/colonial type occurs within a global organization centered on a particular culture.

The peripheral-type signifies expatriation as an employee incentive, and the professional type outsources specific expatriate functions. The expedient type measures the emergence of global business needs. Altman and Baruch (2012) revised their model to four main types of expatriation reasons based on the evolution of reasons to use expatriates: business driven/traditional career path, developmental/traditional, career promotion opportunity/new path and personal growth / new path. Home companies dispatch organizational expatriates (OEs) to international posts while self-initiated expatriates (SIEs) make the decision to live and work abroad (Selmer & Lauring, 2012; Tharenou, 2013). A review of detailed research on other types of expatriate classifications follows.

Identification and selection can focus on several different types of knowledge, skills, ability, and other (KSAOs) factors depending on the persons requesting the

assignment. The role of SIEs, in seeking out and embarking on international assignments without the support or recommendation of an organization, may prevent organizations from incurring additional financial expenditures related to OEs (Selmer & Lauring, 2010). A desire for adventure, life change, family concerns, money, and future career opportunities motivate SIEs, while job-related factors motivate OEs, as their organizations drive the need for their assignments (Doherty, Dickmann, & Mills, 2011; Froese & Peltokorpi, 2013). Organizational expatriates (OEs) tend to work more often at foreign MNCs and frequently occupy more senior organizational positions while SIEs associated more with higher interaction adjustment, because of their personal motivations, longer stay in the host country, and higher host-country language proficiency (Froese & Peltokorpi, 2013).

Researchers recognized the following factors used by organizational leaders to identify and select organizational expatriates (OEs): (a) the presence of a particular skill set (technical, managerial, leadership, communication, decision-making, negotiation); (b) job expertise (job knowledge, job title); (c) past performance (performance appraisals, task performance, relationship performance, contextual performance); (d) the ability to adjust (language skills / proficiency, previous cross-cultural training, cultural distance); and (e) assessment scores from specific types of organization testing (Adams et al., 2013; Altman & Baruch, 2012; Doherty, Richardson, & Thorn, 2013; Froese & Peltokorpi, 2011, 2013; Josien, 2012; Lin, Lu, et al., 2012; Koo Moon et al., 2012; Selmer & Lauring, 2010, 2012; Strubler, Agarwal, Park, & Elmer, 2011; Templer, 2010; Wang et

al., 2011). Assessment tests can identify the most appropriate expatriates for overseas assignments. Assessment tests include (a) Myers-Briggs Type Indicator, (b) Big Five personality characteristics, (c) Dutch Test for Conflict Handling, (d) Foreign Assessment Selection Test, (e) Overseas Assignment Inventory, (f) Relocation Intercultural Services Inventory, (g) Cross-Cultural Adaptability Inventory, (h) Intercultural Development Inventory, (i) Characters, Drivers, Risks 3D Assessment Suite, (j) The Prospector, (k) Self-directed Search, (l) Self-assessment for Global Endeavors, and (m) Dominance, Influence, Steadiness, Conscientiousness Survey for Communication (Adams et al., 2013; Altman & Baruch, 2012; Doherty, Richardson, & Thorn, 2013; Froese & Peltokorpi, 2011, 2013; Josien, 2012; Lin, Lu, et al., 2012; Koo Moon et al., 2012; Selmer & Lauring, 2010, 2012; Strubler, Agarwal, Park, & Elmer, 2011; Templer, 2010; Wang et al., 2011).

Selection criteria for OEs and SIEs vary according to organization and needs. Researchers distinguished the following factors used by organization leaders to identify and select OEs based on factors that also represent important considerations for SIEs including: (a) family openness / adaptability (willingness / openness to relocating, stable family relations, family acceptance, family adaptability); (b) candidate motivation/willingness (interest in host culture / environment, interest in overseas work, cultural openness); (c) career/succession planning needs (improve future career opportunities, succession planning, promotion contingencies); (d) previous international experiences (work-related, non-work-related, number of previous assignments); (e)

relational/interpersonal skills and personality (cultural empathy, initiative, independence, emotional stability, maturity, patience, stress tolerance, conflict management); and (f) demographics (age, gender, education, tenure with the organization, and marital status) (Adams et al., 2013; Altman & Baruch, 2012; Doherty, Richardson, & Thorn, 2013; Froese & Peltokorpi, 2011, 2013; Josien, 2012; Lin, Lu, et al., 2012; Koo Moon et al., 2012; Selmer & Lauring, 2010, 2012; Strubler, Agarwal, Park, & Elmer, 2011; Templer, 2010; Wang et al., 2011). Researchers highlight SIEs' motivation to seek out overseas assignments by their: (a) desire for adventure / travel (challenging situations, new experiences, opportunity to explore different places); (b) financial motivations (increased income potential, increased savings per housing and other allowances); and (c) life changes/escapes from current situations (personal life, work situations, and opportunity for a life change) (Adams et al., 2013; Altman & Baruch, 2012; Doherty, Richardson, & Thorn, 2013; Froese & Peltokorpi, 2011, 2013; Josien, 2012; Lin, Lu, et al., 2012; Koo Moon et al., 2012; Selmer & Lauring, 2010, 2012; Strubler, Agarwal, Park, & Elmer, 2011; Templer, 2010; Wang et al., 2011).

Previous researchers reported conflicting results regarding OEs and SIEs. Self-initiated expatriates (SIEs) that solicited international assignments committed to assignment success, invested more in experiences, and demonstrated higher levels of adjustment, satisfaction, and outcomes than OEs. Both OEs and SIEs with clear personal and psychological contracts, prior to departure, could achieve beneficial outcomes

(Altman & Baruch, 2012; Tharenou, 2013). Other researchers found that SIEs experienced lower levels of satisfaction versus OEs (Froese & Peltokorpi, 2011).

Such differences may occur because of an interest in a given foreign country, and possible previous social interactions with host country nationals for self-initiated expatriates (Doherty et al., 2013; Tharenou, 2013). Despite the increased amount of organizational support provided to OEs, SIEs tend to exhibit better cross-cultural adjustment, but lower job satisfaction, potentially as a result of working for host country management as opposed to organizational management from their country of origin; OEs vs. SIEs and satisfaction ($r = .19$, $p < .05$) and OEs vs. SIEs and interaction adjustment ($r = -.28$, $p < .01$; Froese & Peltokorpi, 2013). Contrary to other study results, Froese and Peltokorpi (2011) found OEs demonstrated higher satisfaction levels than SIEs, perhaps because OEs receive higher levels of organizational support than SIEs; OE expatriate type and job satisfaction ($r = .20$, $p < .05$).

Current identification and selection standards are not sufficient to increase the likelihood of expatriate success. Minter (2011) theorized identification and selection standards have a negative impact on expatriate assignment success because of the lack of consistent standards. An overreliance on technical competence highlights the inadequate identification and selection criteria used by organizations in selecting expatriates for assignments that require more varied, KSAOs (Wang et al., 2011). Previous researchers recommended organizations consistently use any of the existing expatriate identification and selection assessments (Minter, 2011; Wang et al., 2011).

Expatriate personality traits and CQ. Pervin et al. (2005) indicated that personality refers to consistent patterns of feeling, thinking, and behaving (as cited in Jabeen, Cherian, & Pech, 2012). Personality traits related to cultural intelligence may influence an expatriate's ability to adjust, adapt, and perform. Researchers conducted seminal studies with the big five personality traits and specifically identified that individuals with extroversion, openness, and agreeableness attributes demonstrated higher levels of cross-cultural adjustment and assignment success; openness to experience and work adjustment ($r = .39$, $p < .05$; Freeman & Olson-Buchanan, 2013) and cultural openness/adaptability and work adjustment ($r = .49$, $p < .001$; Templer, 2010). Bruning, Sonpar, and Wang (2012) reported a positive relationship between the personality attribute of extraversion and job performance ($r = .38$, $p < .01$). Fischer (2011) associated greater openness and motivational CQ with additional training effectiveness ($r = .64$, $p < .01$). Templer (2010) identified that expatriate attributes pertaining to job knowledge, relational leadership skills, cultural openness, and adaptability correlate positively with HCNs unit performance, but expatriate selection and training processes lack consideration of expatriate attributes.

Attributes related to measures of CQ correlate with measurements of personality traits. Multicultural behavior (MCB) affects cultural intelligence (CQ), which in turn influences the likelihood of international job acceptance (Engle et al., 2012). Expatriates possessing the greater open-mindedness trait correlated with more training effectiveness, especially in relation to improvements in cognitive and motivational CQ: openness and

cognitive CQ before training ($r = .48$, $p < .01$) versus openness and cognitive CQ after training ($r = .58$, $p < .01$; Fischer, 2011). MacNab and Worthley (2012) proposed that traits relating to self-efficacy, intrinsic motivation, and cross-cultural motivation (motivational CQ) lead to higher levels of assignment adjustment and performance.

Lin et al. (2012a) conducted a meta-analysis that indicated higher performance outcomes, job satisfaction, and desired global leader characteristics related to additional personality attributes. Lin et al. (2012a) studied numerous personality traits and their ability to influence work outcomes, including: (a) agreeableness, (b) charisma, (c) creativity, (d) empathy, (e) emotional stability, (f) extroversion, (g) flexibility, (h) maturity, (i) motivation, (j) openness, (k) optimism, (l) perceived personal value, (m) personal initiative, (n) self-efficacy, (o) self-regulation, (p) social initiative, (q) social judgment skills, (r) tolerance of ambiguity, and (s) trustworthiness. Specific personality traits are relevant to acquired levels of CQ (Freeman & Olson-Buchanan, 2013).

Stroppa and Spieß (2011) found expatriates who had high levels of personal initiative or motivation demonstrated higher performance outcomes and satisfaction; personal initiative and job performance ($r = .41$, $p < .001$) and personal imitative and job satisfaction ($r = .35$, $p < .001$). Cole and McNulty (2011) discovered a correlation between higher levels of perceived personal value and higher levels of cultural adjustment; self-transcendence and interactional adjustment ($r = .46$, $p < .001$). Positive outcomes of global leaders correlate with specific personality traits including cultural empathy, open mindedness, social initiative, emotional stability, and flexibility

(Peltokorpi & Froese, 2012; Froese & Peltokorpi, 2013). Researchers demonstrated that personality traits have a positive influence on job satisfaction (Froese & Peltokorpi, 2013; Peltokorpi & Froese, 2012).

Global leaders who cognitively and meta-cognitively understand local expectations and demonstrate behaviors that meet or exceed local expectations have greater positive work outcomes (Dorfman, Javidan, Hanges, Dastmalchian, & House, 2012). Jabeen et al. (2012) reported correlations between personality traits relating to proactivity, extroversion, enthusiasm, and leadership effectiveness; trusting traits and ability to be tactful ($r = .17$, $p < .01$) and trusting traits and approach ($r = .17$, $p < .01$), and trusting traits and ability to solve problems ($r = .23$, $p < .01$). Caligiuri and Tarique (2012) reported global leadership effectiveness correlated with several personality traits; global leadership effectiveness and cultural flexibility ($r = .29$, $p < .01$), global leadership effectiveness and tolerance of ambiguity ($r = .28$, $p < .01$), global leadership effectiveness and neuroticism ($r = .21$, $p < .01$), and global leadership effectiveness and extroversion ($r = .17$, $p < .05$).

Possessing specific personality attributes is not sufficient; expatriates who demonstrate intelligence about when to display specific personality traits tend to experience higher rates of success. Researchers' theories associated with emotional and social intelligence competencies (ESC) show relationships to work performance (Emmerling & Boyatzis, 2012). Selmer and Lauring (2013) showed positive correlations between positive affectivity, work adjustment, work performance, work effectiveness,

and job satisfaction; positive affectivity and work adjustment ($r = .36$, $p < .001$), positive affectivity and work performance ($r = .32$, $p < .001$), positive affectivity and work effectiveness ($r = .30$, $p < .001$), and positive affectivity and job satisfaction ($r = .44$, $p < .001$). Selmer and Lauring (2013) indicated the ability of specific personality factors combined with training in improving expatriate outcomes. These aspects of personality, along with CQ levels, can serve as potential identifiers or selection criteria for future expatriate candidates, given the positive outcomes seen in previous research.

The type of expatriate personality traits that positively interact with HCNs varies based on perceived differences in the host country's personality characteristics. Previous researchers found that the demonstration of social initiative increased job satisfaction in Brazil, but those same attributes had little impact in Japan (Froese & Peltokorpi, 2013). Differences in how previous researchers perceived specific personality traits and HCNs' responses to those traits, could affect job satisfaction and work outcomes. The implication being that personality trait related components and CQ influence work outcomes.

Expatriate demographic factors and CQ. Previous scholars indicated demographic factors might influence CQ and expatriate outcomes. Differences in expatriate demographic factors relating to (a) age, (b) gender, (c) marital status, (d) education, (e) religion, (f) ethnicity and (g) factors in the host country may influence the acceptance of social networks abroad and an expatriate's intercultural effectiveness in working and communicating with those social networks (Alshammari, 2012; Bhatti,

Kaliani Sundram, & Hoe, 2012; Freeman & Lindsay, 2012; Selmer & Lauring, 2010). Expatriate demographics of gender and age specifically can pose a negative impact on adjustment factors if a female expatriate is in a male-dominated or age-centric culture, less accepting of women or specific ages for leadership roles.

Researchers identified age as influencing expatriate assignments; age and job satisfaction ($r = .21$, $p < .05$; Froese & Peltokorpi, 2013). Adventure, career, and money influence Younger SIEs; older male SIEs demonstrate a stronger motivation to expatriate based on money and change in life compared to women expatriates (Selmer & Lauring, 2010). In other research, expatriates traveling with spouses (marital status) demonstrated a positive impact on work outcomes (Selmer & Lauring, 2011c), but Selmer and Lauring did not find a strong correlation between adjustment of SIEs and marital status for other host countries. Alshammari (2012) and Bhatti et al. (2012) attributed influence of demographic factors to cultural differences and values toward those demographic factors in specific regions of the world. Demographic factors relating to age, gender, marital status, religion, and ethnicity and the corresponding response from HCNs in relation to those factors, motivated or deterred expatriates from positive work outcomes and adjustment overseas. Organizations that use these factors in identification and selection criteria may help to alleviate problems experienced with adjustment and work outcomes.

Conflict management traits and CQ. Measurements of CQ may help establish selection criteria for specific roles in business. Negotiation effectiveness inadvertently involves conflict management strategies and cross-cultural knowledge. Conflict

management is increasingly complex in the global domain. Additional considerations for synergies between conflict management and CQ follow.

Expatriates can experience many different types of stress during an assignment, including (a) discord with family/spouse, (b) maladjustment to environmental conditions including living and work arrangements and social interactions with host country peers and society, (c) work-related expectations, (d) potential weather-related or natural disasters, and (e) terrorism (Bader & Berg, 2013; Lee & Kartika, 2014). Scholars connected psychological stress occurring from poor cross-cultural adjustment with lower work performance outcomes, increased job dissatisfaction, and decreased positive outlook (Firth, Chen, Kirkman, & Kim, 2014; Lin, Chen et al., 2012). Expatriates' ability to use the appropriate conflict management strategy when presented with challenges associated with work and life can affect work outcomes and job satisfaction. Researchers showed stress resiliency and empowerment as positivity relating to the type of conflict management approach used (Pines et al., 2012). The Hofstede section entails selection of specific expatriate conflict management strategies and connections to particular societal norms and values.

Rahim's (2000), as cited in Ndubisi (2011) five conflict-handling strategies include: (a) integrating, (b) accommodating, (c) compromising, (d) forcing and (e) avoiding. Cultures have associations with specific conflict management styles. China's Confucian roots and societal norms may affect acceptance of specific conflict management strategies (Ndubisi, 2011). In line with Chinese Confucian philosophies,

Chinese individuals demonstrate more conflict avoidance and desire to maintain harmony than Americans who tend to confront in conflicts. Expatriates who use communication and conflict management styles associated with HCNs and their respective conflict management styles experience better adjustment in terms of job satisfaction and lower turnover intentions; indirect communication style and job satisfaction (r = .28, p < .01) and indirect communication style and job satisfaction (r = -.21, p < .05; Froese et al., 2012). The utilization of appropriate conflict management strategies is relevant to the acquisition of higher levels of CQ.

Expatriate leadership traits and CQ. Measurements of CQ may help establish selection criteria for specific leadership roles in international business (Rockstuhl et al., 2011). The value of expatriates gaining international experiences signifies their future ability to manage different company cultures and foreign employees (Hamori & Koyuncu, 2011). Caligiuri and Tarique (2012) theorized the manner in which a global leader approaches problems and people have higher success rates. Personality traits and leadership effectiveness skills interconnect (Jabeen et al., 2012) with personality traits and behavioral characteristics relating to social skills, network management skills, and knowledge influencing global leadership attributes (Caligiuri & Tarique, 2012; Festing & Maletzky, 2011). Expatriates capable of understanding and utilizing culturally appropriate behavior may improve work outcomes and job satisfaction.

Transformational leaders demonstrated the ability to inspire and motivate followers to achieve performance levels above expectations (Engelen, Schmidt, Strenger,

& Brettel, 2014). Transformational leaders typically demonstrated six traits: (a) articulating a vision, (b) providing an appropriate model, (c) accepting group goals, (d) having high performance expectations, (e) providing individualized support, and (f) providing intellectual stimulation (Podsakoff et al., as cited in Engelen et al., 2014). Transformational leaders can influence an organization's ability to innovate with articulating a vision shown to have a strong positive relationship on innovation (Engelen et al., 2014). Gundersen, Hellesoy, and Raeder (2012) showed that transformational leadership styles associate positively with international work adjustment, job satisfaction, and work performance; transformational leadership and team performance ($r = .54$, $p < .001$), transformational leadership and job satisfaction ($r = .62$, $p < .001$), and transformational leadership and work adjustment ($r = .32$, $p < .001$).

Templer (2010) indicated significant relationships between relational leadership skills and several measures of work outcomes; relational leadership skills and expatriate work adjustment ($r = .55$, $p < .001$), relational leadership skills and subordinate commitment ($r = .45$, $p < .001$), relational leadership skills and subordinate job satisfaction ($r = .48$, $p < .01$), and relational leadership skills and unit performance ($r = .32$, $p < .001$). Researchers from the GLOBE project identified charismatic/value-based leadership and the team-oriented leadership dimensions as being successful leader attributes in multiple cultures and countries (Gundersen et al., 2012). Global leaders trained on these influencers and who know the proper context in which to engage in these behaviors may experience more positive work outcomes.

Leadership definitions vary through time and across cultural boundaries, but scholars identified some universally accepted leadership traits: vision, empowerment, entrepreneurialism, and aspects of transformational leadership. Global leadership training needs to include (a) specific expectations of host societies and (b) how to express those behaviors effectively and in the proper context in order to be successful (Dickson et al., 2012; Steers, Sanchez-Runde, & Nardon, 2012). The demonstration of particular leadership styles in cultural settings is relevant to the acquisition of higher levels of CQ.

Theory of CQ in relation to the CQ construct. The theory of cultural intelligence originated from other distinctions related to intelligence (IQ) domains; emotional intelligence (EQ), social intelligence (SQ), and general mental ability (GMA; Zhang, 2013). Four factors of CQ that measure an individual's ability to interpret and respond to different cultural situations include: (a) metacognitive, (b) cognitive, (c) motivational, and (d) behavioral (Van Dyne et al., 2009). Theoretically, the components of CQ move in a continuum that increase CCA and work outcomes. The first component of cognitive CQ is necessary for building the foundation from which to draw the planning and organization required in metacognitive skills. The motivational domain follows from increased exposure, knowledge, ability, and training. The behavioral component serves as the intersection of cognitive, meta-cognitive, and motivational domains (Earley & Ang, 2003).

The theory of CQ interrelates with the measurement outcomes of the CQ construct. Each of the four domains of CQ identifies potential cross-cultural skills and

competencies, in a static snapshot of time. Researchers demonstrated that higher levels of CQ correlated with higher levels of CCA and work outcomes (see Table 14). The aggregate CQ score and the construct of CQ can serve as a measure of assignment readiness and future assignment success. Additional detail regarding CQ and work outcomes follows.

Table 14.

Correlations Between CQ, CCA, and Work Outcome in Prior Studies

Study Author(s), Date	Variable 1	Variable 2	Correlation $r =$	Significance Level $p <$
Wu & Ang, 2011	Motivational CQ	Task performance	.51	.01
	Behavioral CQ	Task performance	.31	.01
	Motivational CQ	General adjustment	.51	.01
	Motivational CQ	Work adjustment	.37	.01
	Behavioral CQ	Interaction adjustment	.26	.01
Lee et al., 2013	Motivational CQ	Work adjustment	.62	.01
	Motivational CQ	Interaction adjustment	.61	.01
	Motivational CQ	Contextual performance	.96	.01
	Behavioral CQ	Contextual performance	.41	.01

Work outcomes and CQ. Researchers showed relationships between aggregate CQ scores, specific domains of CQ, and work outcome measurements. Cultural shock negatively related to higher levels of CQ (r = -.23, p < .001) while work performance was (r = .49, p < .001) positively related to higher levels of CQ (r = .49, p < .001; Chen et al., 2011). Higher levels of CQ correlated to greater adjustment levels (r = .28, p < .01;

Malek & Budhwar, 2013) and contextual performance ($r = .29$, $p < .05$; Sri Ramalu et al., 2011). Wu and Ang (2011) demonstrated the influence of distinct levels of CQ on work adjustment and corresponding organizational support needs; higher cognitive and metacognitive CQ required less organization support versus lower levels of cognitive and metacognitive CQ. Ang et al. (2007) showed a correlation between culturally based decision-making and metacognitive CQ ($r = .27$, $p < .01$) and culturally based decision-making and cognitive CQ ($r = .21$, $p < .01$). Motivational CQ and behavioral CQ correlated highly with task performance; motivational CQ and task performance ($r = .51$, $p < .01$; Wu & Ang, 2011) and behavioral CQ and task performance ($r = .31$, $p < .01$; Wu & Ang, 2011). Leader CQ correlated to leader performance ($r = .33$, $p < .05$) and leader CQ correlated to team member performance ($r = .22$, $p < .05$; Groves & Feyerherm, 2011). While some researchers found correlations between CQ and work outcomes, others criticize discrepancies in the literature.

Criticisms of CQ. Some researchers show inconsistent relationships regarding CQ on various work outcome factors. Sri Ramalu et al. (2011) did not show a relationship between motivational CQ and job performance. Researchers (Ward et al., 2011) found motivational CQ negatively related to psychological and sociocultural adaption. Researchers (Wu & Ang, 2011) showed cognitive and metacognitive CQ as negatively associated with adjustment and performance. Scholars attempted to respond to these discrepancies with additional research (Van Dyne et al., 2012). The conflicting

nature of existing scholarly literature and research regarding the CQ construct provides justification for additional study of sub-dimensions of CQ factors.

Transition and Summary

Section 1 included a description of the background of the problem, problem statement, purpose statement, nature of the study, research questions, and hypotheses. The literature review concluded the section with details surrounding the topics of expatriates and related research concerns. Section 2 contains a comprehensive summary of the purpose of the study, descriptions surrounding the purpose, and data collection techniques. I outlined the research methods and designs with detailed descriptions of approaches utilized and the rationale for selecting the specific approaches. Section 2 includes explanations of data collection instruments and techniques, along with organizational strategies. The section concludes with thorough descriptions of the data analysis procedures and the reliability and validity of the survey instruments and statistical procedures.

Section 2: The Project

In the first part of this section, I include the study objectives, role of the researcher, and participants followed by a discussion of the study sample and data collection technique. Section 2 includes a discussion of research methods, design considerations, and data analysis techniques. Reliability and validity of the research results complete the section.

Purpose Statement

The purpose of this quantitative correlational study was to examine the relationships among a subset of cultural intelligence predictor variables and work outcome related dependent variables. The independent variables were (a) cognitive CQ, (b) metacognitive CQ, (c) motivational CQ, and (d) behavioral CQ. The dependent variables were (a) work adjustment, (b) work performance, (c) work effectiveness, and (d) job satisfaction. The targeted population comprised United States expatriates working in China or recently returned from work in China. The implications for positive social change include the potential to strengthen current expatriate identification, training, support programs, and improvement of intercultural relations in international business (Collins & Kriz, 2013; Gunkel et al., 2014; Tait et al., 2014; Varma et al., 2012).

Role of the Researcher

My role as the researcher was to model portions of the quantitative study conducted by Selmer and Lauring (2013). Factors influencing expatriate work outcomes were the dependent variable constructs while cultural intelligence sub-dimensions were

the independent variables. Study participants answered questions in an online survey format. After sufficient time in the field and attainment of adequate sample, a statistical analysis program calculated statistics of study data for further examination.

A non-probabilistic, snowball sample can identify appropriate participants for the study. The main advantage of snowball sampling is the option to find potential study participants that may be difficult to obtain in other traditional methods (Sadler, Lee, Lim, & Fullerton, 2010). I obtained my study sample through referrals of potential study participants; snowball sampling. Snowball sampling in this study included the use of LinkedIn groups for expatriate related topics, IHRM, and the American Chambers of Commerce (AmCham) in Hong Kong, Tianjin, and Shanghai. The primary disadvantages of snowball sampling are the potential issues with representativeness of the population and time to reach participants (Sadler et al., 2010). Snowball sampling occurs with referrals from similar groups of potential study samples; therefore, the study sample may not be reflective of the actual population (Sadler et al., 2010).

Study participants received an informed consent letter outlining the study background, procedures, voluntary nature of the study, any risks and benefits of study participation, privacy issues, contact information if questions or concerns arise, and finally, a statement of their understanding and consent to participate in the study (ASH, n.d.). Through participation in the study, participants provided input regarding the study hypotheses. I also gave research participants the option to review the aggregated study results after data analysis.

No previous relationship existed between the study organizations or study participants. I completed an expatriate assignment for a previous employer, which may have introduced potential bias in data analysis and interpretation. The use of validated scales in the study instrument may have decreased the potential for biases in questionnaire design, and the use of the similar statistical testing procedures conducted by Selmer and Lauring (2013) helped provide unbiased data to support or refute the study hypotheses. Data analysis occurred through the Predictive Analytics SoftWare (PASW) program/Statistical Package for the Social Sciences (SPSS) version 21. Additional details highlighting specific targeting of participants and particular research methods follow in the subsequent sections.

Participants

The study sample included United States expatriates working in China. Census figures from the National Bureau of Statistics of China, estimated that 71,493 United States nationals worked in China at the end of 2010 (MacLeod, 2011). The estimated sample of roughly 170 targeted study participants derived from the G*Power calculator (Faul, Erdfelder, Buchner, & Lang, 2009). The following criteria included the inputs for the G*Power calculator: *F* tests under the test family, Linear Multiple Regression: Fixed model, R^2 deviation from zero under statistical tests. To compute the a priori sample size, I entered an effect size of .15 (medium effect size), a α error probability of .05, a power (1-β) of .80, and 4 predictors. The G*Power calculator computed a recommended sample size of 85 (Faul et al., 2009). If the power size increased to .99, the calculator computed a

recommended sample size of 174 desired participants. Therefore, the recommended sample was between 85 and 174 participants for the study.

LinkedIn group managers for expatriate related topics, international human resource management, and the AmCham in Hong Kong, Tianjin, and Shanghai received requests to post an invitation to participate in the study; a nonrandom, snowball sample of potential study participants. Black and Stephens (1989) previously used some of the mentioned sampling sources. An estimated 5,000 potential study participants, comprising American expatriates currently working in China or recently returned from work in China in the past 12 months, received emailed invitations from the contact information obtained (see Appendix A). To achieve additional sample, I used a non-probabilistic, snowball sampling technique and requested that study participants forward the survey link to other appropriate contacts (Sadler et al., 2010).

The email and the introductory survey statements included information regarding informed consent, where participants can agree or decline to participate in the survey, providing their implied consent. The participants indicated their understanding that participation is voluntary and that they would not receive compensation for their time. I notified study participants that survey responses were anonymous and reported as an aggregate. This informed consent process ensured participant confidentiality.

Based on Institutional review board (IRB) approval given on May 22, 2015, data collection commenced on May 24, 2015 and ended on July 14, 2015. The approval number is 05-08-15-0354020. Study participants answered 37 questions in an average of

15-20 minutes. The nonrandom sample approach, using the previously identified organizations combined with personal referrals, yielded the minimum number of completed surveys. I stored the aggregate PASW / SPSS data files, including participant responses, on a cloud-archived computer file where they will remain for a total of 5 years.

Research Method and Design

The goal of this quantitative, correlational study was to determine whether a relationship exists between sub-dimensions of cultural intelligence and the expatriate work-related outcomes of (a) work adjustment, (b) work performance, (c) work effectiveness, and (d) job satisfaction. I explored the underlining factors associated with the sub-dimensions of cultural intelligence: (a) cognitive CQ, (b) metacognitive CQ, (c) motivational CQ, and (d) behavioral CQ. Additional research method and design considerations follow.

Method

Three methods exist for conducting scholarly research: (a) qualitative, (b) quantitative, and (c) mixed-methods. Researchers use quantitative methods to understand statistical relationships through numerical data (Field, 2013). I selected a quantitative methodology for this study to identify a potential correlational relationship and to test the hypotheses (Rovai et al., 2013). The use of correlations in hypothesis testing allows for generalization of quantitative research results to a larger population (Field, 2013; Rovai et al., 2013).

Researchers characterize qualitative analysis through unstructured questions designed to gain a deeper understanding of a participant's thoughts and feelings regarding a study topic (Rovai et al., 2013). Researchers gather rich textural data through in-depth interviews that they transcribe and analyze to understand emerging (Rovai et al., 2013). Previous researchers conducted qualitative expatriate research to determine directional findings for further testing, but statistically significant results are not as prevalent in the scholarly research. I rejected the qualitative research approach since qualitative research would not provide statistically meaningful results for describing relationships between cultural intelligence and expatriate work outcomes.

The intent of this research was to generalize study results to a larger population, provide statistically meaningful comparisons, and derive correlations to infer relationships between the study variables. I did not consider a mixed-methods approach, given the amount of existing qualitative data already available regarding the study factors. Several authors used a similar quantitative research method and design in their studies; Selmer and Lauring (2013) examined work outcomes and dispositional affectivity and Malek and Budhwar (2013) explored potential relationships between cultural intelligence and work adjustment.

Research Design

Three research design approaches exist in quantitative research: (a) non-experimental, including descriptive, correlational, and regression (b) quasi-experimental and (c) experimental (Rovai et al., 2013). Descriptive analysis consists of describing the

study data through means, medians, mode frequencies, ranges, and standard deviations (Rovai et al., 2013). Descriptive analysis does not support drawing relationships between study variables while correlational research does identify study variables that may have a relationship with one another (Rovai et al., 2013).

Determining potential causal relationships is not possible with the use of cross-sectional, correlational designs; researchers use the longitudinal nature of quasi-experimental and experimental designs to draw cause-and-effect relationships (Rovai et al., 2013). Quasi-experimental and experimental designs facilitate the manipulation of control groups and treatment variables in an attempt to measure a possible causal relationship in the study (Rovai et al., 2013). Quasi-experimental and experimental designs are designs commonly used in longitudinal studies. My doctoral study focused on a cross-sectional approach to the data; data capture occurred as it naturally happened in the study participants' environments and without the manipulation of study variables or treatments. I did not consider experimental and quasi-experimental designs, given the need to conduct a longitudinal study. A longitudinal study would require: (a) selecting a random sample of study participants, (b) establishing a control and experimental group, (c) measuring baseline cultural intelligence scores, (d) applying cross-cultural training or other factors I hypothesized to increase levels of CQ, and (e) measuring changes in expatriate groups before, during, and after assignment experiences (Rovai et al., 2013).

Researchers use non-experimental, correlational designs to understand potential relationships between study variables as they naturally occur in the study participants'

environments. The use of quantitative, correlational research increases the ability of the study results to be reflective of the greater U.S. expatriate population working in China. I preferred a correlational design to a more general descriptive design for its ability to measure the degree and pattern of relationships between the study variables (Field, 2013).

Multiple regression analysis measures the potential relationships between dependent and independent variables by examining all variables in the model at the same time (Field, 2013). Researchers use multiple regression processes when they want to examine the values of dependent variables related to multiple predictors or independent variables (Field, 2013). Previous researchers (Chen et al., 2011; Huff, 2013; Malek & Budhwar, 2013) used multiple regression analysis to examine expatriate factors relating to CQ and potential influences on work-related outcomes. An examination of their results follows.

Huff (2013) conducted hierarchical multiple regression analysis to examine the relationships among CQ, language proficiency, cross-cultural adjustment, expatriate satisfaction, and future expatriate aspirations (see Table 15). Chen et al. (2011) used hierarchical multiple regression analysis to examine the influence of CQ and cultural shock on performance. Cultural shock negatively related to higher levels of CQ (r = -.23, p < .001) and work performance (r = .49, p < .001) positively related to higher levels of CQ (Chen et al., 2011). Malek and Budhwar (2013) explored possible relationships between cultural intelligence, work adjustment, and contextual work performance (see

Table 15). These scholars demonstrate the relevance of examining the potential influence of cultural intelligence on work-related outcomes in this doctoral study.

Table 15.

Correlations Between CQ and Work Outcomes in Prior Studies

Study Author(s), Date	Variable 1	Variable 2	Correlation *r* =	Significance Level *p* <
Huff, 2013	Metacognitive CQ	General adjustment	.24	.05
	Metacognitive CQ	Work adjustment	.36	.05
	Metacognitive CQ	Interaction adjustment	.34	.05
	Motivational CQ	Life satisfaction	.50	.05
	Motivational CQ	Work adjustment	.54	.05
	Motivational CQ	Desire accept future assignments	.43	.05
Malek & Budhwar, 2013	CQ	General adjustment	.27	.01
	CQ	Interaction adjustment	.28	.01
	CQ	Work adjustment	.24	.01
	CQ	Contextual work performance	.23	.01

The standard multiple regression equation used in the doctoral study is $Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4$. The Y variables represented the dependent variables of work outcomes: work adjustment (WA), work effectiveness (WE), work performance (WP), and job satisfaction (JS). Sub-dimensions of CQ represented the independent variables: Metacognitive (MC), Cognitive (CO), Motivational (MO), and Behavioral (BE; see Figure 1). Further explanation of the study results follow in Section 3.

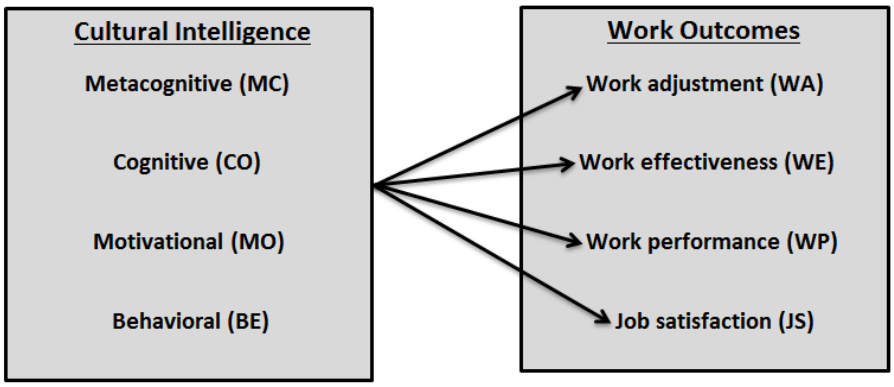

Figure 1. *Doctoral Study Model*

(1) $WA = a + b_1MC + b_2CO + b_3MO + b_4BE$

(2) $WE = a + b_1MC + b_2CO + b_3MO + b_4BE$

(3) $WP = a + b_1MC + b_2CO + b_3MO + b_4BE$

(4) $JS = a + b_1MC + b_2CO + b_3MO + b_4BE$

Population and Sampling

The goal for this study sample was to include approximately 170 United States expatriate participants working in China. This number was an estimate based on data from the Chinese Census Bureau reporting over 70,000 United States nationals worked in China as of 2010 (MacLeod, 2011). I selected the sample size based on sample size indicators that would allow for regression analysis. The sample received study participation invitations through multiple LinkedIn groups for expatriate related topics, international human resource management, and for the AmCham in Hong Kong, Tianjin, and Shanghai.

A power analysis, using G*Power3.1 software, calculated the appropriate sample size for the study. An a priori power analysis, assuming a medium effect size (f = .15), a α error probability of .05, and 4 predictors, indicated a minimum sample size of 85 participants required to achieve a power (1-β) of .80. Increasing the sample size to 174 would increase power to .99. Therefore, I aimed to obtain between 84 and 174 participants for the study (see Figure 2).

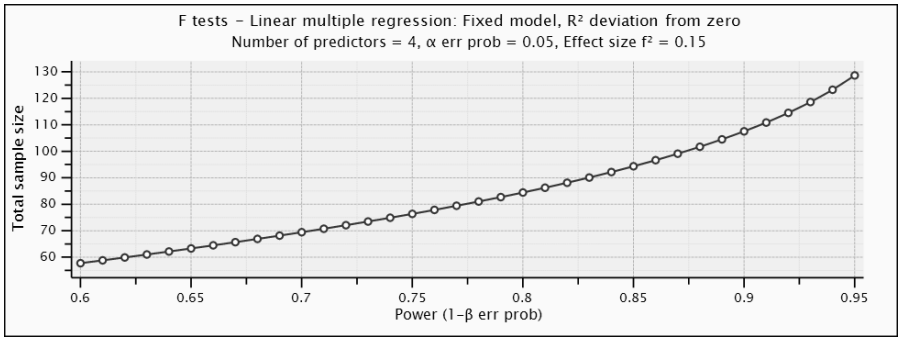

Figure 2. *Power as a Function of Sample Size*

The effect size measures the magnitude of the difference or *noise* between groups of variables (Trochim & Donnelly, 2008). The study required a medium effect size (f = .15). I determined the medium effect size based on the analysis of seven articles where various work-related outcomes were the measurement (see Table 16 for effect sizes of related correlational studies).

Table 16.

Effect Sizes of Related Studies

Work Outcomes Variable	Author(s), Date	Effect Size*
Job satisfaction	Selmer & Lauring, 2011a	.01
	Selmer & Lauring, 2012	.13
	Lauring & Selmer, 2013	.00
	Selmer & Lauring, 2013	.23
Work adjustment	Selmer & Lauring, 2011a	.03
	Froese & Peltokorpi, 2013	.34
	Selmer & Lauring, 2013	.17
	Koveshnikov, Wechtler, & Dejoux, 2014	.32
Work effectiveness	Selmer & Lauring, 2011a	.02
	Selmer & Lauring, 2011c	.03
	Selmer & Lauring, 2012	.08
	Lauring & Selmer, 2013	.01
	Selmer & Lauring, 2013	.12
Work performance	Selmer & Lauring, 2011a	.03
	Selmer & Lauring, 2011c	.01
	Selmer & Lauring, 2012	.10
	Lauring & Selmer, 2013	.07
	Selmer & Lauring, 2013	.18

**Effect sizes as measured by r^2*

The use of a non-probabilistic, snowball sampling method was appropriate because it is a feasible form of non-probability sampling given the amount of resources available for identifying the sample through expatriate LinkedIn groups (Sadler et al., 2010). A snowball sampling approach may introduce some bias in the study based on similar features and profile compositions the sample may share from being part of similar social and professional circles (Sadler et al., 2010). The snowball sampling approach

provided the most opportunity for obtaining a sample of the general United States expatriate population working in China with minimal bias.

Expatriates that currently work in China or recently repatriated (within 12 months of the data collection period) to their company of origin participated in the survey. The survey questions included a screener question to prevent individuals from taking the survey more than once. Multiple participant entries could occur if expatriates subscribed to several of the targeted LinkedIn groups; I posted a survey link on multiple LinkedIn group pages. The participants did not answer any additional screener criteria.

Ethical Research

The American Psychological Association (APA) code of ethics contain relevant ethical considerations in design, sampling, analysis, and reporting of scholarly research (APA, 2013). Based on the recommendations in the code of ethics, participation in the research study was voluntary and included a standard research consent form. Participants had the option to discontinue involvement with the research study at any point through the pre-survey consent questions, stopping the survey before completion, or not submitting the final survey. Research participants did not receive compensation for their time.

I will maintain all study data on a password-protected, cloud-based, file storage and retrieval program as well as a laptop computer for a minimum of 5 years. All research participants' data will remain confidential, and no one will access participants' personal information. Study participants' data were anonymous.

Data Collection

Instruments

The independent variables comprising the sub-dimensions of cultural intelligence included (a) cognitive CQ, (b) metacognitive CQ, (c) motivational CQ, and (d) behavioral CQ. The dependent variables relating to work outcomes included: (a) work adjustment (Black & Stephens, 1989), (b) work performance (Earley, 1987), (c) work effectiveness (Tsui & Ohlott, 1988), and (d) job satisfaction (West et al., 1987). I asked participants to answer questions about the study factors of interest through an online survey hosted by SurveyMonkey. The survey instrument included several background and demographic variables (i.e., gender, age, education, description of industry, and job function. Section 3 includes the detailed study results and data tables.

Reliability refers to the ability of a study to produce similar results given similar circumstances (Field, 2013). I modeled the survey scales pertaining to (a) work adjustment (Black & Stephens, 1989), (b) work performance (Earley, 1987), (c) work effectiveness (Tsui & Ohlott, 1988), and (d) job satisfaction (West et al., 1987) utilized in the Selmer and Lauring (2013) study (see Appendix C). A previously published scale for cultural intelligence includes (a) cognitive CQ, (b) metacognitive CQ, (c) motivational CQ, and (d) behavioral CQ (Van Dyne et al., 2009). Reliability and validity of the data occurred through established, peer-reviewed psychometrically sound survey measurements and pilot tests of the survey questions. Previous scholars tested and

retested the survey measurement scales in prior studies, supporting the reliability of the instrument (see Tables 17, 18, 19, 20, & 21).

The retesting of previously used scales in this study increases reliability. No previous researchers identified the current study population and the combination of scale measurements in tandem, possibly reducing reliability, given that the study is not a complete replicate of another peer-reviewed publication. Cronbach's alpha statistics include indicators needed to evaluate internal consistency; determine whether they meet acceptable reliability benchmarks, with .7 or higher suggested as acceptable reliability (Field, 2013). A detailed review of each of the instruments follows.

Cultural intelligence scale. I utilized the Van Dyne et al. (2009) cultural intelligence scale for this doctoral study. Study participants answered a total of 20 questions that measure sub-dimensions of cultural intelligence including: (a) cognitive CQ, (b) metacognitive CQ, (c) motivational CQ, and (d) behavioral CQ (see Appendix B for specific questions). Van Dyne et al. (2009) provided permission to use this scale in my doctoral study (see Appendix C). Participants provided answers through an ordinal, 7-point Likert-type scale. The scale ranged from 1 (strongly disagree) to 7 (strongly agree), with higher scores indicating strong levels of agreement with the statements and lower scores indicating strong levels of disagreement with the statements. No other adjustments or revisions to the questions occurred.

The cognitive CQ domain includes six questions that assess learned knowledge about different economic, legal, and social systems of different cultures and subcultures. I

measured metacognitive CQ through four questions relating to an individual's ability to recognize, control, and understand thinking and thought processing (i.e., planning, monitoring, and revising) as it relates to cultural preferences. Motivational CQ includes five questions that identify an individual's motivation in trying to engage, adapt, and assimilate in a culturally different environment, while behavioral CQ comprises five questions regarding the ability to use appropriate words, tone, gestures, and facial expressions and knowledge in interactions with culturally diverse individuals.

Descriptive analysis in the PASW/SPSS program aggregated and averaged the Likert scale ratings to determine a score for each sub-dimension of (a) cognitive CQ, (b) metacognitive CQ, (c) motivational CQ, and (d) behavioral CQ to obtain a total average dimension score. Total scores for the four sub-dimensions of CQ provided a baseline understanding of the expatriates' perceived metacognitive, cognitive, motivational, and behavioral tendencies with respect to cultural situations. I used the aggregated average of each CQ dimension score in the correlation and multiple regression analysis. Section 3 included the results from descriptive statistics, Cronbach's alpha, and Pearson correlation (r) coefficients.

Researchers demonstrated relationships between aggregate CQ scores and specific domains of CQ and work outcome measurements (Ang et al., 2007; Malek & Budhwar, 2013; Sri Ramalu et al., 2011; Wu & Ang, 2011). Higher levels of CQ correlated to greater adjustment levels ($r = .28$, $p < .01$) and CQ correlated to contextual performance ($r = .29$, $p < .05$; Malek & Budhwar, 2013). Wu and Ang (2011) demonstrated the

influence of motivational CQ on work adjustment ($r = .37$, $p < .05$) and corresponding organizational support needs; higher cognitive and metacognitive CQ required less organization support versus lower levels of cognitive and metacognitive CQ. Ang et al. (2007) showed a correlation between interactional adjustment and metacognitive CQ ($r = .27$, $p < .01$), interactional adjustment and cognitive CQ ($r = .21$, $p < .01$), and culturally based decision-making and interactional adjustment ($r = .23$, $p < .01$). Metacognitive CQ and task performance ($r = .46$, $p < .01$) and behavioral CQ and task performance ($r = .32$, $p < .01$) correlated (Sri Ramalu et al., 2011). These research results provide justification for use of the CQ instrument in this doctoral study.

Researchers examined the construct of CQ independent of expatriates on foreign assignments. Researchers investigated how levels of cultural intelligence may influence students studying business, military leaders, as well as real estate professionals (Chen, Liu, & Portnoy, 2012; Morrell, Ravlin, Ramsey, & Ward, 2013; Rockstuhl et al., 2011). The use of the CQ scale in various populations lends credibility to the instrument; construct validity.

Ang et al. (2007) tested the reliability of the individual components of the CQ scale through multiple methods: internal consistency, cross-validation, generalizability across time and cultures. Ang et al. (2007) demonstrated the following results: metacognitive CQ, Cronbach alpha $\alpha = .88$; cognitive CQ, Cronbach alpha $\alpha = .89$; motivational CQ, Cronbach alpha $\alpha = .81$; behavioral CQ, Cronbach alpha $\alpha = .86$ (See Table 17). Lee and Sukoco (2010) conducted Confirmatory Factor Analysis and obtained

the following scores for sub-dimensions of CQ; cognitive CQ, Cronbach alpha α = .86; motivational CQ, Cronbach alpha α = .84; behavioral CQ, Cronbach alpha α = .88. Koo Moon et al. (2012) and Wu and Ang (2011) retested the dimensions of CQ and obtained Cronbach alpha scores higher than .7 which indicates reliability, construct validity, and provides justification for use in this doctoral study.

Table 17.

Reliability and Validity Statistics for Cultural Intelligence Construct in Related Studies

Scales/Variables	Study Author(s), Date	Test Types	Cronbach alpha α =	*N* of Items
Original Cultural Intelligence (CQ) scale	Ang et al., 2007	Internal consistency, Cross-validation, Generalizability		
Behavioral CQ	Ang et al., 2007	Intrascale	.86	5
	Lee & Sukoco, 2010	Retest	.88	5
	Wu & Ang, 2011	Retest	.80	5
	Koo Moon et al., 2012	Retest	.85	5
Cognitive CQ	Ang et al., 2007	Intrascale	.89	6
	Lee & Sukoco, 2010	Retest	.86	6
	Wu & Ang, 2011	Retest	.80	6
	Koo Moon et al., 2012	Retest	.87	6
Metacognitive CQ	Ang et al., 2007	Intrascale	.88	4
	Wu & Ang, 2011	Retest	.73	4
	Koo Moon et al., 2012	Retest	.81	4
Motivational CQ	Ang et al., 2007	Intrascale	.81	5
	Lee & Sukoco, 2010	Retest	.84	5
	Wu & Ang, 2011	Retest	.75	5
	Koo Moon et al., 2012	Retest	.90	5

Work adjustment scale. Black and Stephens' (1989) seminal study used a subset of questions to assess general, interaction, and work adjustment as part of their CCA scale. I measured the work adjustment construct using three statements from their study (see Appendix B for specific questions). Participants provide answers through an ordinal, 7-point Likert-type scale. The scale ranged from 1 (completely unadjusted) to 7 (completely adjusted), with high scores indicating higher levels of perceived adjustment in relation to the statements and lower scores indicating low levels of perceived adjustment.

Descriptive analysis in the PASW / SPSS program aggregated and averaged the Likert scale ratings to determine a score indicating expatriates' perceived work adjustment. I modified the Likert-type scale to include seven points of measurement instead of the five points from the original scale, as the other study measurements are a seven-point scale. Aligning the scales on a similar point distribution can potentially reduce confusion for study participants. Selmer and Lauring (2013) also made this scale modification and obtained a Cronbach alpha of $\alpha = .75$ which adds reliability to repeating this modification. Black and Stephens (1989) provided permission to modify this scale in my doctoral study (see Appendix C). The correlation and multiple regression analysis required an aggregated average score. Section 3 includes the results from descriptive statistics, Cronbach's alpha, and Pearson correlation (r) coefficients.

Lee and Sukoco (2010) found CQ to have a significant relationship on CCA (r = .71, p < .05). Ang et al. (2007) found the following correlations; CCA and cognitive CQ (r = .35, p < .01), CCA and motivational CQ (r = .48, p < .01), and CCA and behavioral CQ (r = .41, p < .01). Chen, Wu, and Bian (2014) found CQ to be a predictor of CCA (r = .43, p < .001). These research results provide justification for use of the CCA scale, specifically the work adjustment questions, in this doctoral study.

Researchers examined cross-cultural adjustment independent of the expatriate population. Researchers investigated how levels of CCA may influence students studying business (Zhang & Goodson, 2011). Researchers' use of the CCA scale in various populations lends credibility to the instrument; construct validity.

Black and Stephens (1989) conducted an intrascale reliability test for the work adjustment measurement scale and yielded a Cronbach alpha α = .91 (See Table 18). Froese et al.'s (2012) and Koveshnikov, Wechtler, and Dejoux's (2014) studies retested the reliability of the work adjustment measurement and obtained the following Cronbach alphas; α = .80 and α = .90 respectively. Cronbach alpha scores higher than .7, indicate reliability, construct validity, and provide justification for use in this doctoral study.

Table 18.

Reliability and Validity Statistics for Work Adjustment Construct in Related Studies

Scales/Variables	Study Author(s), Date	Test Types	Cronbach alpha α =	*N* of Items
Original Expatriate Adjustment Scale	Black & Stephens, 1989	Principle component factor analysis		14
Work adjustment	Black & Stephens, 1989	Intrascale	.91	3
Work adjustment	Selmer & Lauring, 2011a	Retest	.86	3
Work adjustment	Wu & Ang, 2011	Retest	.85	3
Work adjustment	Froese & Peltokorpi, 2013	Retest	.86	3
Work adjustment	Selmer & Lauring, 2013	Retest	.90	3
Work adjustment	Koveshnikov et al., 2014	Retest	.90	3

Work performance scale. Earley (1987) introduced the work performance scale in a study measuring the influence of various forms of expatriate training. I adopted the use of Earley's (1987) four work performance questions for this doctoral study (see Appendix B for specific questions). Participants provide answers through an ordinal, 7-point Likert scale. The scale ranged from 1 (poor) to 7 (excellent), with high scores indicating excellent levels of perceived work performance in relation to the statements and lower scores indicating poor levels of perceived performance.

Descriptive analysis in the PASW/SPSS program aggregated and averaged the Likert scale ratings to determine perceived work performance outcomes among expatriates. No other adjustments or revisions to the questions occurred. Earley (1987) provided permission to use this scale in my doctoral study (see Appendix C). I used the aggregated average score in the correlation and multiple regression analysis. Section 3 includes the results from descriptive statistics, Cronbach's alpha, and Pearson correlation (r) coefficients.

Malek and Budhwar (2013) concluded that higher levels of CQ correlated to contextual work performance ($r = .23$, $p < .01$). Sri Ramalu et al. (2011) identified correlations between cognitive CQ and contextual performance ($r = .20$, $p < .01$) and metacognitive CQ and contextual performance ($r = .29$, $p < .01$). Researchers (Wu & Ang, 2011) found correlations between motivational CQ and contextual performance ($r = .39$, $p < .01$) and motivational CQ and task performance ($r = .51$, $p < .01$). These research results provide justification for use of the work performance scale in this doctoral study.

Researchers studied the work performance scale primarily with expatriates since the questions reflect expatriate types of work roles (Earley, 1987; Selmer and Lauring, 2011a, 2011c, 2012, 2013). The use of the work performance scale in different samples within the expatriate population lends credibility to the instrument; construct validity. Additional studies regarding the work performance scale in previously unstudied

expatriate populations in Africa and South American could add additional validity to the measurement.

Earley (1987) tested the reliability of the work performance scale and obtained a Cronbach alpha α = .82 (see Table 19). Selmer and Lauring's studies (2011a, 2011c, 2012, and 2013) retested the reliability of the work adjustment measurement and obtained the following Cronbach alphas; α = .80, α = .80, α = .80, and α = .75 respectively. Cronbach alpha scores higher than .7 indicate reliability, construct validity, and provide justification for use in this doctoral study.

Table 19.

Reliability and Validity Statistics for Work Performance Construct in Related Studies

Scales/Variables	Study Author(s), Date	Test Types	Cronbach alpha α =	*N* of Items
Original Work Performance Scale	Earley, 1987	Intrascale	.82	4
Work performance	Selmer & Lauring, 2011a	Retest	.80	4
Work performance	Selmer & Lauring, 2011c	Retest	.80	4
Work performance	Selmer & Lauring, 2012	Retest	.80	4
Work performance	Lauring & Selmer, 2013	Retest	.75	4
Work performance	Selmer & Lauring, 2013	Retest	.75	4

Work effectiveness scale. Tsui and Ohlott (1988) measured work effectiveness based on the supervising manager's perceptions of meeting expectations and overall performance. The research adopted the use of Tsui and Ohlott's work effectiveness

questions for this doctoral study. I measured work effectiveness using three questions from their seminal study (see Appendix B for specific questions). Participants provide answers through an ordinal, 7-point Likert-type scale. The scale ranged from 1 (not at all) to 7 (entirely), with high scores indicating higher levels of perceived work effectiveness in relation to the statements and lower scores indicating poor levels of perceived work effectiveness.

Descriptive analysis in the PASW/SPSS program aggregated and averaged the Likert scale ratings to determine a work effectiveness score. No other adjustments or revisions to the questions occurred. Answers from these questions identified expatriates' perceived levels of effectiveness achieved during the assignment. Tsui and Ohlott (1988) provided permission to use this scale in my doctoral study (see Appendix C). I used the aggregated average score in the correlation and multiple regression analysis. Section 3 includes the results from descriptive statistics, Cronbach's alpha, and Pearson correlation (r) coefficients.

Positive correlations of work effectiveness and work performance ($r = .66$, $p < .001$) (See Table 20), in previous studies, provide justification for using both variables in the study (Lauring & Selmer, 2013; Selmer & Lauring, 2013). Lauring and Selmer (2013) retested the reliability of the following variables: work performance (Cronbach alpha $\alpha = .75$); work effectiveness scale (Cronbach alpha $\alpha = .90$); and job satisfaction scale (Cronbach alpha $\alpha = .78$). Cronbach alpha scores higher than .7, indicate reliability, construct validity, and provide justification for use in this doctoral study.

Table 20.

Reliability and Validity Statistics for Work Effectiveness Construct in Related Studies

Scales/Variables	Study Author(s), Date	Test Types	Cronbach alpha α =	*N* of Items
Work effectiveness	Selmer & Lauring, 2011a	Retest	.93	3
Work effectiveness	Selmer & Lauring, 2011c	Retest	.93	3
Work effectiveness	Selmer & Lauring, 2012	Retest	.93	3
Work effectiveness	Lauring & Selmer, 2013	Retest	.90	3

Researchers studied the work effectiveness scale primarily with expatriates since the questions reflect those types of work roles (Lauring & Selmer, 2013; Selmer & Lauring, 2013; Tsui & Ohlott, 1988). The use of the scale in different samples within the expatriate population lends credibility to the instrument; construct validity. Additional studies regarding the work effectiveness scale in previously unstudied expatriate populations in Africa and South America could add further validity to the measurement.

Job satisfaction scale. West et al. (1987) measured job satisfaction in terms of the following topics in their study: (a) work responsibilities, (b) work performance, (c) relationship with management, (d) relationship with colleagues, (e) work life balance, and (f) organizational value of contributions. The research adopted the use of the West et al. (1987) work performance questions for this doctoral study. I measured job satisfaction using seven statements from their study (see Appendix B for specific questions). Participants provide answers through an ordinal, 7-point Likert-type scale. The scale ranged from 1 (poor) to 7 (excellent), with high scores indicating exceptional levels of

perceived job satisfaction in relation to the statements and lower scores indicating small levels of perceived job satisfaction.

Descriptive analysis in the PASW/SPSS program aggregated and averaged the Likert scale ratings to determine a job satisfaction score. No other adjustments or revisions to the questions occurred. Answers from these statements provided an understanding of the perceived level of satisfaction expatriates experienced. West et al. (1987) provided permission to use this scale in my doctoral study (see Appendix C). I used the aggregated average score in the correlation and multiple regression analysis. Section 3 includes the results from descriptive statistics, Cronbach's alpha, and Pearson correlation (r) coefficients.

Froese et al. (2012) demonstrated positive correlations of job satisfaction and interaction adjustment ($r = .24$, $p < .01$) and job satisfaction and work adjustment ($r = .45$, $p < .01$). Research regarding the potential relationship between job satisfaction and CQ is not available. The absence of this data justifies the inclusion of the job satisfaction variable in this study.

West et al. (1987) tested the reliability of the job satisfaction questions, in what they coined the post-transition satisfaction scale, and obtained a Cronbach alpha $\alpha = .68$ (see Table 21). Selmer and Lauring (2013) found there was a significant and positive correlation between the two variables of job satisfaction and work adjustment, $r = .58$, $p = <.001$; job satisfaction and work performance, $r = .39$, $p = <.001$; and job satisfaction

and work effectiveness, $r = .52$, $p = <.001$. Cronbach alpha scores higher than .7, indicate reliability, construct validity, and provide justification for use in this doctoral study.

Table 21.

Reliability and Validity Statistics for Job Satisfaction Construct in Related Studies

Scales/Variables	Study Author(s), Date	Test Types	Cronbach alpha α =	*N* of Items
Original Job Satisfaction Scale	West et al., 1987	Intrascale	.68	7
Job satisfaction	Selmer & Lauring, 2011a	Retest	.83	4
Job satisfaction	Selmer & Lauring, 2012	Retest	.83	4
Job satisfaction	Lauring & Selmer, 2013	Retest	.78	4
Job satisfaction	Selmer & Lauring, 2013	Retest	.78	4

Researchers studied the specific West et al. (1987) job satisfaction scale primarily with expatriates. The use of the scale in different samples within the expatriate population lends credibility to the instrument; construct validity. Additional studies regarding the job satisfaction scale in previously unstudied expatriate populations in Africa and South America could add further validity to the measurement.

Threats to external validity represent factors that reduce the ability to generalize the study results in the larger population of study (Trochim & Donnelly, 2008). The common threats to external validity of the CQ scale include selection bias. The use of LinkedIn and other socially connected media groups may affect the generalization of the

study results. After LinkedIn recruiting, I planned to use other recruiting methods like the Walden Participant Pool and market research panel organizations to supplement the sample, if needed.

The use of these peer-reviewed measurement scales in multiple studies provided a measure of content validity. After IRB approval and before a full launch of the study, seven participants completed a pilot test. The pilot test helped to verify that question-wording was clear, estimated timing was correct, and survey skip logic worked properly. Participants received invitations through various expatriate related LinkedIn groups. After pilot test participants completed the survey, I asked them to answer questions regarding their perceptions of the survey. Questions included ease of understanding the questions and participant recommendations to make the questions clearer.

The pilot tests established face validity in situations where no misunderstandings surfaced. Any recommended pilot test changes improved content validity. After making any necessary revisions, I launched the survey and made it available to all potential study participants. Each study participant received the same introduction to the survey, and the order of the survey questions was consistent, thereby improving and ensuring internal consistency.

I uploaded research data to the PASW/SPSS program for statistical analysis and evaluated internal consistency (i.e. reliability) using Cronbach's alpha to determine if the questions measure different dimensions of the same factor (Drost, 2011). Cronbach's alpha is appropriate to evaluate scores and determine whether they meet acceptable

reliability benchmarks, with.7 or higher suggested as acceptable reliability (Field, 2013). The Pearson product-moment correlation coefficient determines the potential linear relationships among the study variables. The results indicate a positive linear relationship when the correlation is positive and a negative linear relationship when the correlation is negative (Field, 2013); positive or negative numbers that approach a value of +1 or -1 indicated a stronger correlation. The results indicate a nonlinear relationship when the correlation coefficient value is zero (Field, 2013).

Multiple regression analysis may determine how well the sub-dimensions of cultural intelligence predict the dependent variables of work outcomes including work adjustment, work performance, work effectiveness, and job satisfaction. Multiple regression analysis can also help to determine the level of contribution that each independent variable has in the variance (Rovai et al., 2013). I confirmed construct validity by using previously replicated peer-reviewed study designs.

A doctoral study committee member verified the study results to confirm that I utilized appropriate statistical analysis procedures and described research results accurately, given the analysis performed. This process helped to confirm the external validity of the study results (Drost, 2011). Study results that corresponded to the general implications in previously published studies regarding the same study factors lead to further validity and reliability of the study measurements.

Data Collection Technique

I collected self-reported measurements of data through online surveys (Rovai et al., 2013). Difficulty in contacting prospective study participants via other data collection methods related to the global nature of the study participants' work and differences in time zones. The estimated telephone costs of contacting a different country and variation in time zones in comparison to using online survey methods presented obstacles to pursuing other research options (Heiervang & Goodman, 2011). Online surveys may promote candid answers since the participants are anonymous and can complete the surveys in the privacy of the environment of their choosing rather than in proximity of their present employers or local Chinese HCNs.

After obtaining Walden's IRB approval, I conducted pilot tests, with expatriates working in China, to assess understanding of the survey questions and timing, as well as for other relevant pre-fielding feedback. Pilot test feedback increased the validity of the final survey and ensured participants knew the approximate duration to complete the survey by providing this information in the instructions. Validation of the survey occurred one a final time before final fielding occurred.

The SurveyMonkey survey platform was the chosen delivery method. This program allowed download of data to PASW / SPSS software for statistical testing and data manipulation after completing data collection. Survey participants received notification of availability of the survey through expatriate related LinkedIn groups (Behrend, Sharek, Meade, & Wiebe, 2011). Using snowball-sampling techniques, I

requested that survey participants forward the survey link to other expatriates who could qualify as participants in the study (Sadler et al., 2010).

Data Analysis Technique

I examined the potential relationship between sub-dimensions of the study variables of cultural intelligence and expatriate work outcomes in this doctoral study. Each regression model included a specific work outcome. The central research question was: What is the relationship between the sub-dimensions of CQ and expatriate work outcomes?

Analysis of four separate regressions helped to examine the central research question. The regression analysis tested the ability of the sub-dimensions of the CQ independent variables in predicting the dependent variables associated with expatriate work outcomes; work adjustment, work performance, work effectiveness, and job satisfaction. Further examination of specific relationships in the study data included the following questions.

1. Is there a statistically significant relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and work adjustment?
2. Is there a statistically significant between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and work performance?

3. Is there a statistically significant relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and work effectiveness?
4. Is there a statistically significant relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, job satisfaction?

Assumption Testing

I selected PASW / SPSS based upon its ability to provide the necessary statistical data analysis tools to describe the research results and interpret the potential relationships between the study variables. The PASW / SPSS program allows researchers to aggregate, average, and analyze the individual variable scores. The identification of missing values is important in identifying the appropriate measures to correct the missing values using options identified in the PASW / SPSS missing values module (Field, 2013). Verification of six assumptions is inherent prior to beginning the full data analysis process: (a) outliers, (b) normality, (c) linearity, (d) homoscedasticity, (e) multicollinearity, and (f) independence of residuals. After completion of assumption testing, descriptive and inferential statistical analysis occurred.

Outliers, normality, linearity, homoscedasticity, and independence of residuals. I evaluated descriptive statistics, skewness, and kurtosis values for the variables and created a series of scatterplots, histograms, box plots, and stem-and-leaf plots to assess any potential univariate and multivariate outliers. Assessment of each outlier determined the appropriate corrective action: (a) delete the value, (b) delete the

variable, (c) conduct bootstrapping analysis to resample the data (Field, 2013). The bootstrapping option in PASW/SPSS estimated statistical properties of the study data by retaking samples from the data by a designated number of times (IBM, 2013). The PASW/SPSS program aggregated those samples to determine statistical properties (Field, 2013). Using a minimum of 1,000 bootstrapping samples minimizes the standard error and influence of assumption violations.

Assessment of normality determined which specific statistical tests researchers utilize; parametric or non-parametric (Field, 2013). I assessed if the variable values for skewness and kurtosis are normal or parametric. Parametric tests produce a bell-shaped curve (Rovai et al., 2013) versus non-parametric tests. The Normal Probability Plot (P-P) of the Regression Standardized Residual and the scatterplot of the standardized residuals provided other analysis points for normality.

The Normal Probability Plot (P-P) of the Regression Standardized Residual and the scatterplot of the standardized residuals may determine if linearity or homoscedasticity exists (Rovai et al., 2013). Scatterplots may identify visual linear relationships between the independent and dependent variables (Rovai et al., 2013). To determine homoscedasticity, I produced scatterplots of the values of the residuals against the values of work outcomes (Field, 2013). Assumptions of homoscedasticity proved valid if no systematic relationship existed between the scatterplots of the values of the residuals against and values of work outcomes. If a relationship did exist, other previously mentioned remedies for violations of assumptions were appropriate.

Visual inspection of the histogram, scatter plot, and normal probability plot helped to determine if systematic relationships in the dispersion of the residual data points exist. A straight-line in the normal probability plot indicates a normal distribution of residuals. If the values do not indicate a straight line, I evaluated previously mentioned corrective actions.

Multicollinearity. Correlation analyses examine the potential relationships between the study predictor and criterion variables (Rovai et al., 2013). Correlational analysis can help to identify the potential strength, direction, and association of the relationships between the study predictor and criterion variables (Field, 2013). Correlation analysis can determine potential issues related to multicollinearity. A review of the Variance Inflation Factor (VIF) scores can assess potential issues with multicollinearity. VIF scores greater than 10 indicate an issue with multicollinearity. If issues with multicollinearity appear in the analysis, the following corrective options are appropriate; (a) leave the model unchanged, (b) increase the sample size, (c) remove contributing variables, (c) create an index of variables, (d) change the model, and/or (e) bootstrap the sample data (Field, 2013). After testing all six assumptions, I compiled descriptive statistics and tested the hypotheses using multiple regression analysis.

Descriptive Statistics

Descriptive statistics allows researchers to describe the study data. Descriptive statistics in PASW/SPSS produce means, medians, mode frequencies, ranges, and standard deviations (Rovai et al., 2013). Descriptive statistics provides two methods of

analyzing the data; examine the central tendency of the averages and variability. Statistics related to means, medians, and modes distinguish the central tendency or central location of the variables while variability statistics related to the range, standard deviation, and variance identify the spread or dispersion of the data set. Descriptive statistics do not allow for making inferences regarding the study data; provides a method to describe the general characteristics of the data. I preferred the use of inferential statistics for data analysis in this study given its ability to draw inferences or make conclusions regarding the study data (Trochim & Donnelly, 2008).

Inferential Statistics

The use of confidence intervals, correlational analyses, and regression modeling are typical of inferential statistics. Confidence interval data estimates the probability of a mean occurring either 95% or 99% in the true population mean (Rovai et al., 2013). I examined the confidence intervals of the study variables to determine the precision of the calculated means in comparison to the true population mean (Field, 2013). Correlational analysis and regression modeling helped to determine the strength and direction of the statistical relationships in the data (Rovai et al., 2013). I analyzed the following statistics, as a minimum, to help answer the research questions and address the study hypothesis: (a) *F* statistic, (b) *p*-value, (c) 95% confidence intervals, (d) beta weights, (e) effect size, and (f) Pearson's product moment correlations, etc.

The effect size measures the difference or importance of the observed effect between high versus low CQ scores (Field, 2013). Additionally, the effect size can

measure the magnitude of the difference or *noise* between groups of variables (Trochim & Donnelly, 2008). I used the Pearson's correlation coefficient to quantify the effect size. A small effect size (r = 0.10), explains 1% of the total variance while a medium effect size (r = 0.30) or large effect size (r = 0.50) explains 10% and 25% respectively (Field, 2013).

I used Cronbach's alpha to determine the internal consistency of the instruments (Field, 2013), specifically to determine whether the instruments meet acceptable reliability benchmarks, with .7 or higher suggesting acceptable reliability (Field, 2013). The Pearson product-moment correlation coefficient revealed the potential linear relationships among the study variables. The Pearson product-moment correlation coefficient can range from either -1.0 to +1.0; values closer to -1.0 or +1.0 indicate a negative or positive relationship respectively while values closest to zero indicate no relationship (Rovai et al., 2013). A positive correlation signifies a positive relationship; as one variable increases, the other variable also increases. A negative correlation signifies a negative relationship; as one variable increases, the other decreases (Field, 2013).

Quantitative researchers use regression analysis to identify the degree to which specific independent or predictor variables influence the dependent or criterion variables (Field, 2013). Multiple regression analysis can help to explain how well the average scores for sub-dimensions relating to the independent variables of cultural intelligence explain the average scores for factors relating to the dependent variables of work

outcomes. Standard multiple linear regression, $\alpha = .05$ (two-tailed), was used to examine the influence of metacognitive, cognitive, motivational, and behavioral CQ scores in predicting expatriate work outcomes scores specifically scores of work adjustment, work performance, work effectiveness, and job satisfaction. The null hypothesis was no significant relationship exists between sub-dimensions of CQ and expatriate work outcomes. The alternative hypothesis was a significant relationship exists between sub-dimensions of CQ and expatriate work outcomes. I tested the hypotheses by analyzing PASW/SPSS data pertaining to the slope and direction of the model's regression line, the variance of the predictor and criterion variables through the R^2, the beta coefficients, how well the model fits given the *F*-test score, the degrees of freedom, and significance of the *p*-values. Section 3 includes tables of the regression data.

Earley and Ang (2003) described cultural intelligence theory as the potential influence of the CQ predictor variables. Earley and Ang introduced CQ based on the absence of theories connecting other types of intelligences (i.e. emotional and social intelligences) to culturally relevant situations. Four factors of CQ that measure an individual's ability to interpret and respond to different cultural situations include (a) metacognitive, (b) cognitive, (c) motivational, and (d) behavioral (Earley & Ang, 2003).

Expatriates, who understand differences in cultural contexts and behave accordingly, may possess higher levels of cultural intelligence (Ramelli et al., 2013). Expatriates with higher levels of CQ experienced reduced levels of anxiety and uncertainty, greater adjustment, and better work performance outcomes (Lee et al., 2013;

Malek & Budhwar, 2013; Sri Ramalu et al., 2011; Ward et al., 2011). The application of CQ provides a rationale for potential positive influences on expatriate work outcomes, the dependent variables in this study. The study results helped to explain how well CQ domains support the literature on CQ theory research.

Validity

Researchers assume the validity of study results when the findings have the capability to reflect the hypothesized occurrence in the study population, using a survey instrument (Drost, 2011). Validity has two dimensions: internal or external (Trochim & Donnelly, 2008). Internal validity measures the ability of an independent variable in causing the effect on a dependent variable (Trochim & Donnelly, 2008). Common threats to internal validity include history, maturation, testing, instrumentation, statistical regression, selection, mortality, and interaction among factors (Trochim & Donnelly, 2008). Experimental study designs infer a causal relationship and, therefore, are not a relevant factor in this study, given the use of a nonexperimental design.

External validity refers to the ability to generalize to the larger population (Trochim & Donnelly, 2008). Threats to external validity represent factors that reduce the ability to generalize the study results in the larger population of study. The common threats to external validity include interaction effect of testing, selection bias, reactive effects of experimental setting, and multiple treatment interference (Trochim & Donnelly, 2008). Selection bias is a potential threat to the present study results. A study with a random sample selection would best address this limitation but given the fragmented

nature of expatriate contact information, I selected a nonrandom sample approach. The remaining threats to external validity relate specifically to experimental research and are not factors in this study.

Construct validity refers to the capabilities of a study instrument in measuring what it intends to measure (Trochim & Donnelly, 2008). Translation- and criterion-related validity further clarifies construct validity. Translation validity signifies how well the construct translates to operational use of the description. Translation validity includes face and content validity. Face validity refers to how well the construct measures the concepts. Content validity refers to the extent to which a given instrument measures all dimensions of a specific construct. Construct validity presents, in the study, through the use of established measurement scales that previous researchers confirmed in multiple peer-reviewed studies, pre-testing the survey for comprehension, and using instruments with good reliability coefficients (Trochim & Donnelly, 2008).

Criterion-related validity refers to the capabilities of a study instrument in measuring a real observable criterion (Field, 2013; Trochim & Donnelly, 2008). Criterion validity includes predictive validity, concurrent validity, convergent validity, and discriminant validity. Predictive validity signifies to the ability of the study results in predicting theoretical occurrences. Concurrent validity refers to the ability of the criterion in distinguishing differences in separate groups. Convergent validity pertains to how the well the operationalization of the criterion measures related theoretical concepts (Trochim & Donnelly, 2008). Discriminant validity measures how the well

operationalization of the criterion diverges from unrelated theoretical concepts while correlation testing assesses different aspects of criterion-related validity (Trochim & Donnelly, 2008).

Statistical conclusion validity examines potential researcher errors in conducting data analysis and interpreting research results (Field, 2013; Trochim & Donnelly, 2008). A Type I Error represents misinterpretation of the potential relationship between study variables; identifying a relationship when one does not exist in reality. Type II identifies the inverse; no relationship exists when in reality a relationship is inherent. Means of improving potential issues with conclusion validity include using a statistical power of .80 or greater, using constructs with good reliability coefficients (.70 or greater), and implementation of standardized study factors (Field, 2013).

Transition and Summary

A comprehensive summary of the purpose of the study, descriptions surrounding the purpose, and data collection techniques comprises section 2. The section regarding research methods and designs comprised detailed descriptions of approaches utilized and the rationale for selecting the specific approaches. I explained data collection instruments and techniques along with organizational strategies. The section concluded with thorough descriptions of the data analysis procedures and reliability and validity of the survey instruments and statistical procedures. An explanation of the detailed study results, applications to business practice, implications for social change, and recommendations for action and further research follows in Section 3.

Section 3: Application to Professional Practice and Implications for Change

This first part of Section 3 includes summary descriptions of the study variables and the data analysis procedures used. An interpretation of the study variables and a discussion of the detailed study results follow. Section 3 concludes with the study's applications to business practice, implications for social change, and recommendations for action and further research.

Overview of Study

The general business problem is expatriate failures, including premature returns, maladjustment, dissatisfaction, and inadequate work outcomes, that generate high costs for organizations and their leaders (McNulty et al., 2013; Selmer & Lauring, 2013). The specific business problem is that some leaders do not understand the relationship between CQ and the outcomes of expatriate related work in China. The purpose of this quantitative, correlational study was to examine the relationships among a subset of CQ predictor variables and work outcome related dependent variables.

Previous research regarding the expatriate factors of cultural intelligence and work outcomes did not investigate specific nuisances in China (Rehg et al., 2012). Understanding the potential relationships between expatriate work outcomes and CQ would be beneficial in determining assignment readiness and needs for additional identification, training, and support programs. Leaders of MNCs who can identify appropriate staffing and training needs of expatriates may potentially reduce costs

associated with failed assignments (McNulty et al., 2013; Minter, 2011; Peng & Beamish, 2014; Tharenou, 2013).

Presentation of the Findings

I used standard multiple linear regression analysis to determine if a relationship exists between the independent variables of CQ and the dependent variables of work outcomes. The independent variables were (a) cognitive CQ, (b) metacognitive CQ, (c) motivational CQ, and (d) behavioral CQ. The dependent variables were (a) work adjustment, (b) work performance, (c) work effectiveness, and (d) job satisfaction. The regression analysis tested the ability of the sub-dimensions of the CQ independent variables in predicting the dependent variables associated with expatriate work outcomes: work adjustment, work performance, work effectiveness, and job satisfaction. Statistical analysis specifically tested the following research question and hypotheses:

RQ: What is the relationship between the sub-dimensions of CQ and expatriate work outcomes?

$H1_0$: There is no significant relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and work adjustment.

$H1_a$: There is a significant relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and work adjustment.

$H2_0$: There is no significant relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and work performance.

$H2_a$: There is a significant relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and work performance.

$H3_0$: There is no significant relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and work effectiveness.

$H3_a$: There is a significant relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and work effectiveness.

$H4_0$: There is no significant relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and job satisfaction.

$H4_a$: There is a significant relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and job satisfaction.

The results of the regression analysis for the first and third hypotheses demonstrated there was no significant predictive relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and work adjustment ($F(4, 83) = 2.005$, $p > .05$, adjusted $R^2 = .044$) and the four sub-dimensions of CQ and work effectiveness ($F(4, 83) = 2.132$, $p > .05$, adjusted $R^2 = .049$). The remaining regression analyses demonstrated significant predictive relationships between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and work performance ($F(4, 83) = 8.202$, $p < .001$, adjusted $R^2 = .249$) and the four sub-dimensions of CQ and job satisfaction ($F(4, 83) = 3.522$, $p < .05$, adjusted $R^2 = .104$). Specifically, the motivational CQ variable had a statistically significant predictive power for work performance

(hypotheses 2) and job satisfaction (hypotheses 4), while the other CQ variables were not statistically significant in their predictive power.

Pilot Study

Based on institutional review board (IRB) approval given on May 8, 2015, a pilot study commenced on May 9, 2015. Seven pilot test participants attempted to take the survey. Only four pilot test participants fully completed the survey questions. Three pilot test participants disqualified from the survey, according to the original qualifier, by leaving China more than 6 months ago. The qualifier changed to include participants that have returned from China more than 6 months ago. Pilot test participants recommended the following changes to demographic and descriptor questions: add a Masters of Business Administration (MBA) option for the education question, change language throughout to assignment/work experience since one pilot test participant did not have a specified assignment time period, change years of work experience to months to allow those with less than 1 year to accurately answer the question, reword a few demographic questions for greater clarity, add a question asking about the Chinese city of work, add a N/A option for specific demographic questions, and add an open ended feedback question as the last question for the study. The IRB approved the request to change the study based on these recommendations.

Post Pilot Study Data Collection

Based on institutional review board (IRB) approval given on May 22, 2015, post-pilot study data collection commenced on May 24, 2015 and ended on July 14, 2015 for a

total of 53 data collection days. I posted the Survey Monkey study link and invitation to participate in the study on various expatriate related LinkedIn groups for China until the desired sample of United States native study participants fully completed the survey questions (see Appendix A). A total of 340 participants attempted to take the survey while only 262 participants completed the survey. Several study participants sent email commentary regarding the inconsistent nature of Chinese internet access as one of the reasons for not being able to complete the survey. This may help to explain one of the contributing factors regarding why 78 participants were not able to complete the survey questions. The study included 94 participants native to the United States, who completed the survey. The remaining 171 study participants originated outside of the United States and, therefore, were outside the scope of this study's population of interest.

Missing Data

Of the 94 United States native study participants, six cases had missing data for specific questions relating to some of the study variables. I deleted those six cases of missing data rather than use the SPSS "Impute Missing Data Values" analysis method. Therefore, 88 study participants remained in the data set for further analysis.

Outliers

I created scatterplots through the SPSS standard linear regression analysis function for each dependent variable (work adjustment, work performance, work effectiveness, and job satisfaction) to identify any potential outliers in the study data. The scatterplots for the regression standardized residual versus the regression standardized

predicted value for work adjustment, work effectiveness, work performance, and job satisfaction displayed points outside of the values of -3.3 and 3.3, which in a normally distributed sample contains 99% of the study scores (see Figure 3). Multiple data points visible outside of the -3.3 and 3.3 ranges indicated potential issues as this violated the assumption that 99% of study scores are within the -3.3 and 3.3 ranges (Field, 2013). The work adjustment and work performance scatterplots also displayed some systematic patterns that violate assumptions of homoscedasticity. Further analysis of multivariate outliers via the Mahalanobis and Cooks distances provided additional data points to consider for identifying outliers.

Using a chi-square value table (Field, 2013) with four variables or degrees of freedom, the critical value was 13.82 at $p < .01$ level. The SPSS generated Mahalanobis distances indicated that four cases had Mahalanobis distances greater than 13.82. Visual examination of the Cooks distance scores did not identify scores greater than 1.0; no additional outliers identified (Field, 2013). I conducted bootstrapping analysis in SPSS with 2,000 bootstrapped samples to mediate potential issues associated with the identified outliers.

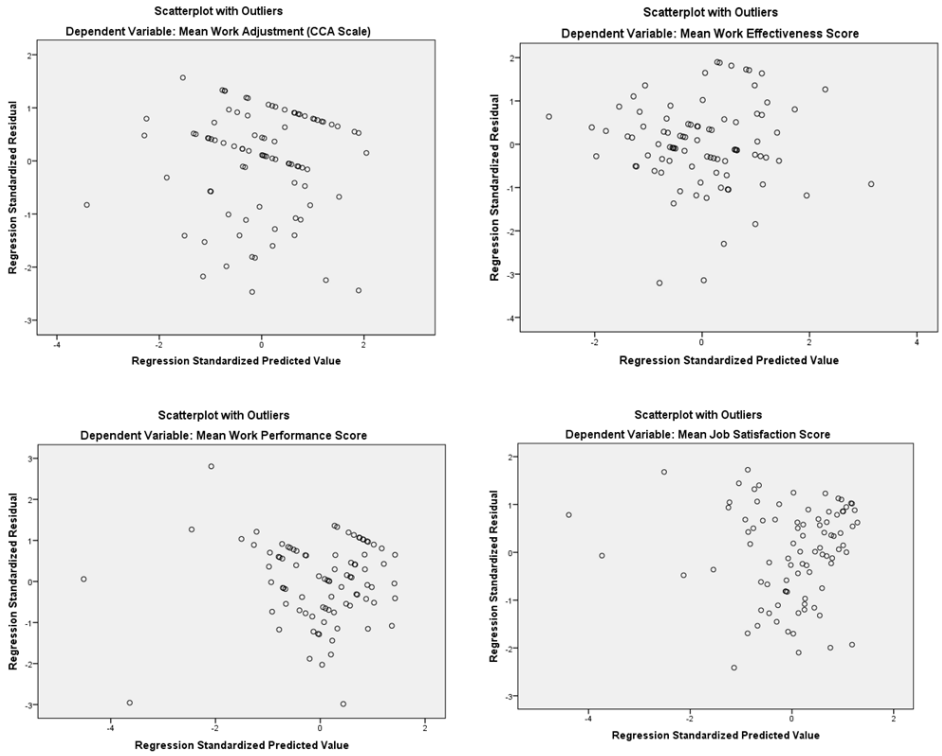

Figure 3. *Scatterplots of the standardized residuals*

Descriptive Statistics

Several demographic questions described the characteristics of the study population. These characteristics included general demographic information, work experience descriptors, Chinese work experience descriptors, and CCT descriptors. A detailed description of each grouping of demographic and descriptor data follows.

Table 22 presents the detailed demographic data for gender, age, marital status, ethnicity, and education level. The majority of the study population was male (77%). The average age of the study participants was 42, with the majority of participants' age ranging being 21–50 years of age. Almost half of participants identified as married (48%) followed by single (36%). A majority of participants self-identified their ethnicity as

White, Non-Hispanic (80%). Over 80% of participants identified their education level as a Bachelor's (38%) or Master's (46%) degree. I considered conducting future regression analysis investigating the influence of these demographic variables.

Table 22.

Frequency and Percentages of General Demographic Data (N=88)

Demographic	Detail	Frequency	Percent
Gender	Female	20	22.7
	Male	68	77.3
Age	21-30	23	26.1
	31-40	22	25.0
	41-50	22	25.0
	51-60	12	13.6
	61-70	8	9.1
	71-80	1	1.1
Marital Status	Single	32	36.4
	Married	42	47.7
	Divorced	10	11.4
	Other	4	4.5
Ethnicity	White, Non-Hispanic	70	79.5
	Black, African American	5	5.7
	Asian/Pacific Islander	6	6.8
	Spanish/Hispanic/Latino/Latina	2	2.3
	Other	5	5.7
Education	Bachelor's degree (BA, BS)	33	37.5
	Master's degree (MBA, MA, MS)	40	45.5
	Doctoral degree (PhD, EdD)	6	6.8
	Law degree (JD)	3	3.4
	None	2	2.3
	Other	4	4.5

Table 23 presents data related to general work experience descriptors including months of full-time work experience, annual salary, functional work area, and tenure with the organization. The distribution of months of full-time work experience was roughly equal for the ranges of months specified. About (48%) of the participants earned an annual salary ranging between above $30,000 to $149,000. Over half of participants (58%) worked in functional areas relating to general management, production / operations, or marketing. More than half (60%) of participants had a tenure of greater than 12 months, with the average tenure calculated at 47 months. I considered conducting additional regression analysis investigating the influence of these general work experience variables in future studies.

Table 23.

Frequency and Percentages of General Work Experience Descriptors (N=88)

Descriptor	Detail	Frequency	Percent
Months F/T Experience	0-50	17	19.3
	51-100	14	15.9
	101-200	18	20.5
	201-350	20	22.7
	351-600	19	21.6
Annual Salary	Below $30,000	15	17.0
	$30,000 to $49,000	12	13.6
	$50,000 to $69,000	13	14.8
	$70,000 to $149,000	17	19.3
	$150,000 and above	28	31.8
	I prefer not to answer	3	3.4
Functional Work Area	General management	30	34.1
	Production/operations	11	12.5
	Marketing	10	11.4
	Finance/accounting	5	5.7
	Consulting	5	5.7
	Other	22	25.0
Months Tenure with Organization	0	9	10.2
	1 – 6	7	8.0
	7 – 12	15.9	18.1
	13 – 24	15	17.0
	25 – 36	11	12.5
	37 – 60	10	11.4
	61 – 192	14	15.9
	193 – 440	3	3.4

Table 24 presents data related to work experiences in China including location of work experience, number of months living in China, other persons embarking on the assignment, number of previous expatriate assignments, assignment selection, and intent to leave current organization. The majority of participants worked in Shanghai, Beijing, or Shenzhen. Distribution of months working in China was roughly equal for the ranges of months specified. Over half of the participants embarked on the work experience alone (63%) followed by spouse / significant other (34%). Almost half of participants (47%) did not have previous expatriate work experiences. Almost half (53%) of participants identified work experience selection as self-initiated / personal request. Almost one-third of participants (32%) anticipate leaving their current organization within the next 2 years. I considered conducting additional regression analysis investigating the influence of these Chinese work experience variables in future studies.

Table 24.

Frequency and Percentages of Work Experience Descriptors in China (N=88)

Descriptor	Detail	Frequency	Percent
City Location In China	Shanghai	30	30.7
	Beijing	27	29.5
	Shenzhen	10	10.2
	Guangzhou	4	4.5
	Various other cities	22	25.0
Number of Months in China	0 – 12	23	26.1
	13 – 24	12	13.6
	25 – 48	20	22.7
	49 – 96	18	20.5
	97 – 180	15	17.0
Persons Accompanying Expatriate	No one	55	62.5
	Spouse/Significant other	30	34.1
	Child(ren)	11	12.5
	Other	3	3.4
Number of Previous Expatriate Work Experiences	0	41	46.6
	1	20	22.7
	2	12	13.6
	3	9	10.2
	4 +	6	6.8
Assignment Selection	Company appointed/offered	34	38.6
	Self-initiated/personal request	47	53.4
	Other	7	8.0
Intention to Leave Organization within 2 years	Bottom 2 box (disagree)	26	29.5
	Middle 3 box	34	38.6
	Top 2 box (agree)	28	31.8

Table 25 presents data regarding CCT experiences including pre-departure CCT, number of hours for pre-departure CCT, type of pre-departure CCT, post-arrival CCT, number of hours for post-arrival CCT, type of post-arrival CCT, and Chinese language proficiency. The majority of study participants (78%) did not receive pre-departure or post-arrival (69%) CCT. Of the 22% of participants that did receive pre CCT and post CCT (31%), the following types of pre-departure training methods occurred; training related to job, language training, brief cultural orientation, intensive cultural orientation, and environmental briefing. Roughly, half (51%) of participants identified language proficiency as elementary or limited. I considered conducting additional regression analysis investigating the influence of these CCT variables in future studies.

Table 25.

Frequency and Percentages of CCT (N=88)

Descriptor		Frequency	Percent
Pre-departure CCT	Yes	19	21.6
	No	69	78.4
Number of Hours Pre-Departure CCT	1 – 20	9	10.2
	21 – 100	6	6.8
	101 +	4	4.5
Type of Pre-Departure CCT	Training related to your job	7	8.0
	Language training	10	11.4
	Brief cultural orientation	7	8.0
	Intensive cultural orientation	6	6.8
	Environmental briefing	8	9.1
	Other	4	4.5
Post-Arrival CCT	Yes	27	30.7
	No	61	69.3
Number of Hours Post-Arrival CCT	1 – 20	16	18.2
	21 – 100	7	7.9
	101 + +	5	5.7
Type of Pre-Post-Arrival CCT	Training related to your job	14	15.9
	Language training	16	18.2
	Brief cultural orientation	17	19.3
	Intensive cultural orientation	4	4.5
	Environmental briefing	9	10.2
	Other	3	3.4
Chinese Language Proficiency	No proficiency	12	13.6
	Elementary proficiency	27	30.7
	Limited working proficiency	18	20.5
	Professional working proficiency	17	19.3
	Full professional proficiency	13	14.8
	Native or bilingual proficiency	1	1.1

Table 26 contains descriptive statistics for the study variables. Violation of the regression assumptions occurred. Additional details of the violations follow in the next section. Therefore, I reported the study variables' descriptive statistics with 2,000 bootstrap samples at the 95% confidence interval. The highest mean of the work outcome variables was for work performance (M = 5.92, SD = 0.82) with a 95% bootstrap confidence interval (CI) mean indicating a range of 5.75 - 6.07. The lowest mean of the work outcome variables was for work effectiveness (M = 4.93, SD = 1.07) with a 95% bootstrap CI mean indicating a range of 4.71 - 5.16. The highest mean of the CQ variables was for motivational CQ (M = 5.82, SD = 1.08) with a 95% bootstrap CI mean indicating a range of 5.58 - 6.03. The lowest mean of the CQ variables was for cognitive CQ (M = 4.83, SD = 1.11) with a 95% bootstrap CI mean indicating a range of 4.61 - 5.05. Further data analysis follows in the next sections.

Table 26.

Means (M) and Standard Deviations (SD) for the Study Variables (N=88)

Variable	*M*	*SD*	Bootstrap 95% CI (*M*)
Total Work Outcomes	5.48	0.83	[5.31, 5.66]
Work Adjustment	5.89	1.03	[5.66, 6.11]
Work Performance	5.92	0.82	[5.75, 6.07]
Work Effectiveness	4.93	1.07	[4.71, 5.16]
Job Satisfaction	5.19	1.28	[4.92, 5.46]
Total CQ	5.41	0.86	[5.21, 5.60]
Cognitive CQ	4.83	1.11	[4.61, 5.05]
Metacognitive CQ	5.75	1.08	[5.50, 5.96]
Motivational CQ	5.82	1.08	[5.58, 6.03]
Behavioral CQ	5.42	1.14	[5.17, 5.66]

Note: Bootstrap results calculated based on 2,000 bootstrap samples

Assumption Testing: Multicollinearity

To test assumptions related to multicollinearity, I reviewed the statistics provided in the correlation table, for each variable in the study model, after conducting standard linear regression analysis in SPSS. A correlation coefficient that was higher than 0.8 when comparing values between independent variables indicated issues with Multicollinearity (Field, 2013). The correlations table among each of the independent variables (metacognitive CQ, cognitive CQ, motivational CQ, and behavioral CQ) did not contain values higher than 0.8 (see Table 27).

Table 27.

Correlations for Study Variables (N=88)

Variable	WA	WE	WP	JS	MC	CO	MO	BE
Work Adjustment (WA)	1.00	.438**	.434**	.544**	.136	.222*	.221*	.219*
Work Effectiveness (WE)	.438**	1.00	.474**	.477**	.030	.102	.233*	.167
Work Performance (WP)	.434**	.474**	1.00	.554**	.435**	.298**	.500**	.342**
Job Satisfaction (JS)	.544**	.477**	.554**	1.00	.308**	.170	.363**	.221*
Metacognitive CQ (MC)	.136	.030	.435**	.308**	1.00	.503**	.611**	.539**
Cognitive CQ (CO)	.222*	.102	.298**	.170	.503**	1.00	.422**	.360**
Motivational CQ (MO)	.221*	.233*	.500**	.363**	.611**	.422**	1.00	.452**
Behavioral CQ (BE)	.219*	.167	.342**	.221*	.539**	.360**	.452**	1.00

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

I reviewed the tolerance and Variance Inflation Factor (VIF) scores in the collinearity statistics box in the standard linear regression coefficients table to assess additional measures for multicollinearity assumption testing. Tolerance values lower than 0.2 indicated issues with multicollinearity. A value that is higher than 10 in the VIF column indicated issues with multicollinearity. The tolerance and VIF scores for the four

dependent variables did not violate these thresholds. Therefore, the study data did not violate the assumption of multicollinearity.

Assumption Testing: Normality

I assessed normality by conducting a visual inspection of the normal probability plot for each of the dependent variables (see Figure 4). The Normal P-P Plot for the work adjustment variable displayed some deviation from the straight line. The histograms for the work adjustment and job satisfaction variables presented with negative skewness (see Figure 5). The Normal P-P Plot and histogram evaluation indicated potential violations of the normality assumptions. The violations of normality assumptions provided justification to conduct bootstrapping analysis in SPSS with 2,000 bootstrapped samples; mediated these violations of normality assumptions.

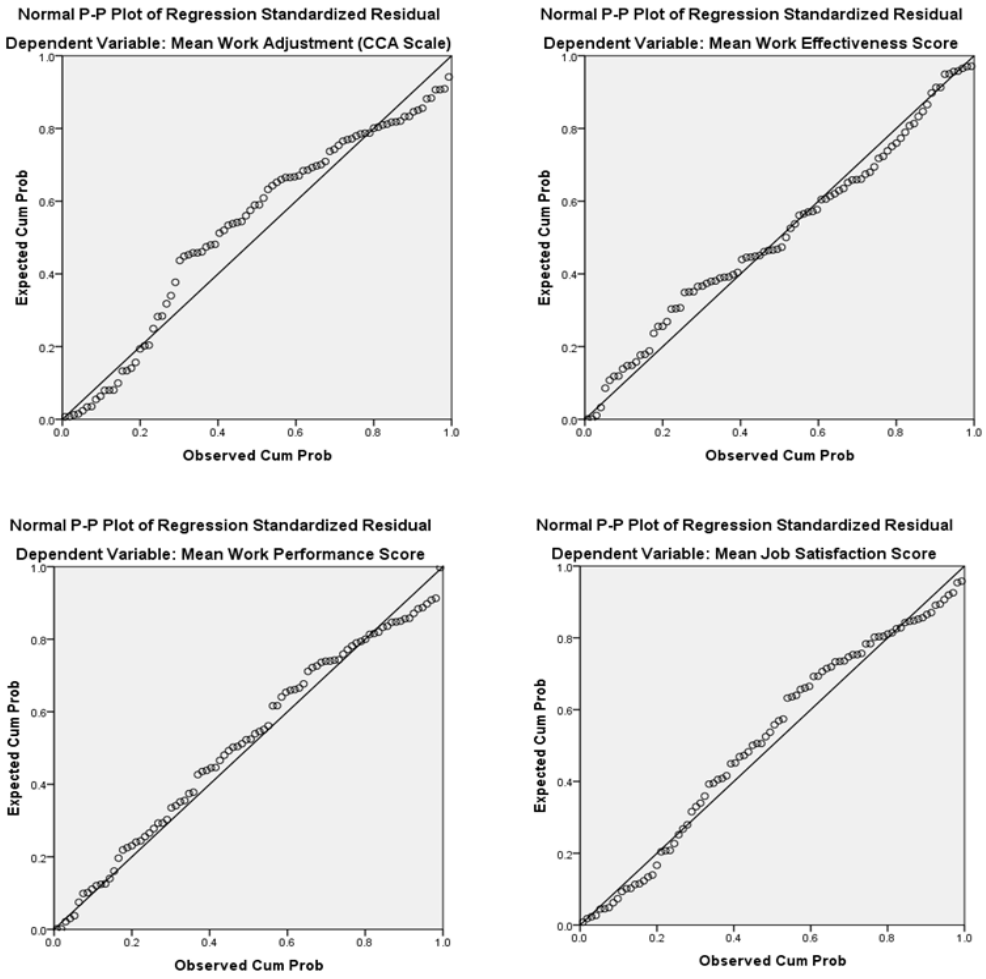

Figure 4. *Normal P-P plots of regression standardized residual*

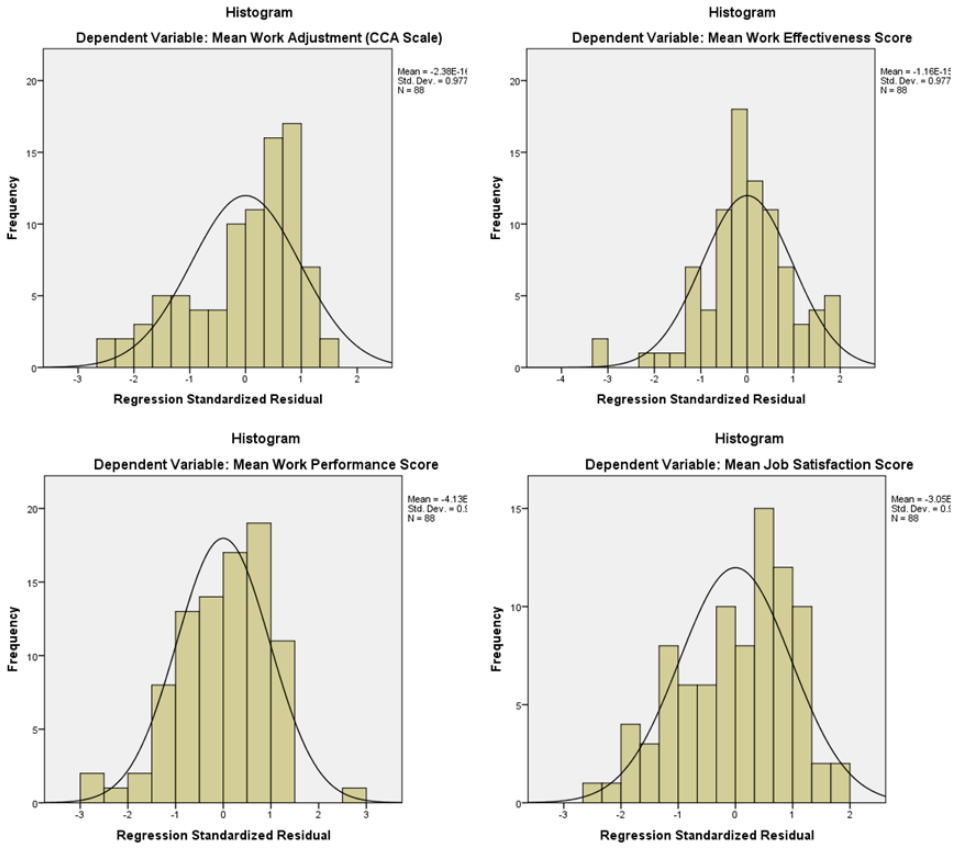

Figure 5. *Histogram of work outcome dependent variables*

Assumption Testing: Linearity, homoscedasticity, and Independence of Residuals

To test assumptions related to linearity, homoscedasticity, and independence of residuals, I reviewed the scatterplots of the standardized residuals (see Figure 3). The scatterplots for the work adjustment, work performance, work effectiveness, and job satisfaction variables displayed points that appear to have a systematic relationship or a nonrandom placement of points (Field, 2013). The study data violated the assumption of linearity, homoscedasticity, and independence of residuals. Therefore, there was

justification to conduct bootstrapping analysis in SPSS with 2,000 bootstrapped samples; mediated these violations of the assumptions.

Reliability Analysis

I computed the Cronbach's alpha coefficient to determine the reliability of the work outcome and CQ scales (see Table 28). The Cronbach's alpha for work adjustment, work effectiveness, work performance, and job satisfaction were .82, .50, .85, and .89 respectively. The Cronbach's alpha for cognitive CQ, metacognitive CQ, motivational CQ, and behavioral CQ were .84, .90, .89, and .86 respectively. Work adjustment, work performance, and job satisfaction had high reliability; the Cronbach's alpha coefficients were higher than .80 (Field, 2013). However, the work effectiveness scale had a low reliability; Cronbach's alpha coefficient was.50. The exclusion of one statement in the work effectiveness scale may improve the reliability score. SPSS reliability statistics indicated deletion of the following work effectiveness statement produces a Cronbach's alpha of .89; To what extent, if he or she could, would the boss change the manner in which the job is done. The scale questions related to cognitive CQ, metacognitive CQ, motivational CQ, and behavioral CQ had high reliability with the Cronbach's alpha coefficients being higher than .80.

Table 28.

Reliability and Validity Statistics for Study Variables

Scales/Variables	Cronbach alpha α =	*N* of Items
Work adjustment	.82	3
Work effectiveness	.50	3
Work performance	.85	4
Job satisfaction	.89	7
Cognitive CQ	.84	6
Metacognitive CQ	.90	4
Motivational CQ	.89	5
Behavioral CQ	.86	5

Results of the Correlation and Regression Analysis

I reviewed the Pearson's product-moment correlation analysis to assess the relationship between the sub-dimensions of CQ and work outcomes. Cohen (1988) as cited in Field (2013) suggested that coefficient values between 0.1 and 0.3 represent a small or weak strength in the correlation relationship while values between 0.3 and 0.5 represent a medium strength correlation. Coefficient values higher than 0.5 represented a high strength correlation.

Then, I conducted standard multiple regression analysis to predict four separate work outcomes or criterion variables; work adjustment, work effectiveness, work performance, and job satisfaction. Cognitive CQ, meta-cognitive CQ, motivational CQ, and behavioral CQ were the independent variables or predictor variables. A detailed review of each of the work outcome dependent variables and testing of the hypotheses follows.

Hypotheses 1: Work Adjustment. The first null hypothesis was there is no significant relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and work adjustment. The alternative hypothesis was there is a significant relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and work adjustment. Correlation analysis calculated statistically significant but weak or small sized, positive correlations between work adjustment and cognitive CQ ($r = .22$, $p < .05$), work adjustment and motivational CQ ($r = .21$, $p < .05$), and work adjustment and behavioral CQ ($r = .22$, $p < .05$; see Table 27). The results indicated increases in cognitive CQ, motivational CQ, and behavioral CQ had small or weak correlations to increases in work adjustment.

I conducted standard multiple linear regression analysis to understand how well the sub-dimensions of the independent variables for CQ (cognitive CQ, metacognitive CQ, motivational CQ, and behavioral CQ) predicted the criterion variable of work adjustment. The regression equation used in attempting to predict work adjustment was

$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4$, where:

Y = the dependent variable of work adjustment (WA)

a (Alpha) = the Constant or intercept

X_1 = predictor variable of Metacognitive (MC)

X_2 = predictor variable of Cognitive (CO)

X_3 = predictor variable of Motivational (MO)

X_4 = predictor variable of Behavioral (BE)

The Beta coefficients b_1, b_2, b_3, and b_4 = the slopes for X_1, X_2, X_3, and X_4

The final work adjustment model was:

$WA = a + b_1MC + b_2CO + b_3MO + b_4BE$

Regression analysis determined that cognitive CQ, metacognitive CQ, motivational CQ, and behavioral CQ, were not able to significantly predict work adjustment $F(4, 83) = 2.005$, $p > .05$, $R = .297$, $R^2 = .088$, adjusted $R^2 = .044$ (see Table 29). The effect size ($R = .30$) indicated a medium effect between the predictor variables of CQ and work adjustment. The *F* value for the predictor variables was not statistically significant, indicating there was not a proper fit between the regression model and the data. The four sub-dimensions of the CQ variables in the model accounted for an 8.8% variance before adjustment and accounted for 4.4% after adjustment variance in work adjustment. This model could not account for the remaining 95.6% of the variance in work adjustment. The four unstandardized beta coefficient values were not significantly different from zero and did not predict work adjustment scores.

Using the regression data, I calculated the final work adjustment model as:

$WA = a + b_1MC + b_2CO + b_3MO + b_4BE$

WA = 4.197 - .121(MC) + .151 (CO) + .152 (MO) + .143 (BE)

t statistics = (-.854) (1.310) (1.165) (1.239)

$R^2 = .088$

$F = 2.005$

While there is a small or weak strength correlation between work adjustment and cognitive CQ, when I conducted multiple regression analysis, the sub-dimensions of the CQ independent variables (metacognitive CQ, cognitive CQ, motivational CQ, behavioral CQ) were not able to significantly predict work adjustment. The insignificance of the model related to not having included some other influential independent variables in the model; the *F* statistic was not statistically significant. In other words, there are additional factors outside of what is in this model that may have more predictive power in determining increases in work adjustment scores. Therefore, the study results failed to reject the null hypotheses. There is no significant relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and work adjustment.

Table 29.

Regression Analysis for Variables Predicting Work Adjustment

Variables	*B*	*SE B*	*β*	*t*	*p*	*B* 95% Bootstrap CI
Metacognitive CQ	-.121	.142	-.127	-.854	.396	[-.358, .148]
Cognitive CQ	.151	.115	.162	1.310	.194	[-.076, .338]
Motivational CQ	.152	.130	.159	1.165	.247	[-.069, .385]
Behavioral CQ	.143	.115	.158	1.239	.219	[-.093, .422]
R			.297			
R^2			.088			
Adjusted R^2			.044			
F			2.005			

Note: Bootstrap results calculated based on 2,000 bootstrap samples
* $p < .05$ (two-tailed).
** $p < .01$ (two-tailed).
*** $p < .001$ (two-tailed).

Hypotheses 2: Work Performance. The second null hypothesis was there is no significant relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and work performance. The alternative hypothesis was there is a significant relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and work performance. Correlation analysis calculated statistically significant and moderate to high sized, positive correlations between work performance and meta-cognitive CQ ($r = .44$, $p < .01$), work performance and cognitive CQ ($r = .30$, $p < .01$), work performance and motivational CQ ($r = .50$, $p < .01$), and work

performance and behavioral CQ (r = .34, p < .05; see Table 27). The results indicated increases in the 4 sub-dimensions of CQ (meta-cognitive CQ, cognitive CQ, motivational CQ, and behavioral CQ) have moderate to high correlations to increases in work performance.

I conducted standard multiple linear regression analysis to understand how well the sub-dimensions of the independent variables for CQ (cognitive CQ, metacognitive CQ, motivational CQ, and behavioral CQ) predicted the criterion variable of work performance. The regression equation used in attempting to predict work performance was

$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4$, where:

Y = the dependent variable of work performance (WP)

a (Alpha) = the Constant or intercept

X_1 = predictor variable of Metacognitive (MC)

X_2 = predictor variable of Cognitive (CO)

X_3 = predictor variable of Motivational (MO)

X_4 = predictor variable of Behavioral (BE)

The Beta coefficients b_1, b_2, b_3, and b_4 = the slopes for X_1, X_2, X_3, and X_4

The final work performance model was:

$WP = a + b_1MC + b_2CO + b_3MO + b_4BE$

Regression analysis determined that the overall model was significant in its ability to predict work performance $F(4, 83) = 8.202$, $p < .001$, $R = .532$, $R^2 = .283$, adjusted R^2

= .249 (see Table 30). The effect size (R = .53) indicated a large effect between the predictor variables of CQ and work performance. The F value for the predictor variables was statistically significant, indicating there was a proper fit between the regression model and the data. The 4 sub-dimensions of the CQ variables in the model only accounted for a 28.3% variance before adjustment and accounted for an adjusted R^2 of 24.9% of the variance in work performance. Although, this model could not account for the remaining 75.1% of the variance in work performance.

Using the regression data, I calculated the final work performance model as:

$WP = a + b_1MC + b_2CO + b_3MO + b_4BE$

$WP = 3.238 + .115\ (MC) + .031\ (CO) + .263\ (MO) + .062\ (BE)$

t statistics = (1.161) (.389) (2.889) (.766)

$R^2 = .283$

$F = 8.202^{***}$ ($p < .001$)

Of the four unstandardized beta coefficient values, only motivational CQ was significantly different from zero. The motivational CQ variable had a statistically significant predictive power for work performance while the other CQ variables were not statistically significant in their predictive power. Therefore, based upon the model‘s statistical significance of the F statistic, the effect size, and the statistically significant ability of motivational CQ in predicting work performance, I rejected the null hypotheses; there is a significant relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and work performance.

Table 30.

Regression Analysis for Variables Predicting Work Performance

Variables	*B*	*SE B*	*β*	*t*	*p*	*B* 95% Bootstrap CI
Metacognitive CQ	.115	.099	.153	1.161	.249	[-.133, .336]
Cognitive CQ	.031	.081	.043	.389	.699	[-.116, .194]
Motivational CQ	.263	.091	.349	2.889	.005**	[.078, .455]
Behavioral CQ	.062	.081	.086	.766	.446	[-.099, .286]
R			.532			
R^2			.283			
Adjusted R^2			.249			
F			8.202**			
			*			

Note: Bootstrap results calculated based on 2,000 bootstrap samples
* $p < .05$ (two-tailed).
** $p < .01$ (two-tailed).
*** $p < .001$ (two-tailed).

Hypotheses 3: Work Effectiveness. The third null hypothesis was there is no significant relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and work effectiveness. The alternative hypothesis was there is a significant relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and work effectiveness. Correlation analysis calculated a statistically significant but weak or small sized, positive correlation between work effectiveness and

motivational CQ (r = .23, p < .05; see Table 27). The results indicated increases in motivational CQ had small or weak correlations to increases in work effectiveness.

I conducted standard multiple linear regression analysis to understand how well the sub-dimensions of the independent variables for CQ (cognitive CQ, metacognitive CQ, motivational CQ, and behavioral CQ) predict the criterion variable of work effectiveness. The regression equation used in attempting to predict work effectiveness was

$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4$, where:

Y = the dependent variable of work effectiveness (WE)

a (Alpha) = the Constant or intercept

X_1 = predictor variable of Metacognitive (MC)

X_2 = predictor variable of Cognitive (CO)

X_3 = predictor variable of Motivational (MO)

X_4 = predictor variable of Behavioral (BE)

The Beta coefficients b_1, b_2, b_3, and b_4 = the slopes for X_1, X_2, X_3, and X_4

The final work effectiveness model was:

$WE = a + b_1MC + b_2CO + b_3MO + b_4BE$

Regression analysis determined that the overall model was not significant in its ability to predict work effectiveness $F(4, 83) = 2.132$, $p > .05$, $R = .305$, $R^2 = .093$, adjusted $R^2 = .049$ (see Table 31). The effect size (R = .31) indicated a medium effect between the predictor variables of CQ and work effectiveness. The F value for the

predictor variables was not statistically significant, indicating there was not a proper fit between the regression model and the data. The four sub-dimensions of the CQ variables in the model accounted for a 9.3% variance before adjustment and accounted for 4.9% after adjustment variance in work effectiveness. This model could not account for the remaining 95.1% of the variance in work effectiveness.

Using the regression data, I calculated the final work effectiveness model as:

$WE = a + b_1MC + b_2CO + b_3MO + b_4BE$

WE = 3.668 -.259 (MC) + .050 (CO) + .298 (MO) + .144 (BE)

t statistics = (-1.771) (.419) (2.224) (1.208)

$R^2 = .093$

$F = 2.132$

Of the four unstandardized beta coefficient values, only motivational CQ was significantly different from zero. The motivational CQ variable had a statistically significant predictive power for work effectiveness while the other CQ variables were not statistically significant in their predictive power. The Motivational CQ variable makes the strongest, unique contribution to predicting or explaining the work effectiveness outcome but the total model is not a significant predictor. Therefore, based upon the model‘s effect size and the insignificant ability of the CQ model in predicting work effectiveness, I failed to reject the null hypotheses. There is no significant relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and work effectiveness.

Table 31.

Regression Analysis for Variables Predicting Work Effectiveness

Variables	*B*	*SE B*	*β*	*t*	*p*	*B* 95% Bootstrap CI
Metacognitive CQ	-.259	.146	-.263	-1.771	.080	[-.617, .086]
Cognitive CQ	.050	.119	.052	.419	.676	[-.190, .305]
Motivational CQ	.298	.134	.302	2.224	.029*	[.005, .660]
Behavioral CQ	.144	.119	.153	1.208	.231	[-.104, .385]
R			.305			
R^2			.093			
Adjusted R^2			.049			
F			2.132			

Note: Bootstrap results calculated based on 2,000 bootstrap samples
* $p < .05$ (two-tailed).
** $p < .01$ (two-tailed).
*** $p < .001$ (two-tailed).

Hypotheses 4: Job Satisfaction. The fourth null hypothesis was there is no significant relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and job satisfaction. The alternative hypothesis was there is a significant relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and job satisfaction. Correlation analysis calculated statistically significant but weak or small to moderate sized, positive correlations between job satisfaction and meta-cognitive CQ ($r = .31$, $p < .01$), job satisfaction and motivational CQ ($r = .36$, $p < .01$), and job satisfaction and behavioral CQ ($r = .22$, $p < .05$; see Table 27). The results indicated

increases in meta-cognitive CQ and motivational CQ had moderate correlations to increases in job satisfaction while increases in behavioral CQ had small or weak correlations to increases in job satisfaction.

I conducted standard multiple linear regression analysis to understand how well the sub-dimensions of the independent variables for CQ (cognitive CQ, metacognitive CQ, motivational CQ, and behavioral CQ) predicted the criterion variable of job satisfaction. The regression equation used in attempting to predict job satisfaction was

$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4$, where:

Y = the dependent variable of job satisfaction (JS)

a (Alpha) = the Constant or intercept

X_1 = predictor variable of Metacognitive (MC)

X_2 = predictor variable of Cognitive (CO)

X_3 = predictor variable of Motivational (MO)

X_4 = predictor variable of Behavioral (BE)

The Beta coefficients b_1, b_2, b_3, and b_4 = the slopes for X_1, X_2, X_3, and X_4

The final job satisfaction model was:

$JS = a + b_1MC + b_2CO + b_3MO + b_4BE$

Regression analysis determined that the overall model was significant in its ability to predict job satisfaction $F(4, 83) = 3.522$, $p < .05$, $R = .381$, $R^2 = .145$, adjusted $R^2 = .104$ (see Table 32). The effect size ($R = .38$) indicated a medium effect between the predictor variables of CQ and job satisfaction. The *F* value for the predictor variables was

statistically significant, indicating there is a proper fit between the regression model and the data. The four sub-dimensions of the CQ variables in the model accounted for a 14.5% variance before adjustment and accounted for 10.4% after adjustment variance in job satisfaction. This model could not account for the remaining 89.6% of the variance in job satisfaction.

Using the regression data, I calculated the final job satisfaction model as:

$JS = a + b_1MC + b_2CO + b_3MO + b_4BE$

JS = 2.315 + .158 (MC) - .030 (CO) + .328 (MO) + .037 (BE)

t statistics = (.928) (-.220) (2.106) (.268)

$R^2 = .145$

$F = 3.522^{**}$ ($p < .01$)

Of the four unstandardized beta coefficient values, only motivational CQ was significantly different from zero. The motivational CQ variable had a statistically significant predictive power for job satisfaction while the other CQ variables were not statistically significant in their predictive power. Therefore, based upon the model‘s statistical significance of the *F* statistic, the effect size, and the statistically significant ability of motivational CQ in predicting job satisfaction, I rejected the null hypotheses; there is a significant relationship between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and job satisfaction.

Table 32.

Regression Analysis for Variables Predicting Job Satisfaction

Variables	*B*	*SE B*	*β*	*t*	*p*	*B* 95% Bootstrap CI
Metacognitive CQ	.158	.170	.134	.928	.356	[-.201, .497]
Cognitive CQ	-.030	.138	-.026	-.220	.826	[-.357, .307]
Motivational CQ	.328	.156	.278	2.106	.038*	[-.038, .758]
Behavioral CQ	.037	.138	.033	.268	.789	[-.226, .348]
R			.381			
R^2			.145			
Adjusted R^2			.104			
F			3.522**			

Note: Bootstrap results calculated based on 2,000 bootstrap samples
* $p < .05$ (two-tailed).
** $p < .01$ (two-tailed).
*** $p < .001$ (two-tailed).

Study Findings in Comparison to other Scholarly Research

Several scholarly studies examined the relationship between work outcomes variables and the sub-dimensions of cultural intelligence. This section examines the study's correlation results in comparison to correlation results from other related scholarly studies. Study implications in relation to the CQ construct follows this section.

Work Adjustment. The calculated correlation statistics, of this study, presented significant but weak or small sized, positive correlations between work adjustment and

cognitive CQ ($r = .22$, $p < .05$), work adjustment and motivational CQ ($r = .21$, $p < .05$), and work adjustment and behavioral CQ ($r = .22$, $p < .05$; see Table 27). The results indicated increases in cognitive CQ, motivational CQ, and behavioral CQ had small or weak correlations to increases in work adjustment. These results were consistent with other scholarly research conducted.

Lee and Sukoco (2010) found motivational CQ to have a significant, positive relationship on work adjustment ($r = .62$, $p < .01$). Wu and Ang (2011) also found a significant positive relationship between motivational CQ and work adjustment ($r = .37$, $p < .01$). While the strength of the correlation statistics in my study is smaller, the results were consistent with other scholarly research conducted on these two variables; indicated a relationship between CQ and work adjustment exists. Although the predictive power of the CQ sub-dimensions on work adjustment were not significant. The study findings, in comparison to other scholarly research on these variables, confirmed that a relationship between these two variables exists although the regression analysis from my study did not demonstrate a predictive relationship.

Work Performance. The calculated correlation statistics, of this study, presented significant and moderate to high sized, positive correlations between work performance and meta-cognitive CQ ($r = .44$, $p < .01$), work performance and cognitive CQ ($r = .30$, $p < .01$), work performance and motivational CQ ($r = .50$, $p < .01$), and work performance and behavioral CQ ($r = .34$, $p < .05$; see Table 27). The results indicated increases in the four sub-dimensions of CQ (meta-cognitive CQ, cognitive CQ,

motivational CQ, and behavioral CQ) have moderate to high correlations to increases in work performance. These results were consistent with other scholarly research conducted.

Malek and Budhwar (2013) concluded that higher levels of CQ correlated to contextual work performance ($r = .23$, $p < .01$). Sri Ramalu et al. (2011) identified correlations between cognitive CQ and contextual performance ($r = .20$, $p < .01$) and metacognitive CQ and contextual performance ($r = .29$, $p < .01$). Wu and Ang (2011) found correlations between motivational CQ and contextual performance ($r = .39$, $p < .01$) and motivational CQ and task performance ($r = .51$, $p < .01$). The study results were consistent with other scholarly research in establishing a relationship between CQ and work performance. The study's regression analyses demonstrated significant predictive relationships between cognitive CQ, metacognitive CQ, motivational CQ, behavioral CQ, and work performance ($F(4, 83) = 8.202$, $p < .001$, adjusted $R^2 = .249$). The study findings, in conjunction with other scholarly research, confirmed a relationship exists between CQ and work performance. In addition, the regression analysis from my study demonstrated a predictive relationship between CQ, especially the motivational CQ variable, and work performance.

Work effectiveness. The calculated correlation statistics, of this study, presented significant but weak or small sized, positive correlation between work effectiveness and motivational CQ ($r = .23$, $p < .05$; see Table 27). The results indicated increases in motivational CQ had small or weak correlations to increases in work effectiveness. Positive correlations of work effectiveness and work performance ($r = .66$, $p < .001$)

(See Table 20), in previous studies, provided justification for measuring both variables in the study (Lauring & Selmer, 2013; Selmer & Lauring, 2013). Although, the regression analysis determined that the overall model was not significant in its ability to predict work effectiveness $F(4, 83) = 2.132$, $p > .05$, adjusted $R^2 = .049$ (see Table 31). The absence of previous research on these two exact variables provided additional areas for further consideration in the future given the significant, positive correlation of work effectiveness with motivational CQ.

Job satisfaction. The calculated correlation statistics, of this study, presented significant but weak or small to moderate sized, positive correlations between job satisfaction and meta-cognitive CQ ($r = .31$, $p < .01$), job satisfaction and motivational CQ ($r = .36$, $p < .01$), and job satisfaction and behavioral CQ ($r = .22$, $p < .05$; see Table 27). The results indicated increases in meta-cognitive CQ and motivational CQ had moderate correlations to increases in job satisfaction, while increases in behavioral CQ had small or weak correlations to increases in job satisfaction. Froese et al. (2012) demonstrated positive correlations of job satisfaction and work adjustment ($r = .45$, $p < .01$). This provided justification for measuring both variables in the study although previous research regarding the relationship between CQ sub-dimensions and job satisfaction is not available. Regression analysis determined that the overall model was significant in its ability to predict job satisfaction $F(4, 83) = 3.522$, $p < .05$, adjusted $R^2 = .104$ (see Table 32). The absence of previous research on these two exact variables provided additional areas for further consideration in the future given the significant,

positive correlation of job satisfaction with motivational CQ and the significant results of the regression analysis.

Study Findings in Relation to the CQ Construct

I selected the theoretical framework of CQ, for this study, because of prior research that provided some evidence in establishing a relationship between CQ and work outcomes. Researchers demonstrated that higher levels of CQ correlated with higher levels of CCA and work outcomes (see Table 14). My study findings provided evidence consistent with prior research on CQ, in its ability to improve work outcomes. Regression analyses determined that the overall models for cognitive CQ, meta-cognitive CQ, motivational CQ, and behavioral CQ had significant predictive power for work performance ($F(4, 83) = 8.202$, $p < .001$, adjusted $R^2 = .249$) and job satisfaction ($F(4, 83) = 3.522$, $p < .05$, adjusted $R^2 = .104$). Specifically, the motivational CQ variable had a statistically significant predictive power for work performance and job satisfaction.

Some research shows inconsistent relationships regarding CQ on various work outcome factors. Sri Ramalu et al. (2011) did not show a relationship between motivational CQ and job performance. Ward et al. (2011) found motivational CQ negatively related to psychological and sociocultural adaption. Additional research that further examines the influence of motivational CQ on other expatriate work outcome variables would be interesting to consider given the conflicting nature of existing scholarly literature and this study's results.

Applications to Professional Practice

Approaches to relationship building differ widely for the Chinese versus western cultures (Ndubisi, 2011). Chen et al. (2011) perceived the Chinese culture as collectivistic, group-oriented, and exhibiting conflict avoidance behaviors compared to their western counterparts. Additionally, the business culture in China depends on the establishment of guanxi and gives much importance to mianzi (Lin, 2011; Varma, Budhwar, & Pichler, 2011). Lu (2012) noted that a lack of guanxi could prevent the establishment of positive business relationships and negotiations. Perceived differences in two countries' cultures can negatively influence (a) levels of anxiety and stress among expatriates; (b) motivation and ability to adjust; (c) performance levels; (d) turnover intent; and (e) job satisfaction (Froese & Peltokorpi, 2011; Grinstein & Wathieu, 2012; Lee & Kartika, 2014; Pinto et al., 2012; Wu & Ang, 2011). Researchers hypothesized that expatriates who understand these types of cultural differences and act accordingly, may experience more favorable work outcomes (Kriz, Gummesson, & Quazi, 2014; Pan et al., 2012; Varma et al., 2011). Ward et al. (2011) and Wu and Ang (2011) theorized CQ measurements are predictors for expatriate identification, selection, and assignment success.

The results of my study may provide additional support for these theories regarding a connection between CQ and assignment success. Specifically, motivational CQ had significant predictive power in explaining the variances in work performance, work effectiveness, and job satisfaction. This finding corresponds with other research

results that found expatriates who had high levels of personal initiative or motivation demonstrated higher performance outcomes and satisfaction (Stroppa & Spieß, 2011). Selmer and Lauring (2013) showed positive correlations between positive affectivity, work adjustment, work performance, work effectiveness, and job satisfaction. MacNab and Worthley (2012) proposed that traits relating to self-efficacy, intrinsic motivation, and cross-cultural motivation (motivational CQ) lead to higher levels of assignment adjustment and performance.

The research results indicated that CQ, and more specifically, motivational CQ, has a significant, positive, and predictive ability to influence work outcomes. Researchers suggested the use of cultural intelligence scores to assess candidate identification and selection criteria, to determine additional requirements for cross-cultural training, organizational support, mentoring, and repatriation support; improvement of cross-cultural adjustment and work outcomes were the intention (Fischer, 2011; Huff, 2013; Mahajan & De Silva, 2012). The results of this study supported this recommendation for an application to professional expatriate management practices.

Implications for Social Change

Ward et al. (2011) and Wu and Ang (2011) theorized that CQ measurements are predictors for expatriate identification, selection, and assignment success. My study findings provided evidence consistent with prior research regarding the predictive ability of sub-dimensions of CQ in predicting work outcomes. Specifically, the motivational CQ variable had a statistically significant predictive power for work performance (hypotheses

2) and job satisfaction (hypotheses 4). These findings were consistent with other research results that found expatriates that exhibited areas related to motivation also demonstrated higher performance outcomes and satisfaction (MacNab & Worthley, 2012; Selmer & Lauring, 2013; Stroppa & Spieß, 2011). Malek and Budhwar (2013) theorized that a connection between expatriates' level of CQ and work outcomes exists. Leaders of MNCs, who understand this relationship and can identify appropriate staffing and training needs for expatriates, may potentially reduce costs associated with failed assignments and improve intercultural communication betweeen expatriates and their counterparts (McNulty et al., 2013; Minter, 2011; Peng & Beamish, 2014; Tharenou, 2013). The social change implications of this study may provide managers with an additional tool in selecting and training employees for international assignments. Additional social change benefits include the improvement of the expatriate experience, lowering turnover, and reducing assignment costs. The social change benefits encompass the improvement of intercultural communications and relationship building competencies of business professionals.

Researchers theorized that improvements in current expatriate identification, training, and support programs may strengthen intercultural relations in international business (Collins & Kriz, 2013; Gunkel et al., 2014; Tait et al., 2014; Varma et al., 2012). Newly established global relationships with international organizations and expatriates may lead to increased levels of FDI in emerging economies and domestically in the United States (Wang, Feng, Freeman, Fan, & Zhu, 2014). The inflows of FDI can

potentially fuel increased economic prosperity and employment opportunities in emerging economies (Peng, 2012b). The increase in business opportunities in Brazil, Russia, China, and India (the BRICs) led to emerging middle classes in previously poor communities (Hurn, 2013). The increase of middle classes in emerging countries can lead to greater economic prosperity globally (Kim & Tung, 2013).

Recommendations for Action

I recommend that organizations use the CQ assessment scale, among other expatriate identification and selection criteria, to measure a prospective expatriate candidate's current ability to adapt to the cultural differences inherent in a global assignment. If a candidate scores lower on CQ sub-dimensions, especially the motivational CQ dimension, further training and the creation of additional support systems may benefit the candidate prior to departure and after arrival in the host location. This recommendation follows from the study's regression analyses and other scholarly research (Fischer, 2011; Huff, 2013; Mahajan & De Silva, 2012). Organizations able to identify appropriate staffing and training needs of expatriates may potentially reduce costs associated with failed assignments (McNulty et al., 2013; Minter, 2011; Peng & Beamish, 2014; Tharenou, 2013). International business school programs may benefit from research identifying areas to strengthen the existing education of aspiring expatriates (Kim & Egan, 2011).

Recommendations for Further Study

I recommend conducting additional regression analyses on the study data. Researchers use multiple regression processes when they want to examine the values of dependent variables related to multiple predictors or independent variables (Field, 2013). Multiple regression analysis may determine how well a set of independent variables predict the dependent variables in study. Multiple regression analysis can also help to determine the level of contribution that each independent variable has in the variance (Rovai et al., 2013).

Previous researchers used multiple regression analysis to examine the influence of expatriate factors and work-related outcomes (Chen et al., 2011; Huff, 2013; Malek & Budhwar, 2013). I explored the influence of other general work experience factors, with questions included in this study, in future studies. Questions related to the following factors regarding months of full-time work experience, annual salary, functional work area, and months of tenure with the organization will be considered. Specifically, a hierarchical regression analysis that examines the relationships between work outcomes and CQ, while controlling for variables related Chinese work experience variables, may provide interesting findings. I explored the influence of Chinese work experience factors, with questions included in this study, in future studies. Questions related to the following factors regarding city or location of the assignment in China, number of months in China, persons accompanying the expatriate, number of previous expatriate work experiences, person requesting the assignment, and intention to leave the organization within 2 years

will be considered. The data surrounding these types of regression analyses could help to explain additional factors of influence that may have a relationship with CQ and work outcomes.

Recommendations include conducting additional regression analyses based upon the demographic variables collected for this study. Previous scholars indicated several different types of demographic factors might influence expatriate work outcomes. Differences in expatriate demographic factors relating to (a) age, (b) gender, (c) marital status, (d) education, (e) religion, (f) ethnicity, and (g) factors in the host country may influence the acceptance of social networks abroad and an expatriate's intercultural effectiveness in working and communicating with those social networks (Alshammari, 2012; Bhatti, Kaliani Sundram, & Hoe, 2012; Freeman & Lindsay, 2012; Selmer & Lauring, 2010). Expatriate demographics of gender and age specifically can pose a negative impact on adjustment factors if a female expatriate is in a male-dominated or age-centric culture, less accepting of women or specific ages for leadership roles. Froese and Peltokorpi (2013) identified age as influencing expatriate assignments.

Wu and Ang (2011) demonstrated that expatriates with higher cultural intelligence and more international experience have greater cultural adjustment and performance. Other factors researchers identified as influencing expatriate work outcomes include (Lin et al., 2012a; Koo Moon et al., 2012; Okpara & Kabongo, 2011; Rizwan, Riaz, & Saboor, 2011): (a) demographics (age, gender, marital status, ethnicity); (b) personality traits; (c) family support; (d) cross-cultural training; (e) cultural

intelligence; (f) organization support; (g) job level; (h) length of stay; (i) previous overseas experiences; (j) previous international experience; and (k) cultural distance. I will explore the influence of CCT related variables, with questions included in this study, in future studies. Questions related to the following factors regarding pre-departure CCT, number of hours of pre-departure CCT, type of pre-departure CCT, post-arrival CCT, number of hours of post-arrival CCT, type of post-arrival CCT, and level of Chinese language proficiency will be considered. The following variables may provide additional insights regarding other predictors of work outcomes and CQ in future studies; gender, age, martial status, education, tenure with the organization, type of assignment selection, amount of provided CCT, amount of previous expatriate assignments, amount of host country and parent country organizational support, amount of non-work related support, and turnover intentions.

The work effectiveness variable presented a limited reliability score. The exclusion of one statement in the work effectiveness scale may improve the reliability score. SPSS calculated a Cronbach's alpha of .89 if the following statement under work effectiveness was deleted; To what extent, if he or she could, would the boss change the manner in which the job is done. Therefore, future research should remove this variable.

Recommendations are that future expatriate research investigate what factors influence expatriate motivation and motivational CQ given the regression results demonstrated significant predictive power in CQ, especially motivational CQ, in explaining variances in work outcomes. Previous researchers hypothesize that specific

expatriate personality traits in combination with the host country's values, norms, and prototypical personality traits may influence expatriate adjustment and job satisfaction (Peltokorpi & Froese, 2014; Schiefer, Möllering, & Daniel, 2012). Additional studies comparing the predictive power of personality type versus cultural intelligence would be interesting to understand which is a bigger predictor of work outcomes.

Additionally, it would be interesting to compare the survey results of the US population to that of European populations, that completed the survey but were outside the scope of this research. Ghafoor and Khan (2011) identified cultural distance as an influencer of cross-cultural adjustment and a contributor to assignment failure. Given the diverse population and cultural composition of Europe, it would be interesting to investigate if Europeans have a higher cultural intelligence versus the US population.

Study participants completed the survey based upon self-evaluations. To mitigate potential issues related to common method variance, future studies could include work outcome assessments and percieved cultural intelligence of expatriates provided by expatriates' supervisors and peers. The triangulation of self, peer, and supervisor assessments may lend greater clarity to the actual work performance outcomes.

This study was cross-sectional in nature and, therefore, can not establish causality. It would be interesting to conduct a longitudinal expatriate study that measures work outcomes and cultural intelligence, among other factors, prior to an expatriate's departure, during their assignment, and upon their repatriation.

Reflections

The doctoral study process was simultaneously rewarding and challenging. The knowledge and skills that I gained from this process constitute the rewarding aspect of this journey. The challenging aspect of the process involved the attempt to gain an understanding of and explain a complex system of expatriate management practices in societies and business practices that are ever evolving and changing.

I created four hypotheses to investigate in this study. Some of my hypotheses, prior to conducting the study, proved true. The hypotheses regarding the influence of CQ on work adjustment and work effectiveness were false. In this regard, this study data added to the growing body of evidence regarding the influence of the CQ assessment scale on work outcomes. Although the effect size and small predictive power of some of my study models indicated there was still much to learn in terms of finding more explanatory factors for predicting a larger portion of variances in expatriate work outcomes.

The experience I gained throughout this process creates a better position from which to conduct further investigations on the topic of expatriate management in the future. Many additional studies may result from the original doctoral study data collected; as I highlighted in the recommendations. I hope to continue conducting quantitative analyses regarding this topic in the near future.

Summary and Study Conclusions

The purpose of this quantitative correlational study was to examine the relationships among a subset of cultural intelligence predictor variables and work outcome related dependent variables. The independent variables included (a) cognitive CQ, (b) metacognitive CQ, (c) motivational CQ, and (d) behavioral CQ, while dependent variables comprised (a) work adjustment, (b) work performance, (c) work effectiveness, and (d) job satisfaction. The central research question included: What is the relationship between the sub-dimensions of CQ and expatriate work outcomes?

I used standard multiple linear regression analysis to determine if a relationship existed between the independent variables of CQ and the dependent variables of work outcomes. Based upon the study results, conclusions include that CQ has a positive and significant relationship to the following work outcomes; work performance and job satisfaction. Specifically, motivational CQ had significant predictive power in explaining the variances in work performance and job satisfaction.

I recommend that organizations use the CQ assessment scale, among other expatriate identification and selection criteria, to measure a prospective expatriate candidate's current ability to adapt to the cultural differences inherent in a global assignment. Leaders who understand this relationship and take corrective actions to mitigate the relationship may reduce costs associated with failed assignments or inadequate work outcomes. Internationally focused higher education business programs

that understand this relationship may implement changes to curriculum to increase the attainment of motivational CQ factors.

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Appendix A: Survey Recruitment and Invitation Letter to Participants

Dear [**Prospective Research Participant/Expatriate Association and/or group**],

My name is Barbara Diemer and I am an [redacted] I am also currently a student in the Doctor of Business Administration (DBA) program at Walden University in Minneapolis, Minnesota. My DBA program specialization is in International Business. I am conducting this doctoral study research as a Walden University DBA student.

I would like to invite you to participate in my doctoral study research regarding outcomes of expatriates working in China. The focus of this study is to examine if there is a relationship between specific factors associated with expatriates and their work outcomes. The potential implications of this study include the identification of recommendations to strengthen current expatriate selection, training, and support programs and improve intercultural relations in international business.

My research proposal has been approved by approved by the Institutional Review Board at Walden University. Walden University's approval number for this study is 05-08-15-0354020 and it expires on May 7, 2016.

If you would like to participate in this research please click on the link provided below. The link will direct you to a standard informed consent agreement. Read the agreement

and if you would like to participate in this research, click the accept button for the agreement. You will then continue directly to the survey questions. The survey is expected to take roughly 15 minutes to complete.

No personal identifiers, including name, email address, or other information, will be collected. I will treat your responses as anonymous. I will only report responses in an aggregate form.

I thank you in advance for your time and participation in my doctoral study research. Your feedback is greatly appreciated and valued to the expatriate community. If you have friends or colleagues also working as expatriates in China or recently returned from working on an assignment in China, please forward this link to them to complete the survey.

https://www.surveymonkey.com/[redacted]

Sincerely,

Barbara Diemer,

Doctor of Business Administration Candidate

Walden University

Appendix B: Select Survey Measurements

The following page contains statements illustrating different levels of metacognitive, cognitive, motivational, and behavioral tendencies with respect to cultural situations. Read each statement carefully and select the response that best describes your current capabilities using the scale provided (Cultural Intelligence Scale; permission given by Van Dyne et al., 2009).

Think of yourself as you generally are now, **not as you would like to be**. Answer as you honestly see yourself in relation to other people you know who are the same sex as you are and generally your same age.

Please understand that there are no right or wrong answers, and that such measures are only indicators of experience or behavioral style, and are not definitive. Your responses will remain confidential and will not be associated with you as an individual.

Please rate your level of agreement on the statement below using the following scale: 1 = strongly disagree and 7 = strongly agree.

	1 = strongly disagree

	7 = strongly agree						
	1	2	3	4	5	6	7
1. I am conscious of the cultural knowledge I use when interacting with people with different cultural backgrounds (MC1).							
2. I adjust my cultural knowledge as I interact with people from a culture that is unfamiliar to me (MC2).							
3. I am conscious of the cultural knowledge I apply to cross-cultural interactions (MC3).							
4. I check the accuracy of my cultural knowledge as I interact with people from different cultures (MC4).							
5. I know the legal and economic systems of other cultures (COG1).							
6. I know the rules (e.g., vocabulary, grammar) of other languages (COG2).							
7. I know the cultural values and religious beliefs of other cultures (COG3)							
8. I know the marriage systems of other cultures (COG4).							

9. I know the arts and crafts of other cultures (COG5).							
10. I know the rules for expressing non-verbal behaviors in other cultures (COG6).							
11. I enjoy interacting with people from different cultures (MOT1).							
12. I am confident that I can socialize with locals in a culture that is unfamiliar to me (MOT2).							
13. I am sure I can deal with the stresses of adjusting to a culture that is new to me (MOT3).							
14. I enjoy living in cultures that are unfamiliar to me (MOT4).							
15. I am confident that I can get accustomed to the shopping conditions in a different culture (MOT5).							
16. I change my verbal behavior (e.g., accent, tone) when a cross-cultural interaction requires it (BEH1).							
17. I use pause and silence differently to suit different cross-cultural situations (BEH2).							
18. I vary the rate of my speaking when a cross-							

cultural situation requires it (BEH3).							
19. I change my non-verbal behavior when a cross-cultural interaction requires it (BEH4).							
20. I alter my facial expressions when a cross-cultural interaction requires it (BEH5).							

Please rate your level of <u>adjustment</u> while in China to the factors listed below using the following scale: 1 = completely unadjusted and 7 = completely adjusted (Work Adjustment Scale; permission given by Black & Stephens, 1989).

	1 = completely unadjusted 7 = completely adjusted						
	1	2	3	4	5	6	7
1. Living conditions in general							
2. Housing conditions							
3. Food							
4. Shopping							
5. Cost of living							
6. Entertainment/recreation facilities & opportunities							

7. Healthcare facilities							
8. Socializing with host nationals							
9. Interacting with host nationals on a day-to-day basis							
10. Interacting with host nationals outside of work							
11. Speaking with host nationals							
12. Specific job responsibilities							
13. Performance standards and expectations							
14. Supervisory responsibilities							

Please rate your level of work effectiveness while in China to the factors listed below using the following scale: 1 = Not at all and 7 = Entirely (Work Effectiveness Scale; permission given by Tsui & Ohlott, 1988).

	1 = Not at all 7 = Entirely						
	1	2	3	4	5	6	7
1. To what extent have your boss's expectations been met in roles and responsibilities?							
2. To what extent, if he or she could, would the							

boss change the manner in which the job is done?							
3. Overall, to what extent do you feel that you are performing your job the way your boss would like it to be performed?							

Please rate your level of work performance while in China to the factors listed below using the following scale: 1 = poor and 7 = excellent (Work Performance Scale; permission given by Earley, 1987).

	1 = poor 7 = excellent						
	1	2	3	4	5	6	7
1. How would you rate your overall performance?							
2. How would you rate your ability to get along with others?							
3. How would you rate your ability to complete assignments on time?							
4. How would you rate the quality of your performance?							

Please rate your level of job satisfaction while in China to the factors listed below using the following scale: 1 = strongly disagree and 7 = strongly agree (Job Satisfaction Scale; permission given by West et al., 1987).

	1 = poor 7 = excellent						
	1	2	3	4	5	6	7
1. I am satisfied with my job.							
2. I am satisfied with my work duties							
3. I am satisfied with my performance in the job							
4. I am satisfied with my relationship with my boss							
5. I am satisfied with my relationship with your colleagues							
6. I am satisfied with how the job fits in with my family life							
7. I am satisfied with how much influential people at work value my contributions							

Appendix C: Permissions to Modify and Use Measurements

I adopted several different peer-reviewed survey measurements for use in this doctoral study. The table below summarizes each area of measurement by authors and other relevant information. I obtained email permissions to adapt the measurements in the summary table below.

Table 33.

Summary of Survey Measurements

Study Variable	Type of Variable	Number of Questions	Type of Measurement	Author and Study Year
Work adjustment scale (WA)	Dependent	5	Likert scale (7pt)	Black & Stephens (1989)
Work performance scale (WP)	Dependent	4	Likert scale (7pt)	Earley, 1987
Work effectiveness scale (WE)	Dependent	3	Likert scale (7pt)	Tsui & Ohlott, 1988
Job satisfaction scale (JS)	Dependent	7	Likert scale (7pt)	West et al., 1987
Cultural intelligence scale (CQ)	Independent	20	Likert scale (7pt)	Van Dyne et al., 2009
Cognitive CQ	Independent	6		
Metacognitive CQ	Independent	4		
Motivational CQ	Independent	5		
Behavioral CQ	Independent	5		