

AN EMPIRICAL EXAMINATION OF KNOWLEDGE AND SKILL PREDICTORS OF
CULTURAL ADAPTIVE PERFORMANCE

by

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DEDICATION

I would like to dedicate this dissertation to my family. My amazing wife and beautiful children, who supported and encouraged me along the way. To my mother who has always been an inspiration and an incredible friend. To my father for his support and lessons learned. A mis abuelos, por los sacrificios que hicieron por la familia.

I would also like to dedicate this research to the leadership and staff at the U.S. Army John F. Kennedy Special Warfare Center and School, members of 1st Special Warfare Training Group (Airborne), and members of the Army Special Operations community. Their professionalism and sacrifice have been a source of inspiration for me.

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ABSTRACT

AN EMPIRICAL EXAMINATION OF KNOWLEDGE AND SKILL PREDICTORS OF CULTURAL ADAPTIVE PERFORMANCE

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The current research explores the relationship between knowledge and skill predictors and the two components of cultural adaptive performance (CAP): learning behaviors and integrating behaviors. Drawing on the cross-cultural performance literature, a number of knowledge and skills that have been hypothesized as being important predictors of cross-cultural performance were evaluated. A total of 104 U.S. Army Special Operations students going through a field training exercise involving cross-cultural interactions participated in this research. A number of hypotheses were supported, with cognitive, metacognitive, and the motivational dimensions of cultural intelligence (CQ) and respect for cultural differences being predictors of learning component of CAP. Behavioral CQ, and cross-cultural schemas were found to be predictors of the integrating component of CAP.

INTRODUCTION

Cross-cultural performance, or more accurately stated, an individual's performance in a culture different than his/her own, has been researched in a number of different disciplines (e.g., psychology, business, communication, education). One of the main problems in this area of research has been the lack of an agreed upon definition for this type of performance. As Ferro (in press) argues in his review of the different literatures, most definitions of cross-cultural performance confound the relationships between predictors, performance, and outcomes. For example, a recent special issue of the *Journal of Cross-Cultural Psychology*, focused on the area of cross-cultural competence (Chiu, Lonner, Matsumoto, & Ward, 2013). Cross-cultural competence was treated as a predictor of performance (Wilson, Ward, & Fischer, 2013), a component of performance (Matsumoto & Hwang, 2013), while others yet recognized that predictors of performance are different from actual definitions of performance (Van Driel & Gabrenya, 2013).

To address the need for a theoretically-driven definition of cross-cultural performance, that avoids the confounding of predictors, performance, and outcomes, Ferro (in press) proposed the term *Cultural Adaptive Performance (CAP)*, which defines performance from a behavioral perspective, based on the adaptive performance literature (Pulakos, Arad, Donovan, & Plamondon, 2000). Pulakos et al. (2000) argue that adaptive

performance is different from task and contextual performance, and is comprised of eight dimensions, one of which is *cultural adaptability*. Using the definition of cultural adaptability as a starting point, Ferro (in press) defined CAP and hypothesizes that CAP is comprised of two components, *learning behaviors* (L-CAP) and *integrating behaviors* (I-CAP). Learning behaviors “are those that facilitate the effective adjustment of performing tasks/behaviors in a new cultural environment” (in press), while integrating behaviors “reflect actions that indicate one is modifying his or her behavior based on what was observed and learned through past learning behaviors, and correcting for past mistakes or replacing ineffective behaviors with behaviors that are more likely to be effective in a different culture” (in press).

The current work builds on Ferro’s (in press) CAP theory by identifying and empirically testing predictors of cross-cultural performance. The goal is to identify and test the validity of proximal predictors of performance, that is, identify and empirically test knowledge and skills that have been hypothesized in various literatures as being important predictors of cross-cultural performance. The focus on knowledge and skills is particularly useful from a training perspective because identifying valid predictors allows leadership and training developers to focus resources on knowledge and skills that are most relevant to improving cross-cultural performance.

The Components of CAP

Ferro (in press) argues that cultural adaptive performance (CAP) is a dimension of adaptive performance (Pulakos et al., 2000) comprised of two components: 1) learning behaviors (L-CAP) and integrating behaviors (I-CAP). At its core, adaptive performance

is a type of performance that requires an individual to modify his/her cognitive or behavioral actions to meet the demands of a dynamic work environment in order to be effective. This too, is at the heart of cross-cultural performance. In cross-cultural situations, the environment is different – the norms, values, beliefs (the environmental conditions) can be so unlike one's own environment, that cognitive and behavioral changes are required in order to perform successfully. Therefore, cross-cultural performance should be defined from an adaptive performance perspective, not as a type of task or contextual performance.

Adaptive performance is different from task or contextual performance because it involves proactive or reactive change in order to meet the demands of a dynamic work environment. Task performance, as defined by Campbell (1990), is usually thought of as static in nature and defined in terms of core tasks, or task-related behaviors that assist an organization in meeting its goals (Borman & Motowidlo, 1993). Contextual performance focuses on behaviors that are stable in nature (similar to task performance) but are not role-prescribed and do not address a changing work environment. As Chan (2000) explains “adaptation refers to the process by which an individual achieves some degree of fit between his or her behaviors and the new work demands created by the novel and often ill-defined problems resulting from changing and uncertain work situations” (p.6). Therefore, adaptive performance is theoretically different from both task performance and contextual performance, and it best describes the job performance demands encountered in a cross-cultural environment.

The two components of CAP, as Ferro (in press) argues also address the *process* required to perform in a new cultural environment. Adaptive performance is commonly described as a process (see Chan, 2000; Lang & Bliese, 2009; in the cross-cultural performance domain see Tucker et al., 2004). By its very nature, performance in a culturally distinct environment requires individuals to have the knowledge necessary to recognize how the new environment is different, identify what those differences mean in terms of new performance demands, and possess the skills required to effectively change behavior in order to meet the demands of the new environment.

CAP and its two components help describe the process through which individuals successfully adapt to the dynamic environmental conditions encountered in cross-cultural situations. Learning behaviors help individuals gain the prerequisite knowledge to understand how performance tasks have changed, and what entails effective performance in the new environment (Ferro, in press). As individuals engage in learning behaviors, the knowledge gained will directly guide what new behaviors are required to effectively perform. These new behaviors are the second component of CAP, integrating behaviors. Integrating behaviors comprise behaviors related to social interactions, and corrective behaviors that counteract or amend for past mistakes (e.g., engaging in culturally inappropriate or culturally offensive behaviors) (Ferro, in press). Integrating behaviors reflect the application of knowledge gained through learning behaviors and the actions required to overcome the demands of the environmental change.

In summary, the components of CAP describe the process by which individuals are able to successfully adapt to, and perform in, cross-cultural situations. At its core, L-

CAP captures behaviors that result in the acquisition of the necessary cultural knowledge to perform in a new environment. As such, predictors of L-CAP should be related to activities that result in the accumulation, structuring, and use of knowledge. Conversely, I-CAP focuses on the application of the knowledge gained through L-CAP activities in behaviors involved mostly in interpersonal interactions. Therefore, predictors of I-CAP should involve knowledge and skills related to successful interpersonal interactions. The following section describes the knowledge and skills, the predictors, required to engage in successful learning and integrating behaviors.

Predictors of CAP

Most models of performance in the industrial/organizational psychology literature categorize predictors along a continuum into two broad types: **distal** and **proximal**. In their model of performance Schmitt and colleagues (2003), and Cortina and Luchman (2013) described stable individual characteristics, “can do” factors, such as abilities (e.g. cognitive ability, physical abilities), and experience; and “will do” factors such as personality and integrity as distal predictors. When describing the variables that mediate the individual difference-performance relationship, the authors referred to declarative knowledge (knowledge of something), procedural knowledge or skill (knowing how to do something) and motivation as more proximal predictors of performance (Cortina & Luchman, 2013, Schmitt, Cortina, Ingerick, & Weichmann, 2003). Following their nomenclature, the focus of the current research is on identifying valid proximal predictors (i.e., the knowledge and skills) of L-CAP and I-CAP (see Figure 1 for the full list of predictors).

Pulakos and colleagues (2000) called for future research to “specify the knowledge, skills, abilities, and other characteristics that underlie and can be used to predict adaptive performance in the dimensions proposed here” (p. 622). To effectively work in a new environment, performance will be predicated by a combination of the motivation, declarative knowledge, and procedural knowledge of the individual (Schmitt et al., 2003). Recent research has proposed and tested the use of knowledge and skills as predicting above and beyond previously identified attitudinal, motivational, and trait

predictors of contextual performance (Dudley & Cortina, 2008). The focus of the current research is on identifying knowledge and skills that are valid predictors of the two components of CAP. This more narrow focus is beneficial because knowledge and skills can be trained, and as such, identification of these predictors may lead to more effective cross-cultural training programs.

Predictors of CAP can be characterized from an *etic* (universal) or *emic* (culture-specific) perspective. Some culture researchers have argued for the importance of attending to both “*etics*” and “*emics*” (Gelfand & Diener, 2010); others have argued for focusing on an etic approach since it provides a broader perspective (Gannon & Poon, 1997). For example, although receiving training specific to a country/region of the world (an emic approach) is advantageous when training for a position in a particular country, there are instances where a generalized training (etic approach) will be more effective (e.g., an individual who will be working in different countries/areas of the world).

In the interest of expanding understanding of predictors that are broadly applicable and could be used in general cross-cultural training programs, this research will largely focus on identifying general knowledge and skills that predict CAP regardless of the specific culture. That said, some etic and emic predictors overlap. For example, cultures can be described in broad terms (etic) based on characteristics such as individualism versus collectivism (e.g., priority given to the individual or collective; Triandis, Bontempo, Villareal, Asai, & Lucca, 1988), power distance (e.g., focus on the difference between the amount of power individuals possess; Hofstede, 1980), tightness versus looseness (e.g., amount of tolerance towards deviation from cultural norms;

Triandis, 1989). Knowledge of these broad dimensions is an etic predictor of CAP; however, knowledge of where a specific culture falls on these dimensions is an emic predictor. Therefore, knowledge and skills that are emic in nature but can be generalized across cultures will also be considered.

Predictors

Cultural Adaptive Performance (CAP)

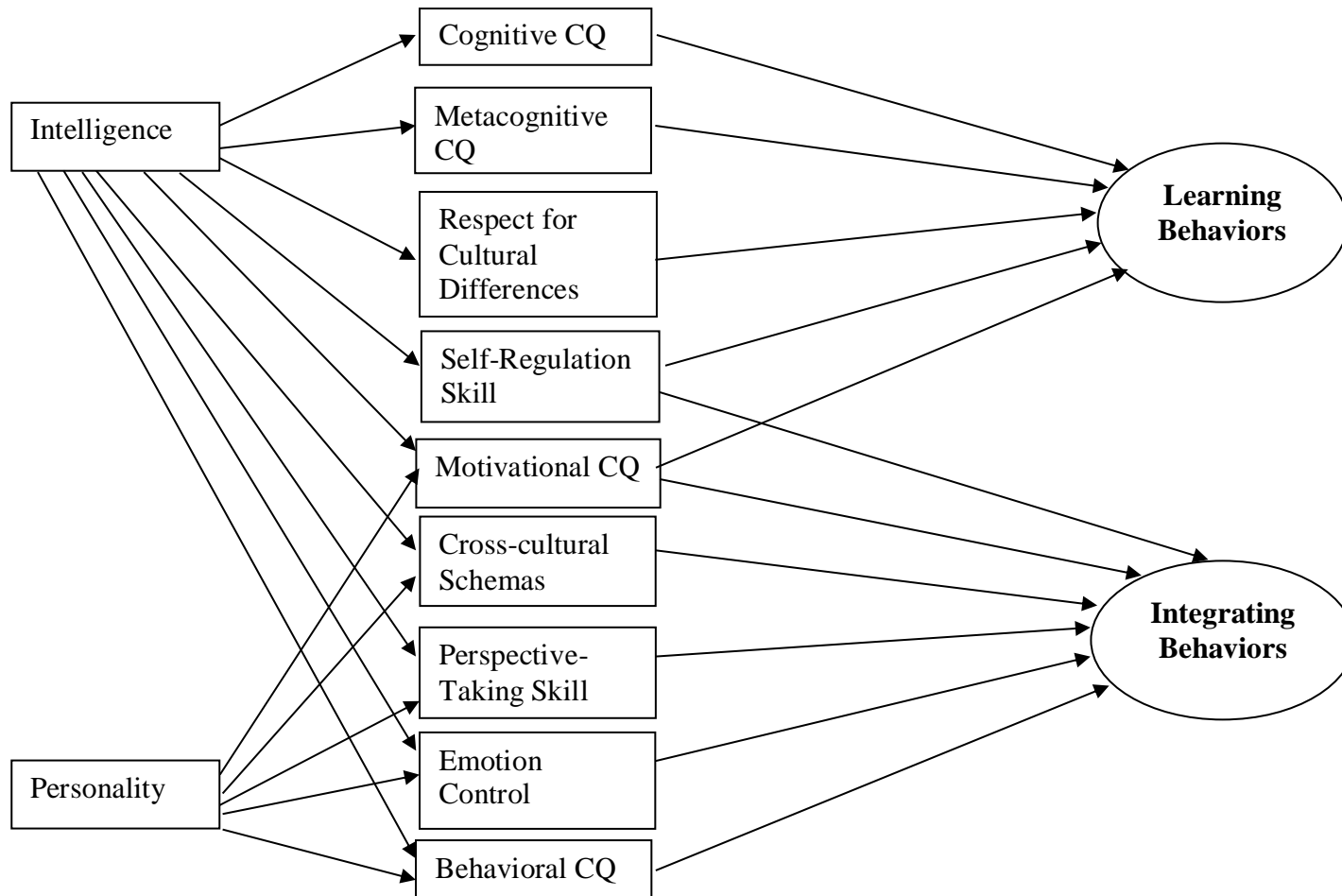


Figure 1. Proximal and Distal Predictors of CAP

Predictors of Learning Behaviors (L-CAP)

Knowledge predictors of L-CAP. Declarative knowledge refers to knowledge about facts and things (Campbell, 1990). As Campbell explains, declarative knowledge encompasses not only facts, figures, and principles, but also knowledge of goals and of the self. In addition, declarative knowledge reflects both the amount of knowledge an individual has and how the knowledge is structured (Schmitt et al., 2003). The term “knowledge” will be used throughout the rest of this paper to refer to declarative knowledge.

Earley and Ang (2003) originally defined cultural intelligence (CQ) as an individual’s capability to adapt effectively across cultures. This definition of CQ is very broad and combines different KSAOs. An alternative perspective is the conceptualization of CQ as both a type of intelligence and as traits and skills of people who can adapt to different cultures (Brislin, Worthley, & Macnab, 2006). In their conceptualization of CQ, Ang and Earley posited that CQ was a multidimensional construct, comprised of four facets: “metacognition (cognitive strategies to acquire and develop coping strategies), cognition (knowledge about different cultures), motivation (desire and self-efficacy), and behavior (repertoire of culturally appropriate behaviors)” (2006, p. 7).

Cognitive CQ (CCQ) refers to knowledge of the norms, practices, and conventions found in different cultures (Ang, Van Dyne, Koh, Ng, Templer, Tay, & Chandrasekar, 2007); it is developed through training and personal experience. CCQ is thought to help in cross-cultural performance because it allows individuals to understand the similarities and differences between cultures (Brislin et al., 2006). Research by Ang

and colleagues (2007) showed that CCQ predicted cultural judgment and decision making, but was not related to cultural adaptation or task performance. Individuals high on CCQ should more readily understand their own level of knowledge about a foreign culture, be able to recognize similarities and differences between cultures, understand when learning behaviors are needed to fill gaps in their knowledge, and engage in learning behaviors that are effective in building knowledge that will meet the demands of the new environment. Therefore, CCQ is likely to have a positive influence on engaging in learning behaviors.

Hypothesis 1. Cognitive CQ (CCQ) is positively related to the learning component of CAP.

Metacognitive CQ (MCCQ) refers to the ability to gain and process cultural knowledge (Ang et al., 2007). MCCQ is hypothesized to enable individuals to plan, monitor, and revise their mental models regarding cultural norms of different groups. Klafehn, Li, and Chiu (2013) argue that metacognition is important for cross-cultural performance because it should allow individuals to adapt to situations where their existing cultural knowledge does not match what the individual is currently witnessing or experiencing.

Furthermore, Klafehn et al. (2013) argue that in performance situations requiring adaptive change, metacognition allows individuals to adjust their existing knowledge to meet the demands of novel environments. However, in their research on the relationship between the MCCQ and international students' adaptation, MCCQ was not a significant predictor. The authors discuss the possibility of MCCQ not being an accurate measure of

metacognition, because of the self-report nature of the MCCQ; and they cite previous research that has failed to find a link between MCCQ and cross-cultural adaptation. A different possible explanation, and the one tested in this research, is that MCCQ is not directly related to the behavioral component of cross-cultural adaptation (what I refer to as I-CAP), but instead, is related to the learning component of CAP. Individuals high on MCCQ will be able to better identify gaps in their current cultural knowledge, or identify what new cultural knowledge is required, and engage in effective learning behaviors that will result in the successful acquisition and integration of the required culture-related knowledge. Therefore, MCCQ should be positively related to the L-CAP.

Hypothesis 2. Metacognitive CQ (MCCQ) is positively related to the learning component of CAP.

Sutton and colleagues (2006) proposed a number of barriers to cultural adaptability based in a multidisciplinary review of different literatures. They identified evaluative biases, which involve the comparison of other cultures to one's own culture, as the most serious barrier to cultural adaptability because they can result in individuals taking an ethnocentric perspective (e.g., assuming your culture is superior to someone else's culture) or a parochial perspective (e.g., perceiving your way of doing things as better than another's culture-based way of doing things). These biases can therefore affect how events are construed and interpreted, leading to differential evaluations of events in the social environment, and in misunderstandings and overgeneralizations (Foti & Lord, 1987; Myers, 2000; Triandis, Kurowski, & Gelfand, 1994).

A related concept to biases are stereotypes. Cuddy, Fisk, and Glick (2007) defined stereotypes as culturally shared knowledge that elicits emotional responses in individuals once activated. Stereotypes can inhibit or aid adaptability depending on the type. Stereotypes can be useful when they are a form of categorization (e.g., Buddhist monks are pacifists), the stereotype is accurate (e.g., Buddhist monks do not believe in violence against others), and if the stereotype is not used to negatively judge members of another group. These types of stereotypes are useful because they help interpret behaviors or communications (Sutton et al., 2006). Stereotypes can be detrimental to cultural adaptability when they are used to negatively evaluate or avoid members of a stereotyped category (Major & Eccleston, 2004). Negative stereotypes can make an individual act in a way that detrimentally impacts the target (Major, 2005). External stimuli automatically activate stereotypes, which often leads to behaviors that are congruent with the activated stereotype.

One way in which biases can influence CAP, is through their effect on learning behaviors. Individuals that are biased could be less likely to engage in learning behaviors and as such, less likely to act in culturally appropriate ways. Biases may influence one's cultural stereotypes and result in an individual engaging in behaviors that are consistent with negative stereotypes (Wheeler & Petty, 2001). One way of evaluating biases is through an individual's behaviors that demonstrate *respect for cultural differences* (RCD). By demonstrating RCD, an individual can ensure that biases, such as negative stereotypes, do not negatively impact one's behavior, which is important for successful adaptation. Individuals who are respectful of cultural differences may be more likely to

combat their own biases and negative stereotypes by being more likely or more proactive, to learn more about a culture and seek to understand why cultural differences exist.

Individuals who are respectful of cultural differences may look for more information in the environment and not jump to conclusions or simple explanations. Alternatively, individuals who are not respectful of cultural differences will be less likely to engage in learning behaviors to build a deeper understanding of the culture that goes beyond their initial assumptions, perceptions, or stereotypes.

Consistent with the biases literature, RCD may activate learning behaviors geared towards building a better understanding of cultural differences that go beyond initial assumptions or misconceptions. Therefore, RCD is likely to have a positive influence on engaging in learning behaviors.

Hypothesis 3. Respect for cultural differences (RCD) is positively related to the learning component of CAP.

Skill predictors of L-CAP. Skill, also referred to as *procedural knowledge*, refers to knowledge of how to do something as well as what to do (Schmitt et al., 2003). A number of previous reviews have organized skills hypothesized to be relevant for successful performance in different cultures (Abbe et al., 2008; Black & Mendenhall, 1990; Mendenhall & Oddou, 1985; Yamazaki & Kayes, 2004). Except for the Abbe et al. (2008) review, which dealt with cross-cultural competence, the reviews dealt with the expatriate literature, and as such focused mostly on adjustment. These reviews have grouped skills in terms of cognitive and interpersonal skills.

Self-regulation is the process involved in attaining goals, which are internally desired states (Vancouver, 2000; Vancouver & Day, 2005). Self-regulation involves higher cognitive processes used in the allocation of time, effort, and attention in activities geared toward attainment of a goal (Kanfer, 1990); or activities carried out by an individual to monitor his/her progress towards achievement of a goal (Kanfer & Ackerman, 1989). These activities include regulating or managing the environment, one's own cognitive and affective states, and behavioral processes involved in performance (Bandura, 1986). Essentially, effective self-regulation involves finding ways to achieve desired goals through making necessary cognitive, behavioral, or emotional adjustments.

With respect to the cognitive aspect of self-regulation, self-regulation skills should be an important predictor of learning behaviors since they are directly related to activities such as monitoring the environment and evaluating change (Kozlowski, 1998). These activities are important to engaging in effective learning behaviors, since environmental scanning and recognizing change should trigger engagement in learning behaviors. For example, during cross-cultural interactions, an individual skilled in self-regulation may recognize a gap in knowledge that requires immediate attention, and then engage in learning behaviors to address this gap. In addition, self-regulation skills will keep the individual focused on effective learning behaviors and facilitate identification of cues that help guide the direction and focus of learning behaviors. Therefore, self-regulation skills should be positively related to learning behaviors.

Hypothesis 4. Self-regulation skill is positively related to the learning component of CAP.

Motivational CQ (MCQ) can also be looked at as a skill. MCQ “reflects the capability to direct attention and energy toward learning about and functioning in situations characterized by cultural differences” (Ang et al., 2007, p. 338). Earley and Peterson (2004) argue that MCQ is critical in cross-cultural performance because it drives an individual to continue in the face of obstacles, and in the desire to gain cultural knowledge. In their study of CQ and its relationship to experiential learning during international assignments, Ng and colleagues (2009) proposed that individuals higher in MCQ are more likely to engage in experiences that result in cultural learning since these individuals are more likely to have higher self-efficacy and more likely to initiate and persist in their efforts to gain the required cultural knowledge. Therefore, MCQ should be positively related to learning behaviors.

Hypothesis 5. Motivational CQ is positively related to the learning component of CAP.

Predictors of Integrating Behaviors (I-CAP)

Knowledge predictors of I-CAP. Schemas are knowledge structures that individuals use to organize information and make sense of the world around them. Research into how experts and novices engage in problem solving has shown that experts possess much more domain-specific knowledge than novices (Ericsson & Hastie, 1994). Through the use of schemas, experts are able to construct complex, yet abstract, representations of problems based on structural similarities among problems (Sternberg,

2000). The amount of knowledge, the nature of the knowledge, and how it is organized is what dictates the level of effectiveness in performance when comparing experts to novices (Chase & Simon, 1973). Experts are better performers than novices in a specific domain because they are able to rely on more complex and richer knowledge structures to identify previously learned knowledge and rules (which have been used to develop effective solutions in the past) that apply to current problem sets (Hunt, 1994). For the purpose of this research, cross-cultural schemas are complex mental models that represent an individual's unique understanding of culture and its components.

Salas and Rosen (2010) equate routine versus adaptive expertise with the difference between accretion of skill and learning with understanding. A deeper understanding allows experts to link new concepts to old ones, and apply these in new contexts. With respect to CAP, cultural knowledge can be considered a foundational knowledge—a knowledge that forms the foundation for building adaptive expertise and the skills required to perform in new cultures. Hofstede (2001) describes two different types of cultural knowledge: cultural-general knowledge which focuses on general differences among cultures; and culture-specific knowledge which focuses on the actual “facts and figures” of a particular culture. Beyond gaining knowledge of the dimensions that differentiate cultures (knowledge of core cultural values), organizing cultural knowledge (both etic and emic) into complex, cross-cultural schemas will help individuals perform effectively in cross-cultural environments.

In cross-cultural performance settings, cultural schemas allow individuals to recognize the relevant characteristics of the situation, map them to their cultural

knowledge, and use this insight to generate courses of action. As Molinsky (2007) argues, an individual must possess the appropriate knowledge of the norms and values of that culture to choose the correct behavioral response in a given situation. For example, knowing that there are different cultural norms for how the individual relates to the group (e.g., power distance, individualism vs. collectivism, uncertainty avoidance, masculinity vs. femininity, and long term orientation vs. short term orientation) (Hofstede, 1984) can be useful for the development of appropriate role schemas, which refer to knowledge about the social roles and behaviors that are expected of individuals in a particular social position (Nishida, 2005).

As knowledge of cultural values is gained through learning behaviors, ever more complex cross-cultural schemas can be developed. Unlike stereotypes, which are used to simplify information and can be static in nature, schemas are dynamic and change over time. Increased complexity in schemas is usually associated with increased expertise (Fiske & Taylor, 1991). Therefore, cross-cultural schemas are important because they can guide an individual in adjusting his or her behaviors in order to better integrate into a culture. This type of knowledge structure will help an individual plan and appropriately carry-out behaviors that are deemed “appropriate” within a specific culture.

Consequently, cross-cultural schemas are required by an individual to effectively adjust his or her behavior in order to effectively integrate into a different culture.

Hypothesis 6. Cross-cultural schemas are positively related to the integrating component of CAP.

Skill predictors of I-CAP. Perspective-taking skill is one of the skills most often hypothesized as an important predictor of cross-cultural performance (for a summary see Abbe et al., 2008). Perspective-taking is defined as the skill required to analyze, discern, and consider another individual's point of view (Wolff, Pescosolido, & Druskat, 2002), and has been described as related to adaptive behaviors (Boland & Tenkasi, 1995). By being able to put oneself in someone else's shoes, an individual is able to consider their point of view and adjust their behavior/actions accordingly. Although perspective-taking has not been tested as a predictor of cultural adaptability (Abbe et al., 2008), results from adaptability and leadership research provide hints of the value of this skill for I-CAP.

Researchers have argued that leaders need perspective-taking skill in order to implement solutions in a complex system (Mumford, Marks, Connelly, Zaccaro, & Reiter-Palmon, 2000). In a study of leader emergence in self-managing teams, Wolff et al. (2002) suggested that perspective-taking is an analytic skill used by emerging leaders to understand and identify the needs of the group and its members. Perspective-taking skill was directly related to an individual being chosen as a leader in teams comprised of a large number of international students. Marks et al. (2001) also identify perspective-taking as one of the most important processes in multicultural teams.

Perspective-taking facilitates building relationships with other individuals since it allows an individual to anticipate the behavior and reaction of others (Davis, 1983). Galinsky and colleagues (2008) argued that perspective-taking skills are useful in negotiations because they help individuals discover underlying interests, develop creative solutions, and create more efficient deals for themselves. All of these actions are

important in cross-cultural situations where an individual is trying to avoid eliciting negative reactions or commits a mistake that results in a negative interaction with a foreign counter-part. The individual must anticipate what not to do based on his/her understanding of the counterpart's point of view or "fix" the situation by working to mitigate concerns or identify interests that will build the relationship.

In addition, perspective-taking is thought to facilitate social interactions because it is related to the ability to mimic another person's nonverbal behaviors (Chartrand & Bargh, 1999). In a cross-cultural environment, where appropriate nonverbal behaviors are often different, perspective taking should facilitate one's ability to demonstrate nonverbal behavior that will facilitate adaptation to new social interactions.

Therefore, perspective-taking likely allows individuals to adapt to and integrate into new cultures by facilitating an understanding of the needs and values of other groups; understanding the implication of one's and others' actions; and adjusting one's approach to maintain positive relationships. This skill facilitates engagement in culturally-appropriate integrating behaviors.

Hypothesis 7. Perspective-taking skill is positively related to the integrating component of CAP.

In addition to its relationship to L-CAP, self-regulation is also hypothesized as related to integrating behaviors. Kozlowski (1998) argues that self-regulation is likely an important skill for adaptive performance. In highly complex and ambiguous environments, both of which are characteristics of cross-cultural interactions, where change is required for effective performance, the same regulating activities that guide

learning behaviors, will also be important for integrating behaviors. Monitoring the environment and evaluating change will help guide effective behavioral responses to environmental change (Vancouver, 2005).

Carver and Scheier's (1981) feedback loop model of self-regulation highlights that an individual obtains information from the environment, compares this information to the current state, develops a revised output that affects the environment, and then monitors the environment to determine the effect. The loop indicates that information obtained from monitoring effects is then used to make further adjustments. This feedback loop also serves an important function in the I-CAP process since environmental cues help individuals plan and execute behaviors that will lead to better integration into the new culture. The feedback loop also helps an individual recognize when mistakes are made and identify and execute behaviors to mitigate those mistakes. Therefore, self-regulation is likely related to behaviors associated with integrating into a new culture. This view is also supported by research in the cross-cultural adjustment literature, which has shown that emotional self-regulation is a predictor of adjustment (van Oudenhoven, Mol, & Van der Zee, 2003), a concept related to I-CAP.

Hypothesis 8. Self-regulation skill is positively related to the integrating component of CAP.

Related to the concept of self-regulation is the construct of emotion control. Performance can be affected by emotion, and to the extent that an individual can regulate his/her emotions, this skill will have a direct effect on performance. Negative emotions, such as anxiety and frustration, distract an individual from the task at hand, causing a

decrease in performance (Keith & Friese, 2005). Self-regulation helps individuals to concentrate on the task and spend less cognitive resources focusing on the self (Vancouver & Tischner, 2004). This is especially relevant for complex tasks where more cognitive resources are needed to maintain situational awareness (Endsley, 1995). In addition, Matsumoto and colleagues (2003) found that emotion control predicted adjustment and culture shock in expatriates. Individuals who are high on emotion control are likely to feel less stress when engaged in difficult cross-cultural interactions, as such, they are better able to focus on intercultural adaptation (Van der Zee, van Oudenhoven, & de Grijs, 2004).

Identifying and executing appropriate integrating behaviors in a cross-cultural environment requires maintaining awareness of multiple variables, which requires significant cognitive resources; furthermore, making a mistake can induce stress. Individuals who are skilled at controlling their emotions during these interactions should be better able to execute effective integrating behaviors.

Hypothesis 9. Emotion control is positively related to the integrating component of CAP.

Earley and Ang (2003) conceptualize behavioral CQ (BCQ) as the flexibility of an individual to exhibit culture-appropriate behaviors when interacting with people from different cultures. Stated another way, BCQ requires individuals to engage in adaptive behaviors in new cultural settings. Although the authors do not describe BCQ as a skill, their conceptualization clearly implies a procedural cultural knowledge component (i.e., a skill). In order to exhibit culture-appropriate behaviors, individuals rely on their

knowledge of a culture, recognize the norm-specific behaviors of others, and adjust their behavior to match that of the target individual (Brislin et al., 2006). It is important to note that BCQ as a skill is not the same thing as behavioral mimicry (Earley & Ang, 2003; Thomas, 2006). Behavioral mimicry refers to copying personal displays and actions, and can happen at an unconscious level (Chartrand & Bargh, 1999). Although being able to make culturally appropriate personal displays (e.g., facial expressions, body postures) is part of CQ skill, these have to be guided by conscious and willful action.

BCQ is focused on the application of knowledge to the execution of culturally appropriate, culture-specific behaviors (Thomas, 2006), and the focus is largely on interpersonal interactions. Engaging in culturally appropriate behaviors and making adjustments is at the core of the definition of I-CAP. It is also the part of CAP that includes maintaining and building relationships. Individuals who are high on BCQ are more likely to engage in, or modify their behaviors, in order to better fit or perform in a new culture, therefore, BCQ is likely related to integrating behaviors. In their validation of a CQ measure, Ang et al. (2004) found that BCQ predicted both task performance and general adjustment. However, BCQ has not been tested in a setting where cross-cultural performance was defined from an adaptive performance perspective.

Hypothesis 10. Behavioral CQ is positively related to the integrating component of CAP.

In addition to being a predictor of learning behaviors, Motivational CQ (MCQ) should be related to integrating behaviors. Early and Peterson (2004) argue that MCQ not only motivates individuals to continue to perform when faced with obstacles in their

quest to gain cultural knowledge; it should also drive individuals to apply the gained cultural knowledge in culturally-appropriate responses. Ang and colleagues (2007) argue that MCQ should be related to successful cultural adaptation and to task performance because individuals high on MCQ “tend to practice new behaviors and, through practice, improve their performance” (p. 343). As such, MCQ should be related to the integrating component of CAP.

Hypothesis 11. Motivational CQ is positively related to the integrating component of CAP.

Incremental Validity

Models of performance link individual difference variables to performance through mediating variables such as declarative knowledge, procedural knowledge and motivation (Schmitt et al., 2003). Ackerman (1987) posits that knowledge and skill variables are determined by different abilities, which can be categorized into general intelligence, perceptual speed, and psychomotor abilities (Kanfer & Ackerman, 1989). With respect to predictors of the different components of CAP, this study examines the proposed knowledge and skill constructs as contributing incremental validity above and beyond more distal predictors such as cognitive ability (e.g., intelligence) and personality traits.

Hypothesis 12. Each of the hypothesized predictors (e.g. knowledge and skills) demonstrate incremental validity in the prediction of the two components of CAP, above and beyond distal predictors (intelligence and personality traits) identified in previous research.

METHOD

Participants

Participants consisted of 104 U.S. Army Soldiers attending one of the Army Special Operations Qualification Courses. This particular one, the Civil Affairs Qualification Course (CAQC), is a year-long course which students are required to complete to become an Army Civil Affairs (CA) Operator. The sample consisted of 93 men (89.4%) and 10 women (9.6%). The sample was 66.3% Caucasian, 14.4% African-American, 4.8 Asian, 10.6% Latino/Chicano, and 2.9% other. With respect to their education, 23.1% had less than 2 years of college credits, 12.5% had a 2 year degree, 27.9% had a 4 year degree, 11.5% had some graduate education, and 19.2% had a post-graduate degree. The mean age was 31.15 years, with a range of 22 to 48. The sample was comprised of current U.S. Army Soldiers, with a mean of 8.32 years of Army service (minimum of 1 year and maximum of 21.25 years). Officers made up 54.5% of the sample, 88.5% were active duty; and 80.8% had deployed in the past 5 years for an average of 1.59 deployments (minimum of 0 and maximum of 7), and the average number of months deployed was 15.62.

Procedure and Tasks

In order to successfully graduate from the CAQC, students must complete a 40-plus week long course (USAJFKSWCS, 2012) which has the dual function of assessing/selecting and training students within the different Army Special Operations Forces (SOF) disciplines. The CAQC culminates in a two-week-long field training

exercise (FTX). During the FTX, students participate in physically taxing exercises (e.g., long distance marches) and complex cross-cultural role-playing exercises. The purpose of the cross-cultural role-playing exercises is to realistically simulate the type of interactions that CA Operators are likely to encounter in their overseas deployments. For example, students have to conduct “key leader engagements” where they meet with leaders from a foreign country in order to represent the U.S. In other exercises, they conduct cross-cultural negotiations, work with foreign government leaders (e.g., city mayor, key religious leaders), and interact in other complex cross-cultural situations.

In the FTX, each student participates in three role playing exercises where he or she interacts with foreign-born role-players who speak different languages. In these exercises, each student navigates a complex cross-cultural interaction. One of the role-playing exercises takes place in a mock village called the “Soldiers’ Urban Reaction Facility” (SURF). The SURF is a mock village consisting of a handful of buildings, built to resemble a small, isolated village found in a developing nation. Each building hosts a different scenario within the exercise where a student must engage with multiple role players. The role players all speak a foreign language (e.g. Arabic, African-French dialects). Each scenario requires the student to communicate with the role players via an interpreter in order to achieve the goals of the mission.

Over the course of four days, students arrived at the SURF facility in squads ranging in size from six to sixteen and each squad was broken into four teams of 2 to 4 Soldiers. Each student was randomly assigned to take the lead in one of the four scenarios, with the other team members serving in support roles (e.g., providing

perimeter security). Depending on the size of the team, some students were able to take the lead in a second scenario. No student took the lead in three scenarios. Each team of students was assigned an instructor. The instructor led the team to each scenario and picked which student would take the lead in that scenario. These scenarios have been in use for a number of years, and events that occur in the scenario are scripted in such a way to make the scenario as standard as possible across iterations. Role players have been trained, through the use of scripts, to provide certain types of responses depending on the actions (or lack of action) of the Soldier taking the lead in the scenario. At the end of each scenario, the instructor scored the student's cross-cultural performance using the I-CAP measure and then provided feedback to the lead student. Each scenario took about 20 minutes to complete, with ten minutes available for feedback before moving to the next scenario.

Predictor Measures

Participants completed all of the measures (see Appendix A for the predictor measures) two weeks prior to the SURF exercise. The soldiers filled out the forms during one of their last days of class over a two-hour period. Demographic and background information (e.g., current Army status, previous cross-cultural training information, whether English is second language) was obtained.

Cultural intelligence was measured using Ang et al. (2007) Cultural Intelligence Scale (CQS). The CQS is a 20-item self-report measure and has been shown to be highly reliable and generalizable across samples and cultures (Van Dyne, Ang, & Koh, 2008). The CQS is comprised of four sub-scales: Cognitive cultural intelligence (CCQ),

metacognitive cultural intelligence (MCCQ), behavioral cultural intelligence (BCQ), and motivational cultural intelligence (MCQ). The CCQ consists of 6 items (e.g., “I know the legal and economic systems of other cultures”). The MCCQ consists of 4 items (e.g., “I adjust my cultural knowledge as I interact with people from a culture that is unfamiliar to me”). The BCQ sub-scale consists of 5 items (e.g., “I alter my facial expressions when a cross-cultural interaction requires it”). The MCQ scale consists of 5 items (e.g., “I enjoy interacting with people from different cultures”).

Perspective-taking skill was measured using Davis’ (1980) Interpersonal Reactivity Index (IRI). The IRI is a self-report measure of dispositional empathy consisting of four seven-item subscales. One of the subscales is the perspective-taking (PT) scale, which measures an individual’s tendency to adopt the point of view of other people in everyday life. A sample item is, “I sometimes try to understand my friends better by imagining how things look from their perspective.”

Self-regulation skill was assessed through two different self-report measures. The participants’ self-regulation skill was assessed at a general level by using the Short Self-Regulation Questionnaire (SSRQ) (Carey, Neal, & Collins, 2004), which contains 31 items. The SSRQ is highly correlated with the original 63-item SRQ ($r = .96$) developed by Brown, Miller, & Lawendowski (1999), which is based on Miller and Brown’s (1991) seven-step model of self-regulation.

Self-reported emotion control (EmoCont) was assessed via an 8-item measure developed by Keith and Frese (2005). Although this measure is generally given after completion of the exercise, due to the nature of the SURF exercise, soldiers were not

allowed to fill out the measure at any point during the FTX. As such, the emotion control measure was completed prior to the FTX with all of the other measures. Soldiers were asked to rate their general emotion control, and not specific to cross-cultural performance. An example item is, “I purposely continued to focus myself on the task.”

Respect for cultural differences (RCD) was measured using Chen and Starosta’s Intercultural Sensitivity Scale (ISS, 2000) subscale Respect for Cultural Differences (ISS-RCD). Chen and Starosta (1996) developed the term *intercultural communication competence* (ICC), and defined it as “the ability to negotiate cultural meanings and to execute appropriately effective communication behaviors that recognize the interactants’ multiple identities in a specific environment” (p. 358). Chen and Starosta developed ISS to assess five dimensions related to ICC. One of the subscales of the ISS is the ISS-RCD. It addresses how an individual orients to or tolerates another individual’s culture and opinion.

Soldiers’ cross-cultural schemas were assessed using the culture-related items of the Military Judgment Proficiency (MJP_{Cult}) situational judgment test (SJT), developed by Foldes and colleagues (Foldes, Ferro, Vasilopoulous, Cullen, Wisecarver, & Beal, 2010) and validated by Billington and colleagues (Billington, Beal, Ferro, & Foldes, 2011). The SJT consists of six scenarios of culturally complex situations a special operations forces soldier might encounter. Billington et al. (2011) found that the overall SJT (which in addition to the cultural items included items addressing ethically complex and tactically complex situations) was predictive of soldiers’ successful completion of a different special operations selection course. The items consisted of a short, two to three

paragraph description of a situation. The respondents were then asked to rate the effectiveness of each of the courses of action (COAs). In addition, respondents had to answer which COA they were most likely to take and which COA they were least likely to take.

Four different SJT scoring options were evaluated. The first consisted of an overall distance score (MJP_D) where an absolute value was calculated for each scenario based on the difference between the respondent's effectiveness rating and a mean SME rating. A total distance score was calculated based on the addition of the distance scores for all six SJT items. The second scoring option involved utilizing the most likely and least likely ratings (MJP_{ML}). If a soldier selected the same most and least likely option as the SMEs, the soldier was given one point for each correct answer. However, if the soldier selected the SME least likely option as the most likely option, or vice versa, the soldier was penalized one point (scored as -1 point). For all other options, the soldier received no points. As such, scores for the most/least likely scoring ranged from -2 to +2 points. The last two scoring options involved looking at the most likely option (MJP_M) and the least likely option (MJP_L) separately. These scoring options ranged from -1 to +1. Total scores for scoring options two through four were calculated by summing the soldiers' scores across all six SJT items.

Lastly, Army psychologists provided data containing soldiers' intelligence and personality scores. Intelligence was assessed using the Multidimensional Aptitude Battery-II (MAB-II), and personality was assessed using the NEO-PI-R. The MAB-II is a psychological test that measures aptitude and intelligence and is comprised of 10

subtests. It groups the ten tests into two broad categories, Verbal IQ (information, comprehension, arithmetic, similarities, and vocabulary), and Performance IQ (digit symbol, picture completion, spatial, picture arrangement, and object assembly). These two categories can be combined to yield a full scale score (combined IQ). The Performance IQ profile (MAB-P) was used in this study. The MAB-P appears to be more related to fluid intelligence than crystallized intelligence. Fluid intelligence allows individuals to construct novel and complex mental representations out of known components (Cattell, 1971). Fluid intelligence is most important when novel situations are encountered and solutions to those situations are required (Cattell, 1971). Therefore, MAB-P should be more important to CAP than the MAB Verbal IQ score. In addition to the intelligence scores, scores for each of the Big-Five dimensions of personality: Openness to experience (NEO-O), conscientiousness (NEO-C), extraversion (NEO-E), neuroticism (NEO-N), and agreeableness (NEO-A) were provided.

Criterion Measures

The learning component of CAP (L-CAP) was measured using a self-report, 11-item, behaviorally anchored rating scale (BARS, Smith & Kendall, 1963). A self-report measure was created because there were no instructors available who had the opportunity to observe the students engage in learning behaviors throughout the entirety of the course. The eleven items were developed from two sources. One source is the original adaptability work by Pulakos et al. (2000). Pulakos and colleagues developed a set of behaviors from critical incidents collected from multiple sources and used these behaviors to develop their definition of cultural adaptability. The other source for the

behaviors used in this research is a study of the competencies required of military personnel to have regional expertise and culture (REC; Wisecarver, Ferro, Foldes, Adis, Hope, & Hill, 2012) in which competencies were further defined with four to six example behaviors. The example behaviors from the competencies in this research were used to develop both the L-CAP and I-CAP measures (sample items from the L-CAP and I-CAP can be found in Appendix B).

For each behavior, soldiers were instructed to make two ratings based on their activities throughout the 40-week long course: a) the frequency with which the soldier had engaged in that behavior throughout the course, and b) the soldier's perceived effectiveness with which he/she had engaged in that behavior. A 5-point response scale was utilized, with the frequency ratings ranging from Never to Very Often, and the effectiveness scale broken up into three ranges: Ineffective (1), Successful (3), and Outstanding (5), with values 2 and 4 serving as the transition points between the three ranges. An example behavior from the L-CAP is, "Learns about the different dimensions of culture (e.g., individualism/collectivism, masculine/feminine, concept of time)." A total score (L-CAP_T) was calculated by summing the frequency and effectiveness ratings across all 11 items. The soldiers filled out the L-CAP at the same time as the dependent variables.

The integrating component of CAP (I-CAP) was measured via instructor's ratings using a 5-item scale. Instructors used the I-CAP to assess each soldier's performance during each of the four SURF scenarios. At the end of each scenario, the instructor rated the performance of the soldier leading the scenario. The same scale format as the L-CAP

measure was followed for the I-CAP measure. Instructors made two ratings for each behavior: a) the frequency with which the soldier had engaged in that behavior during the scenario, and b) the soldier's perceived effectiveness of that behavior during the scenario. A sample behavior from the I-CAP is, "Expresses respect for the beliefs, actions, and values of individuals from a different culture." A total score (I-CAP_T) was calculated by summing the frequency and effectiveness ratings across all five items.

Data Analyses

The first phase of data analysis involved conducting analyses designed to examine the relationship between the different independent variables (IVs) and the self-report measure of L-CAP. The second phase of the data analysis was designed to examine the relationship between the IVs and the instructor-rated I-CAP measure. Because of the nature of the I-CAP data, different types of analyses were conducted and their results compared. The following sections describe in detail the various analytical techniques that were utilized before describing the specific results.

L-CAP Analyses. As an initial step, the psychometric properties (e.g., means, standard deviations, ranges, and internal consistency reliabilities) of all the measures that were used in the study were examined and are presented in Table 1. Overall, the internal consistency of all measures was within acceptable levels.

Next, in order to examine the relationship between the IVs and L-CAP, bivariate correlations between predictors and L-CAP were examined, and hierarchical regressions conducted to evaluate the predictive validity of the hypothesized predictors by controlling for important demographic characteristics. Lastly, in order to evaluate the incremental of

the hypothesized predictors, hierarchical regressions were conducted where in the first step, intelligence (MAB-II) and personality variables were entered, and the IV, or groups of IVs, were entered in the second step.

I-CAP Analyses. The I-CAP data had two important characteristics that impacted the analyses. The first was that subjects were rated by different raters, and performance was rated during one of four scenarios. Therefore, there are rater effects and scenarios effects that must be accounted for. The second characteristic was the repeated performance (I-CAP) measure for some of the subjects. Out of the 104 Soldiers who went through the exercise, 58 (55.7%) Soldiers completed a second scenario where data was collected. As such, for these 58 subjects, the performance scores are nested within individuals, resulting in a maximum of 104 subjects, and 162 observations. This type of multilevel clustering is best analyzed using random coefficient modeling (RCM) techniques (Raudenbush & Bryk, 2002). RCM analyses allow for the modeling of clustered data, yielding proper estimates of standard errors. In these types of analyses, Level-1 models reflect the intra-individual performance observations, and the Level-2 model reflects the individual predictors. Therefore, performance scores are nested within individuals, and individuals are nested within raters.

Two sets of analyses were conducted. In the first set, analyses were conducted using only the first performance score on I-CAP, with predictors and I-CAP at Level-1, and raters at Level-2 (individuals clustered within raters); these analyses examined the relationship between the different independent variables (IVs) and the dependent variable (DV). These analyses examined within rater variance. The second set of analyses were

conducted using the two I-CAP scores. In these analyses, the DV (I-CAP scores) are Level-1, and the IVs are at Level-2, accounting for rater and scenario effects. The first set of analyses were conducted using HLM statistical software (free student trial version) and the second set of analyses were conducted using the lme4 package in the R statistical software (Bates & Sarkar, 2006).

Table 1. Psychometric Properties of the Measures

| Measure | Items | M | SD | Min. | Max. | alpha |
|---------------------|--------------|----------|-----------|-------------|-------------|--------------|
| L-CAP _T | 22 | 69.48 | 15.49 | 28 | 98 | .95 |
| I-CAP _T | 10 | 24.80 | 8.93 | 9 | 47 | .94 |
| CCQ | 6 | 19.71 | 3.72 | 1.83 | 5 | .82 |
| MCCQ | 4 | 16.49 | 2.03 | 3 | 5 | .81 |
| MCQ | 5 | 24.08 | 3.0 | 3 | 5 | .78 |
| BCQ | 4 | 15.28 | 2.30 | 2.25 | 5 | .77 |
| CQ _{Total} | 19 | 75.70 | 8.75 | 12 | 19.35 | .90 |
| ISS-RCD | 6 | 24.51 | 3.25 | 2.83 | 5 | .76 |
| PPT | 7 | 26.06 | 4.88 | 1.86 | 5 | .81 |
| EmoCont | 8 | 32.34 | 4.38 | 2.88 | 5 | .78 |
| SSRQ | 31 | 126.50 | 12.37 | 96 | 155 | .92 |
| MJP _D | 6 | 10.61 | 1.73 | 7.23 | 16.84 | NA |
| MJP _{ML} | 6 | 4.29 | 2.28 | -2 | 10 | NA |
| MJP _M | 6 | 2.31 | 1.42 | -1 | 6 | NA |
| MJP _L | 6 | 1.98 | 1.34 | -2 | 5 | NA |

Note: NA = Not Applicable for this scale due to each item is an average of multiple responses (in the case of total distance score, and most/least likely scoring), or the items include negative values (most/least likely, most likely, and least likely scoring).

RESULTS

Predictors of L-CAP

IV to DV relationships. Intercorrelations among all variables are provided in Table 2a and Table 2b. Values represent between-person correlations. In support of hypothesis 1, cognitive CQ was significantly correlated to L-CAP ($r = .25, p < .01$). Hypothesis 2 was supported, with metacognitive CQ being a significantly related to L-CAP ($r = .22, p < .05$). Respect for cultural differences had a significant correlation with L-CAP ($r = .21, p < .05$) in support of hypothesis 3. Hypothesis 4 was not supported; self-regulation skill was not significantly related to L-CAP. Hypothesis 5 was supported, with motivational CQ being a significant predictor of L-CAP ($r = .21, p < .05$). Although no hypothesis was made regarding the relationship of perspective-taking to L-CAP, perspective-taking had a significant correlation with L-CAP ($r = .24, p < .05$).

Table 2a. Intercorrelations of Study Variables

| Variable | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|-------------------------|-----|-------|--------|--------|---------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1. I-CAP _T | 104 | — | | | | | | | | | | | | | |
| 2. L-CAP _T | 90 | -.083 | — | | | | | | | | | | | | |
| 3. MAB-P | 102 | .089 | -.118 | — | | | | | | | | | | | |
| 4. NEO-N | 99 | .031 | -.255* | -.078 | — | | | | | | | | | | |
| 5. NEO-E | 99 | -.075 | .129 | -.226* | -.026 | — | | | | | | | | | |
| 6. NEO-O | 99 | -.130 | .166 | .197 | .082 | -.180 | — | | | | | | | | |
| 7. NEO-A | 99 | .014 | .177 | -.012 | -.059 | .064 | .288** | — | | | | | | | |
| 8. NEO-C | 99 | .073 | .014 | -.127 | -.059 | -.096 | .207* | .070 | — | | | | | | |
| 9. MCCQ | 104 | -.015 | .217* | .152 | -.127 | .089 | .450** | .208* | .292** | — | | | | | |
| 10. CCQ | 103 | -.115 | .245* | .003 | .012 | .186 | .283** | .190 | .068 | .470** | — | | | | |
| 11. MCQ | 104 | -.008 | .210* | .110 | -.140 | .137 | .461** | .402** | .250* | .660** | .449** | — | | | |
| 12. BCQ | 103 | .031 | .087 | .092 | -.002 | -.115 | .375** | .089 | .197 | .494** | .356** | .441** | — | | |
| 13. CQ _{Total} | 102 | -.059 | .241* | .100 | -.072 | .084 | .491** | .273** | .239* | .821** | .748** | .792** | .745** | — | |
| 14. PPT | 103 | .056 | .241* | -.013 | .075 | -.065 | .290** | .381** | .216* | .261** | .150 | .279** | .193 | .280** | — |
| 15. ISS-RCD | 104 | .090 | .207* | -.081 | -.049 | .140 | .407** | .319** | .212* | .505** | .350** | .623** | .314** | .548** | .335** |
| 16. EmoCont | 103 | -.049 | .198 | -.158 | -.357** | .069 | .036 | -.040 | .278** | .234* | .126 | .108 | .204* | .217* | .180 |
| 17. SSRQ | 102 | -.018 | .200 | .026 | -.281** | .021 | .202* | -.029 | .559** | .485** | .249* | .366** | .236* | .401** | .271** |
| 18. MJP _D | 100 | .062 | -.009 | -.253* | .125 | .146 | -.142 | .048 | .129 | .123 | .086 | .076 | .068 | .116 | .115 |
| 19. MJP _{ML} | 104 | .017 | .053 | .131 | -.002 | -.047 | .051 | -.030 | -.174 | -.014 | -.126 | -.057 | -.102 | -.134 | -.067 |
| 20. MJP _M | 104 | -.036 | .028 | -.041 | .013 | .026 | .023 | -.163 | -.089 | .045 | -.012 | -.045 | -.024 | -.016 | -.066 |
| 21. MJP _L | 104 | .067 | .059 | .266** | -.016 | -.107 | .062 | .121 | -.200* | -.072 | -.201* | -.050 | -.151 | -.218* | -.043 |

Table 2b. Intercorrelations of Study Variables

| Variable | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
|-----------------------|--------|--------|--------|---------|--------|--------|----|
| 15. ISS-RCD | — | | | | | | |
| 16. EmoCont | .165 | — | | | | | |
| 17. SSRQ | .314** | .522** | — | | | | |
| 18. MJP _D | .225* | .141 | .031 | — | | | |
| 19. MJP _{ML} | -.095 | -.073 | -.204* | -.586** | — | | |
| 20. MJP _M | -.127 | -.011 | -.104 | -.496** | .838** | — | |
| 21. MJP _L | -.027 | -.116 | -.236* | -.468** | .814** | .366** | — |

Note. Values represent between-persons correlation coefficients * $p \leq .05$. ** $p \leq .01$.

Next, the relationship between the various demographic variables and L-CAP was examined. The only significant correlation was between the item: “Do you speak more than one language at home?” which was intended to be a proxy for multiculturalism (scored as a dichotomous item where 1 = Yes, and 2 = No) and L-CAP ($r = -.34, p < .01$). This indicates that multicultural individuals (those who speak more than one language at home) are more likely to have higher L-CAP scores. Controlling for multiculturalism, by entering it in step 1 of a hierarchical regression, the only other significant predictor was metacognitive CQ, step 1: $r^2 = .12$ (adjusted $r^2 = .11$), $F(1,89) = 11.57, p = .00$, step 2: $r^2 = .16$ (adjusted $r^2 = .14$), $F(2,89) = 8.31, p < .00$ (see Table 3 for coefficients). Results from the hierarchical regression provide additional support for the predictive validity of metacognitive CQ (hypothesis 2).

Table 3. Regression Coefficients for the Predictors of L-CAP

| Model | Unstandardized Coefficient | | Standardized Coefficients | |
|------------------|----------------------------|-----------|---------------------------|----------|
| | <i>B</i> | <i>SE</i> | β | <i>t</i> |
| 1 (Constant) | 88.03 | 5.67 | | 15.53** |
| Multiculturalism | -11.13 | 3.27 | -.34 | -3.40** |
| (Constant) | 60.82 | 13.87 | | 4.39** |
| Multiculturalism | -11.0 | 3.21 | -.34 | -3.43** |
| Metacognitive CQ | 6.65 | 3.10 | .21 | 2.14* |

Note. * $p \leq .05$. ** $p \leq .01$.

Incremental validity. As an initial step, the predictive validity of intelligence, multiculturalism, and each of the five personality dimensions was explored. Results indicated that multiculturalism, neuroticism, and openness were all significant predictors of L-CAP, $r^2=.21$ (adjusted $r^2=.18$), $F(3,84)=7.06$, $p < .00$ (see Table 4 for coefficients). Next, using a hierarchical regression, multiculturalism, neuroticism, and openness were entered in step 1, and the hypothesized predictors were entered in step 2.

Table 4. Unstandardized and Standardized Regression Coefficients for Distal Predictors of L-CAP.

| | Unstandardized Coefficient | | Standardized Coefficients | |
|------------------|----------------------------|-----------|---------------------------|----------|
| | <i>B</i> | <i>SE</i> | β | <i>t</i> |
| (Constant) | 89.58 | 10.47 | | 8.56** |
| Neuroticism | -.36 | .17 | -.21 | -2.12* |
| Openness | .29 | .13 | .22 | 2.19* |
| Multiculturalism | -11.22 | 3.36 | -.34 | 3.34** |

Note. * $p \leq .05$. ** $p \leq .01$.

The incremental validity of each of the L-CAP predictors was examined by entering neuroticism, openness, and multiculturalism in step 1, and all of the hypothesized predictors in step 2. Results from the hierarchical regression did not support hypothesis 12; none of the hypothesized predictors contributed incremental validity over distal predictors (multiculturalism, neuroticism, and openness).

Predictors of I-CAP

The second phase of analyses involved analyzing the relationships between the hypothesized predictors and I-CAP. Prior to conducting the analyses on the I-CAP data, exploratory analyses were conducted to examine rater differences. A total of six raters participated in the study. Four of the raters received training on the use of the I-CAP measure, and frame-of-reference training was conducted to ensure all of the raters were rating to the same standard for each of the four scenarios. Because of the nature of the data collection, a field study where the researcher was a guest, control over some of the procedures was not possible. In addition to the four raters, 2 other raters (who were new to the scenarios) rated participants. These two raters rated 11 subjects (10.7% of the sample); 10 of these subjects received two I-CAP scores, for a total of 21 observations out of 162 observations (13%). Data collection was conducted over four days, each day running from 1400 hours through 0100 hours, because of the length of time, these two raters provided breaks for the main four raters. The two raters received a shortened version of the training on the use of the I-CAP. An examination of rater differences was conducted to evaluate possible rater effects. An analysis of variance was conducted to

examine possible difference in mean I-CAP ratings by rater. Results are presented in Tables 5 and 6.

Table 5. Descriptive Statistics for Mean I-CAP Ratings by Rater

| | N | M | SD | SE | 95% Confidence Interval for Mean | | Min | Max |
|---------|----------------|-------|------|------|----------------------------------|-------------|-------|-------|
| | | | | | Lower Bound | Upper Bound | | |
| Rater 1 | 20 | 17.55 | 4.55 | 1.02 | 15.42 | 19.68 | 9.00 | 25.00 |
| Rater 2 | 29 | 31.55 | 7.33 | 1.36 | 28.76 | 34.34 | 14.00 | 47.00 |
| Rater 3 | 27 | 20.70 | 6.59 | 1.27 | 18.10 | 23.31 | 13.00 | 39.00 |
| Rater 4 | 17 | 20.88 | 5.00 | 1.21 | 18.31 | 23.45 | 11.00 | 28.00 |
| Rater 5 | 6 | 39.17 | 1.83 | .75 | 37.24 | 41.09 | 37.00 | 41.00 |
| Rater 6 | 5 | 32.80 | 5.36 | 2.40 | 26.15 | 39.45 | 27.00 | 38.00 |
| Total | 104 | 24.80 | 8.93 | .88 | 23.06 | 26.53 | 9.00 | 47.00 |
| Model | Fixed Effects | | 6.03 | .59 | 23.63 | 25.97 | | |
| | Random Effects | | | 3.47 | 15.87 | 33.73 | | |

Table 6. Analysis of Variance of Mean I-CAP Ratings by Rater

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|-----|-------------|--------|------|
| Between Groups | 4645.610 | 5 | 929.122 | 25.583 | .000 |
| Within Groups | 3559.150 | 98 | 36.318 | | |
| Total | 8204.760 | 103 | | | |

Single I-CAP Scores. The first set of analyses examined the relationship between predictors and I-CAP, using only the first I-CAP score (104 subjects, 104 observations). Random coefficient modeling (RCM) analyses were conducted where the DV and IVs were entered in Level-1 and raters were entered in Level-2. In this manner, the nesting

within raters is accounted for while examining the relationship of the IVs to the DV. The results are presented below.

As an initial step, the fully unconditional intercept model was run. This model includes no predictors and models the Level-1 equation and Level 2 intercept equation (takes into account the nesting by rater). This model provides an estimate of the within- and between-group variance and can be used to calculate the intraclass correlation type 1 (ICC1). The ICC1 is a measure of how much variability in the DV (I-CAP) can be attributed to differences across groups. An ICC1 is calculated by dividing the between-group variance by the total variance in the model (Hofmann, Griffin, & Gavin, 2000). Results from the ICC1 indicate that 65.59% of the variance in I-CAP resides between groups. The chi-square test associated with these values shows that there is significant between-group variance, $\chi^2(5) = 140.85, p < .001$.

In subsequent analyses, each of the predictors was entered as a Level-1 predictor to examine its relationship to I-CAP. Scenario was entered as a covariate in all of the Level-1 analyses (scenario was never a significant predictor of I-CAP). To get an estimate of how much of the variance in I-CAP scores is due to rater and scenario effects, raters and scenario were dummy coded, with 5 and 3 dummy coded variables respectively. Entering these dummy coded variables into a simple regression showed that the dummy variables for raters and scenario were significant predictors of I-CAP and accounted for a large amount of the between subjects variance $r^2 = .586$ (adjusted $r^2 = .551$), $F(8,95) = 16.8, p < .00$. Table 7 shows the unstandardized and standardized weights for the

dummy variables. The implications of this finding will be further discussed in the discussion and limitations sections.

Table 7. Unstandardized and Standardized Regression Coefficients for the Predictors of I-CAP.

| | Unstandardized Coefficient | | Standardized Coefficients | |
|------------------|----------------------------|-----------|---------------------------|----------|
| | <i>B</i> | <i>SE</i> | β | <i>t</i> |
| (Constant) | 34.59 | 3.01 | | 11.51** |
| Rater 1 Dummy | -15.191 | 3.062 | -.674 | -4.961** |
| Rater 2 Dummy | -1.346 | 2.971 | -.068 | -.453 |
| Rater 3 Dummy | -11.142 | 2.974 | -.550 | -3.746** |
| Rater 4 Dummy | -11.614 | 3.070 | -.484 | -3.783** |
| Rater 5 Dummy | 6.376 | 3.777 | .167 | 1.688 |
| Scenario 1 Dummy | -2.447 | 1.859 | -.122 | -1.316 |
| Scenario 2 Dummy | -1.611 | 1.905 | -.074 | -.846 |
| Scenario 3 Dummy | -3.600 | 1.729 | -.185 | -2.082* |

Note. * $p \leq .05$. ** $p \leq .01$.

Repeated Measures. In addition to the analyses conducted utilizing only one I-CAP score, the data were analyzed again, but this time the data for participants with two I-CAP scores were used. A total of 58 subjects had two I-CAP scores, resulting in a nested model with 104 subjects and 162 observations.

As a first step, the amount of between-person and with-in person variance was examined for the two I-CAP scores. Results of the intra-class correlation coefficient (ICC1) for I-CAP was .4682, meaning that 46.82% of the variance in I-CAP is between-subjects variance. Next, the percentage of the variance in I-CAP scores accounted for by

the rater and scenario effects was examined. The variance component representing variation between individuals decreased greatly ($38.824 - 6.4181$) between the null model and the model when the rater and scenario factors were entered. This means that rater effects and scenarios accounted for 85.23% of the individual-to-individual variation in I-CAP scores. Consequently, only about 15% of the variance can be accounted for by the different predictors. The implications of this finding are discussed in greater detail in the discussion and limitations section of this paper.

Results from both types of analyses (single and repeated I-CAP scores) are presented together in the following paragraphs.

Using the repeated I-CAP scores, total distance score (MJP_D) showed the expected pattern ($\beta = -.60, p = .056$), providing support for hypothesis 6 (cross-cultural schemas are positively related to integrating behaviors). The negative coefficient in this case makes sense, since in the distance scoring, the larger the distance between the scores, the worse the response. None of the other scoring options were significant. Results utilizing the single I-CAP score did not support any of the four scoring methodologies: 1) distance scoring (MJP_D) $\beta = -.11, ns$; 2) most likely/least likely COA (MJP_{ML}) $\beta = .15, ns$; 3) most likely COA (MJP_M) $\beta = .10, ns$; and 4) least likely COA (MJP_L) $\beta = .33, ns$.

Hypothesis 7, 8, and 9 were not supported with either the single I-CAP score: perspective-taking ($\beta = -.31, ns$), self-regulation ($\beta = .01, ns$), and emotion control ($\beta = .17, ns$); or with the repeated I-CAP score perspective-taking ($\beta = .263, ns$), self-regulation skill ($\beta = .049, ns$), and emotion control ($\beta = .165, ns$).

Using the single I-CAP score provided support for hypothesis 10, with behavioral CQ ($\beta = 2.02, p = .056$) demonstrating the expected pattern. Behavioral CQ accounted for 3% of the variance in I-CAP ($r^2=.03$). Utilizing repeated I-CAP scores, behavioral CQ was not significant ($\beta = 1.164, ns$).

Hypothesis 11 was not supported in either analyses; motivational CQ ($\beta = .19, ns$) and ($\beta = .641, ns$) was not a significant predictor of integrating behaviors.

Finally, exploratory analyses were conducted examining the predictive validity of both dimensions of CQ (behavioral CQ and motivational CQ) together. Utilizing the repeated I-CAP score, behavior CQ is a significant predictor ($\beta = 2.58, p > .05$), and motivational CQ ($\beta = -1.48, ns$) was not.

To test the incremental validity of each of the predictors (hypothesis 12), the validity of intelligence and the five dimensions of personality were tested. Utilizing the single I-CAP score, results showed that MAB-P shows the expected pattern but is not a significant predictor ($\beta = .11, p = .08$); and none of the five personality dimensions were found to be significant either. Next, each of the predictors was tested with intelligence as a predictor. None of the IVs were found to have incremental validity over intelligence, as such hypothesis 12 was not supported. However, the model including scenario ($\beta = .34, ns$), intelligence ($\beta = .10, p = .10$), motivational CQ ($\beta = -1.40, ns$) and behavioral CQ ($\beta = 2.40, p < .05$), resulted in intelligence demonstrating the expected pattern and behavioral CQ being a significant predictor.

Results using the repeated I-CAP scores for assessing the incremental validity of the hypothesized predictors were different. First of all, results indicated that MAB-P ($\beta = .157, p < .01$) and conscientiousness ($\beta = .163, p < .01$) were significant predictors. None of the hypothesized IVs had incremental validity over intelligence and conscientiousness, therefore hypothesis 12 was not supported.

DISCUSSION

The goal of this research study was to test the predictive validity of knowledge and skills that have been hypothesized as being important predictors of cross-cultural performance. The results of this research are summarized below and suggestions for the advancement of the field of cross-cultural performance are provided.

CAP and Its Components

A number of researchers have expressed the need to develop a definition of cross-cultural performance that does not confound the relationship between predictors, performance, and outcomes (Arthur & Bennett, 1995; Burke, Watkins, & Guzman, 2009; Deshpande & Viswesvaran, 1992; Harrison, Shaffer, & Bhaskar-Shrinivas, 2004; Kealey & Protheroe, 1996; Mol, Born, Willemsen, & Van Der Molen, 2005; Mol, Born, & van der Molen, 2005; Ones & Viswesvaran, 1997; Sinangil & Ones, 2001). The theoretical definitions of the two components of CAP developed in Ferro (2014) and provided here fill this gap. This research adds to the cross-cultural research literature by developing measures of cross-cultural performance that were developed from an industrial-organizational psychology perspective. The L-CAP and I-CAP measures are behavior-based and had high internal consistency values. For this study, the L-CAP was designed as a self-report, but could easily be rated by an observer, the way that the I-CAP was assessed. Therefore, these measures provide a new method for measuring performance that can be explored in other cross-cultural contexts. However, the validity (e.g., construct, or content) of these measures was not tested and needs to be assessed.

Predictors of CAP

In addition to creating measures of CAP, the primary goal of this research was to identify valid knowledge and skills that predict each of the CAP components. The results of this research are an initial step in answering the call for research that illuminates the processes by which individuals adapt in a cross-cultural performance domain (Gelfand, Erez, & Aycan, 2007). Findings from the current work demonstrate how knowledge and skills predict different components of the cultural adaptive performance process.

Previous research in the area of cross-cultural performance has focused on dependent variables such as adjustment (Arthur & Bennett, 1995; Black, Mendenhall, & Oddou, 1991; Harrison & Shaffer, 2005; Tucker, Bonial, & Lahti, 2004); early withdrawal from an international assignment (Naumann, 1992); task performance (e.g. final grades for an international student, Van der Zee, et al. 2004); leader effectiveness (Rockstuhl et al. 2011) and international leader potential (Kim & Van Dyne, 2012). In their review of the intercultural competence literature, Leung, and colleagues (2014) recognize that models linking predictors to criterion need to be improved. The authors argue that one way this can be done is by better conceptually aligning predictors and criteria (Leung, Ang, & Tan, 2014). The CAP conceptualization (Ferro, in press) accomplishes this goal by providing a behavioral definition of cross-cultural performance based on the adaptive performance literature that can be linked directly to hypothesized knowledge, skills, abilities, and other characteristics. The current research expands on this work by identifying valid predictors of both CAP components.

Results showed that the different dimensions of cultural intelligence predicted different components of CAP. A unique finding of this research was the linkage of metacognitive CQ to performance. Recent research has failed to find a link between MCCQ and cross-cultural performance (defined as sociocultural adaptation, or the ability of an individual to adapt to a new culture) (Klafehn et al., 2013). Cognitive CQ and Metacognitive CQ, both of which deal with cultural knowledge, were predictors of L-CAP, but not of I-CAP; while behavioral CQ, which deals with behaviors necessary to build interpersonal relationships, was related to I-CAP but not L-CAP. Together, these results lend support to the theoretical underpinnings of CAP – that cultural knowledge drives learning behaviors, and these in turn, form the basis for integrating behaviors. Furthermore, motivational CQ, which addresses the motivation and perseverance in the face of obstacles, was significantly related to L-CAP. Lastly, metacognitive CQ was a significant predictor of L-CAP, after accounting for variance due to multiculturalism.

Overall, the findings related to cultural intelligence provide support for the relevance of this multidimensional construct as a viable composite of knowledge and skill that is predictive of cultural adaptive performance. From an organizational perspective, this finding suggests that individuals who are slated to perform in cross-cultural settings would benefit from training targeting the knowledge and skills encompassed in CQ.

Respect for cultural differences was also an important predictor of L-CAP. However, this finding requires further examination. The scale that was used, the ISS-Respect for Cultural Differences, is typically used to measure biases towards a culture. An individual level of bias is not necessarily a measure of how much knowledge that

particular individual possesses. The degree to which an individual is aware of his/her personal biases and that is represented by their level of respect for other cultures is not apparent. As such, the degree to which people are aware of their own personal biases and stereotypes, and this self-awareness drives learning behaviors, is not transparent. Further research is required to identify the processes through which biases relate to learning behaviors and can be expressed by demonstration respect for another culture. For example, is the process that less-biased individuals are more likely to engage in learning behaviors?

Lastly, no hypotheses were made regarding the relationship between intelligence and personality and the two components of CAP; however, the results were interesting and support previous findings. Meta-analyses have consistently found that cognitive ability is the best predictor of performance (e.g., Hunter & Hunter, 1984), with this study linking intelligence to I-CAP but not to L-CAP. Furthermore, meta-analyses have found that conscientiousness is positively related to a number of different performance criteria (e.g., Barrick & Mount, 1991), including expatriate job performance (Mol, et al., 2005). A recent meta-analysis on the predictors of socio-cultural adaptation (as assessed by the Sociocultural Adaptation Scale, Searle & Ward, 1990), found positive significant relationships between conscientiousness ($r=.22$), agreeableness ($r=.16$), extraversion ($r=.29$) and medium, negative effect size for neuroticism ($r=-.32$) socio-cultural adaptation (Wilson et al., 2013); with this study finding a significant relationship between neuroticism and L-CAP, and conscientiousness and I-CAP.

Within the realm of cross-cultural performance, the current study adds to the literature by honing in on the links between personality and intelligence and cross-cultural performance. First, as Mol and colleagues commented in their meta-analysis of expatriate job performance (2005), only two studies they reviewed used measures of intelligence as a predictor. The current study's use of the MAB-II to measure intelligence and the finding that it relates significantly to I-CAP, but not to L-CAP, provides evidence that intelligence is related to integrating behaviors in cross-cultural performance. However, this should be further explored because the performance component of the MAB-II was used, which may explain its relationship to I-CAP and not L-CAP. Second, the five dimensions of personality had different relationships with the two components of CAP. Neuroticism was the only significant predictor of L-CAP, and conscientiousness was the only significant predictor of I-CAP. The mechanisms by which these personality dimensions relate to each component of CAP warrants further study. It could be that the emotional stability aspect of neuroticism facilitates the learning of cross-cultural knowledge, a subject that could be more stressful to some types of individuals. In cross-cultural interactions, conscientiousness could play a role by influencing people to pay more attention to the individuals with whom a person is interacting, and in this manner, more conscientious individuals are likely to pick up on subtle behavioral cues and use this information to adjust their own behavior accordingly.

Limitations

While this research makes several important contributions to the field of cross-cultural performance, there are a number of limitations that must be noted. First, the

challenges of field research and working with real-world samples manifested itself in rater differences in the I-CAP measure. Differences among raters seriously impacted the validity of the I-CAP and make interpretation difficult. Analyses showed that rater and scenario main effects accounted for a large portion of the variance in I-CAP scores. Although four of the raters received training on the use of the I-CAP, and frame-of-reference training was conducted to ensure that all four raters were rating to the same level for each of the scenarios, differences between raters still existed. Ideally, two raters would have been used for each scenario, and inter-rater correlations could have been computed and rater differences addressed. However, the host organization did not have the manpower to accommodate that request. In addition, data collection occurred during an exercise that is used to select students for the field of Army Civil Affairs. Failure in these exercises could result in a student failing to graduate from the year-long course. As such, data collection occurred during a high-stakes event where stress is high on both students and instructors. The nature of the environment could have impacted how instructors completed the I-CAP measure, despite having prior training on the measure.

In addition, the overall sample size was low for the types of analyses that were conducted. The maximum number of observations per analysis was 104 for the initial I-CAP score and 58 for the repeated measures score. Only 90 individuals took the L-CAP. When missing data is factored in, some of the analyses had small samples. The combination of rater and scenario effects, and low sample size, made finding relationships between IVs and DVs difficult, especially for analyses involving incremental validity. A number of variables were trending in the expected direction and it

is possible that with additional subjects some of these trends would have resulted in significant relationships.

Lastly, the sample for this study consisted of military personnel going through an Army Special Operations selection and training course. The generalizability of these results to other military branches and to non-military settings requires further exploration. In these scenarios, interactions were conducted in a different language and some of the role-plays simulated threatening situations (e.g., weapons are drawn). This is not something typically encountered in international business settings. On the other hand, the level of realism involved in these scenarios made the interaction much more realistic than those that are normally encountered in classroom-based training and made this a more realistic environment for assessing performance behaviors.

Implications for Future Research

The L-CAP and I-CAP measures developed for this research are a new contribution to the field; therefore, additional research should explore the validity and factor structure of these two measures. Related to this, the current research used a total score for the L-CAP and I-CAP, which was calculated on the sum of total scores from the effectiveness and frequency ratings for each behavior. It is possible that differences exist in the relationship between various predictors and each of these two ratings. For example, a particular predictor may be more important to the frequency with which an individual engages in learning behaviors than to the relative effectiveness of each behavior. Further research could examine the relationships among specific predictors and the frequency versus effectiveness ratings.

The research presented here can also be used to spur additional studies that use the L-CAP and I-CAP conceptualization to clearly distinguish cross-cultural performance from its predictors and outcomes. In addition, their associated measures can be modified for different contexts and for different uses. As was demonstrated in this study, they can be used to assess performance from an observer stand-point (as the I-CAP used), or as a self-report measure (which could be useful for developmental purposes to identify strengths and weaknesses).

Conclusion

The distinction between learning and integrating behaviors as part of the cross-cultural performance domain, as well as the behavior-based measures associated with these components, is unique to the literature. Despite the limitations of this study, the results suggest that there are a number of valuable predictors of cross-cultural performance. Organizations involved in international work can benefit from targeting these knowledge and skills for training within their workforce so employees will have the tools required to succeed in these types of environments. In addition, the conceptualization of CAP and its two components provide tools for organizations to more accurately assess the performance of their employees during international assignments. Too often the focus is on outcomes such as adjustment or acculturation that, although related and somewhat important, do not exactly or accurately measure the performance of the individual. For example, it is not always clear if the individual fails to adjust to a new culture, which leads to poor performance and early withdrawal, or if the case is that the poor performance influences failure to adjust and, the combination of these results in

early withdrawal. Although these ideas are speculative, the CAP construct and its measures, allow researchers to explore these types of questions, and add to the field of cross-cultural performance and cross-cultural psychology.

APPENDIX A: PREDICTOR MEASURES

Demographic Questionnaire

1. What is your gender? M__ F __
2. What is your Age? _____
3. Please indicate your ethnicity:
 - a. African-American/Black
 - b. Asian, Asian American/Pacific Islander
 - c. Caucasian/ White American, European, not Hispanic
 - d. Chicano(a)/ Mexican American
 - e. Latino(a)/ Hispanic American
 - f. Native American/American Indian
 - g. Mixed; parents are from two different groups
 - h. Other (please specify):_____
4. Marital Status:
 - a. Single
 - b. Married
 - c. Widowed
 - d. Separated/Divorced
5. Highest level of education completed?
 - a. GED or high school equivalency diploma
 - b. High school diploma
 - c. Less than 2 years of college credits, but no college degree
 - d. 2-year college degree (AA/AS)
 - e. 4-year college degree
 - f. Some graduate school, but no degree
 - g. Master's, doctoral, or professional degree
6. Which of the following describes your current status?
 - a. Active Duty
 - b. Reserves
 - c. National Guard

- d. Active Guard
7. Is English a second language for you? Y__ N__
 8. Do you speak more than one language at home? Y__ N__
 - a. What languages do you speak (please list all). Include DLAB scores on any language that has been evaluated by the Army.
 9. What is your current MOS? _____
 10. Have you deployed overseas as a member of the US military in the last 10 years? Y__ N__
 - a. Please list each deployment and length of stay:
 - i. Deployment location _____ Length (in months) _____
 - b. Did you have to interact with host nation personnel as part of any deployment?
 - i. Yes _____ No _____
 - ii. How often did you interact with host nation personnel?
 1. Daily basis
 2. A few times a week
 3. A few times a month
 4. On rare occasions
 - iii. Did you receive cross-cultural competence (3C) training prior/during deployment/s?
 1. Yes _____ No _____
 2. How much 3C training did you receive?
 - a. No training
 - b. Minimal
 - c. Moderate
 - d. Extensive

Cultural Intelligence (CQ) – (Ang&Earley, 2006)

Cognitive CQ: 7-point Likert Scale (1=Strongly Disagree; 7=Strongly Agree)

1. CCQ1: I know the legal and economic systems of other cultures.
2. CCQ 2: I know the rules (e.g., vocabulary, grammar) of other languages.
3. CCQ 3: I know the cultural values and religious beliefs of other cultures.
4. CCQ 4: I know the marriage systems of other cultures.
5. CCQ 5: I know the arts and crafts of other cultures.
6. CCQ 6: I know the rules for expressing non-verbal behaviors in other cultures.

Behavioral CQ: 7-point Likert Scale (1=Strongly Disagree; 7=Strongly Agree)

1. BCQ1: I change my verbal behavior (e.g., accent, tone) when a cross-cultural interaction requires it.
2. BCQ 2: I use pause and silence differently to suit different cross-cultural situations.
3. BCQ 3: I vary the rate of my speaking when a cross-cultural situation requires it.
4. BCQ 4: I change my non-verbal behavior when a cross-cultural interaction requires it.
5. BCQ 5: I alter my facial expressions when a cross-cultural interaction requires it.

Metacognitive CQ: 7-point Likert Scale (1=Strongly Disagree; 7=Strongly Agree)

1. MCC1: I am conscious of the cultural knowledge I use when interacting with people with different cultural backgrounds.
2. MCC 2: I adjust my cultural knowledge as I interact with people from a culture that is unfamiliar to me.
3. MCC 3: I am conscious of the cultural knowledge I apply to cross-cultural interactions.
4. MCC 4: I check the accuracy of my cultural knowledge as I interact with people from different cultures.

Motivational CQ: 7-point Likert Scale (1=Strongly Disagree; 7=Strongly Agree)

1. MCQ: I enjoy interacting with people from different cultures.
2. MCQ 2: I am confident that I can socialize with locals in a culture that is unfamiliar to me.
3. MCQ 3: I am sure I can deal with the stresses of adjusting to a culture that is new to me.
4. MCQ 4: I enjoy living in cultures that are unfamiliar to me.
5. MCQ 5: I am confident that I can get accustomed to the shopping conditions in a different culture.

Perspective-Taking (Davis, 1980)

INTERPERSONAL REACTIVITY INDEX

The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by choosing the appropriate letter on the scale at the top of the page: A, B, C, D, or E. When you have decided on your answer, fill in the letter on the answer sheet next to the item number. READ EACH ITEM CAREFULLY BEFORE RESPONDING. Answer as honestly as you can. Thank you.

ANSWER SCALE:

| | | | | |
|-------------|---|---|---|--------------|
| A | B | C | D | E |
| DOES NOT | | | | DESCRIBES ME |
| DESCRIBE ME | | | | VERY |
| WELL | | | | WELL |

1. I sometimes find it difficult to see things from the "other guy's" point of view. (PT) (-)
2. I try to look at everybody's side of a disagreement before I make a decision. (PT)
3. I sometimes try to understand my friends better by imagining how things look from their perspective. (PT)
4. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments. (PT) (-)
5. I believe that there are two sides to every question and try to look at them both. (PT)
6. When I'm upset at someone, I usually try to "put myself in his shoes" for a while. (PT)
7. Before criticizing somebody, I try to imagine how I would feel if I were in their place. (PT)

NOTE:(-) denotes item to be scored in reverse fashion

A = 0
B = 1
C = 2
D = 3
E = 4

Except for reversed-scored items, which are scored:

A = 4
B = 3
C = 2
D = 1
E = 0

Intercultural Sensitivity Scale (Chen & Starosta, 1996)

Below is a series of statements concerning intercultural communication. There are no right or wrong answers. Please work quickly and record your first impression by indicating the degree to which you agree or disagree with the statement. Thank you for your cooperation.

5 = strongly agree

4 = agree

3 = uncertain (Please put the number corresponding to your answer

2 = disagree in the blank before the statement)

1 = strongly disagree

- ___ 1. I enjoy interacting with people from different cultures.
- ___ 2. I think people from other cultures are narrow-minded.
- ___ 3. I am pretty sure of myself in interacting with people from different cultures.
- ___ 4. I find it very hard to talk in front of people from different cultures.
- ___ 5. I always know what to say when interacting with people from different cultures.
- ___ 6. I can be as sociable as I want to be when interacting with people from different cultures.
- ___ 7. I don't like to be with people from different cultures.
- ___ 8. I respect the values of people from different cultures.
- ___ 9. I get upset easily when interacting with people from different cultures.
- ___ 10. I feel confident when interacting with people from different cultures.
- ___ 11. I tend to wait before forming an impression of culturally-distinct counterparts.
- ___ 12. I often get discouraged when I am with people from different cultures.
- ___ 13. I am open-minded to people from different cultures.
- ___ 14. I am very observant when interacting with people from different cultures.
- ___ 15. I often feel useless when interacting with people from different cultures.
- ___ 16. I respect the ways people from different cultures behave.
- ___ 17. I try to obtain as much information as I can when interacting with people from different cultures.
- ___ 18. I would not accept the opinions of people from different cultures.
- ___ 19. I am sensitive to my culturally-distinct counterpart's subtle meanings during our interaction.
- ___ 20. I think my culture is better than other cultures.
- ___ 21. I often give positive responses to my culturally different counterpart during our interaction.
- ___ 22. I avoid those situations where I will have to deal with culturally-distinct persons.
- ___ 23. I often show my culturally-distinct counterpart my understanding through verbal or nonverbal cues.

____24. I have a feeling of enjoyment towards differences between my culturally distinct counterpart and me.

Note. Items 2, 4, 7, 9, 12, 15, 18, 20, and 22 are reverse-coded before summing the 24 items. Interaction Engagement items are 1, 11, 13, 21, 22, 23, and 24, Respect for Cultural Differences items are 2, 7, 8, 16, 18, and 20, Interaction Confidence items are 3, 4, 5, 6, and 10, Interaction Enjoyment items are 9, 12, and 15, and Interaction Attentiveness items are 14, 17, and 19.

Emotion Regulation (Keith & Frese, 2005)

Instructions: Some difficulties may have arisen while working on the task. Please choose the response that describes your reaction to these difficulties.

| | When difficulties arose: | False | Is somewhat false | Is neither true or false | Is somewhat true | True |
|---|--|-------|-------------------|--------------------------|------------------|------|
| 1 | ... I did not allow myself to lose my composure. | | | | | |
| 2 | ... I purposely continued to focus myself on the task. | | | | | |
| 3 | ... I calmly considered how I could continue the task. | | | | | |
| 4 | ... I allowed myself to be distracted by worrisome thoughts. | | | | | |
| 5 | ... I let myself become distracted. | | | | | |
| 6 | ... I let myself be sidetracked from the task. | | | | | |
| 7 | ... I was able to focus all my attention on the task. | | | | | |
| 8 | ... I was able to motivate myself to continue. | | | | | |

Items 4, 5, & 6 are reversed items.

Short Self-Regulation Questionnaire (SSRQ) Items

Carey, K.B., Neal, D.J., Collins, S.E. (2004). A psychometric analysis of the self-regulation questionnaire. *Addictive Behaviors*, 29, 253-260. Brown, J.M., Miller, W.R., & Lawendowski, L.A. (1999). The self-regulation questionnaire. In L. Van de Creek, & T.L. Jackson (Eds.), *Innovations in clinical practice: A sourcebook, vol. 17* (pp. 281-292). Sarasota, FL: Professional Resource Press/Professional Resource Exchange.

Items are assessed using a 5-point Likert scale (1 = Strongly disagree, 2 = Disagree, 3 = Uncertain or Unsure, 4 = Agree, 5 = Strongly Agree.) Items followed by (R) are reverse scored.

1. I have trouble making plans to help me reach my goals. (R)
2. I have a hard time setting goals for myself. (R)
3. Once I have a goal, I can usually plan how to reach it.
4. I give up quickly. (R)
5. I set goals for myself and keep track of my progress.
6. When I'm trying to change something, I pay attention to how I'm doing.
7. I don't notice the effects of my actions until it's too late. (R)
8. I tend to keep doing the same thing, even when it doesn't work. (R)
9. I have personal standards, and try to live up to them.
10. I get easily distracted from my plans. (R)
11. I have trouble following through with things once I've made up my mind to do something. (R)
12. I have a lot of willpower.
13. I'm able to accomplish goals I set for myself.
14. If I make a resolution to change something, I pay a lot of attention to how I'm doing.
15. I put off making decisions. (R)
16. Most of the time I don't pay attention to what I'm doing. (R)
17. I don't seem to learn from my mistakes. (R)
18. If I wanted to change, I'm confident I could do it.
19. I usually keep track of my progress toward my goals.
20. I usually think before I act.
21. As soon as I see a problem or challenge, I start looking for possible solutions.
22. When it comes to deciding about a change, I feel overwhelmed by the choices. (R)
23. I learn from my mistakes.
24. I am able to resist temptation.
25. Often I don't notice what I'm doing until someone calls it to my attention. (R)
26. I have trouble making up my mind about things. (R)
27. I know how I want to be.

28. I usually only have to make a mistake one time in order to learn from it.
29. I can stick to a plan that is working well.
30. I usually can find several different possibilities when I want to change something.
31. It's hard for me to notice when I've had enough (e.g., food, alcohol, sweets). (R)

Military Judgment Proficiency (Ferro, Foldes, & Beal, unpublished)

Redacted (proprietary information)

APPENDIX B: CRITERION MEASURES

L-CAP MEASURE

This form asks you to rate the extent to which you, a CAQC student, have engaged in learning behaviors associated with building one's cross-cultural knowledge and skill during the CAQC course. For each cross-cultural behavior, please rate the frequency with which you engaged in that behavior during the CAQC, and how effective you were in your attempts to engage in said behavior.

Please circle the correct number for Frequency and Level of Effectiveness. **Please answer honestly.**

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| 1. L-CAP Behavior: Learns about different shared systems that comprise culture (e.g., symbols, beliefs, attitudes, values, expectations, and norms of behavior). | | | | | |
|---|--------------------------|---------------------------|------------------|-----------------------|--------------------|
| Frequency | Never | Rarely | Sometimes | Often | Very often |
| | | 1 | 2 | 3 | 4 |
| Effectiveness | Needs Improvement | Somewhat Effective | Effective | Very Effective | Outstanding |
| | 1 | 2 | 3 | 4 | 5 |

| 2. L-CAP Behavior: Learns about the different dimensions of culture (e.g., individualism/collectivism, masculine/feminine, concept of time). | | | | | |
|---|--------------------------|---------------------------|------------------|-----------------------|--------------------|
| Frequency | Never | Rarely | Sometimes | Often | Very often |
| | | 1 | 2 | 3 | 4 |
| Effectiveness | Needs Improvement | Somewhat Effective | Effective | Very Effective | Outstanding |
| | 1 | 2 | 3 | 4 | 5 |

| 3. L-CAP Behavior: Researches how cultures vary according to the different key elements that comprise culture. | | | | | |
|---|-------------------|--------------------|-----------|----------------|-------------|
| Frequency | Never | Rarely | Sometimes | Often | Very often |
| | | 1 | 2 | 3 | 4 |
| Effectiveness | Needs Improvement | Somewhat Effective | Effective | Very Effective | Outstanding |
| | 1 | 2 | 3 | 4 | 5 |

| 4. L-CAP Behavior: Seeks to understand how own culture is viewed by members of other cultures. | | | | | |
|---|-------------------|--------------------|-----------|----------------|-------------|
| Frequency | Never | Rarely | Sometimes | Often | Very often |
| | | 1 | 2 | 3 | 4 |
| Effectiveness | Needs Improvement | Somewhat Effective | Effective | Very Effective | Outstanding |
| | 1 | 2 | 3 | 4 | 5 |

| 5. L-CAP Behavior: Seeks opportunities to interact with individuals from different cultures. | | | | | |
|---|-------------------|--------------------|-----------|----------------|-------------|
| Frequency | Never | Rarely | Sometimes | Often | Very often |
| | | 1 | 2 | 3 | 4 |
| Effectiveness | Needs Improvement | Somewhat Effective | Effective | Very Effective | Outstanding |
| | 1 | 2 | 3 | 4 | 5 |

| 6. L-CAP Behavior: Uses research tools and resources to gather information on various cultures. | | | | | |
|--|-------------------|--------------------|-----------|----------------|-------------|
| Frequency | Never | Rarely | Sometimes | Often | Very often |
| | | 1 | 2 | 3 | 4 |
| Effectiveness | Needs Improvement | Somewhat Effective | Effective | Very Effective | Outstanding |
| | 1 | 2 | 3 | 4 | 5 |

| 7. L-CAP Behavior: Seeks to understand different cultural practices (e.g., religious, economic, social, educational, political, historical). | | | | | |
|---|-------------------|--------------------|-----------|----------------|-------------|
| Frequency | Never | Rarely | Sometimes | Often | Very often |
| | | 1 | 2 | 3 | 4 |
| Effectiveness | Needs Improvement | Somewhat Effective | Effective | Very Effective | Outstanding |
| | 1 | 2 | 3 | 4 | 5 |

| 8. L-CAP Behavior: Asks questions of experienced individuals about their cross-cultural experiences. | | | | | |
|---|-------------------|--------------------|-----------|----------------|-------------|
| Frequency | Never | Rarely | Sometimes | Often | Very often |
| | | 1 | 2 | 3 | 4 |
| Effectiveness | Needs Improvement | Somewhat Effective | Effective | Very Effective | Outstanding |
| | 1 | 2 | 3 | 4 | 5 |

| 9. L-CAP Behavior: Looks for opportunities to gain cross-cultural knowledge from experienced individuals. | | | | | |
|--|-------------------|--------------------|-----------|----------------|-------------|
| Frequency | Never | Rarely | Sometimes | Often | Very often |
| | | 1 | 2 | 3 | 4 |
| Effectiveness | Needs Improvement | Somewhat Effective | Effective | Very Effective | Outstanding |
| | 1 | 2 | 3 | 4 | 5 |

| 10. L-CAP Behavior: Learns how different cultures differ in their approaches to influence and negotiation. | | | | | |
|---|-------------------|--------------------|-----------|----------------|-------------|
| Frequency | Never | Rarely | Sometimes | Often | Very often |
| | | 1 | 2 | 3 | 4 |
| Effectiveness | Needs Improvement | Somewhat Effective | Effective | Very Effective | Outstanding |
| | 1 | 2 | 3 | 4 | 5 |

| 11. L-CAP Behavior: Recognizes differences between own culture and other cultures and seeks to gain understanding of major differences. | | | | | |
|--|-------------------|--------------------|-----------|----------------|-------------|
| Frequency | Never | Rarely | Sometimes | Often | Very often |
| | | 1 | 2 | 3 | 4 |
| Effectiveness | Needs Improvement | Somewhat Effective | Effective | Very Effective | Outstanding |
| | 1 | 2 | 3 | 4 | 5 |

I-CAP MEASURE

This form asks you to provide performance ratings in the area of cultural adaptive performance (CAP) for the lead Soldier in the SURF scenario. Each rating scale targets a broad CAP behavior at three levels of performance – *Ineffective*, *Successful*, and *Outstanding*.

| | | | | | |
|---|--------------------------|---------------------------|------------------|-----------------------|--------------------|
| 1. I-CAP Behavior: Adjusts behavior to effectively promote positive interactions with individuals from different cultures. | | | | | |
| Frequency | Never | Rarely | Sometimes | Often | Very often |
| | 1 | 2 | 3 | 4 | 5 |
| Effectiveness | Needs Improvement | Somewhat Effective | Effective | Very Effective | Outstanding |
| | 1 | 2 | 3 | 4 | 5 |

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| | | | | | |
|---|--------------------------|---------------------------|------------------|-----------------------|--------------------|
| 2. I-CAP Behavior: Recognizes how own actions are viewed by members of other cultures. | | | | | |
| Frequency | Never | Rarely | Sometimes | Often | Very often |
| | 1 | 2 | 3 | 4 | 5 |
| Effectiveness | Needs Improvement | Somewhat Effective | Effective | Very Effective | Outstanding |
| | 1 | 2 | 3 | 4 | 5 |

| | | | | | |
|--|--------------------------|---------------------------|------------------|-----------------------|--------------------|
| 3. I-CAP Behavior: Adjusts behavior to mirror behavior of individuals from a different culture. | | | | | |
| Frequency | Never | Rarely | Sometimes | Often | Very often |
| | 1 | 2 | 3 | 4 | 5 |
| Effectiveness | Needs Improvement | Somewhat Effective | Effective | Very Effective | Outstanding |
| | 1 | 2 | 3 | 4 | 5 |

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| | | | | | |
|---|--------------------------|---------------------------|------------------|-----------------------|--------------------|
| 4. I-CAP Behavior*: Follows the customs and practices of another culture even when uncomfortable with the custom/practice. | | | | | |
| Frequency | Never | Rarely | Sometimes | Often | Very often |
| | 1 | 2 | 3 | 4 | 5 |
| Effectiveness | Needs Improvement | Somewhat Effective | Effective | Very Effective | Outstanding |
| | 1 | 2 | 3 | 4 | 5 |

| | | | | | |
|--|--------------------------|---------------------------|------------------|-----------------------|--------------------|
| 5. I-CAP Behavior: Maintains a positive climate in complex situations by demonstrating appropriate deference to local interaction formalities and styles. | | | | | |
| Frequency | Never | Rarely | Sometimes | Often | Very often |
| | 1 | 2 | 3 | 4 | 5 |
| Effectiveness | Needs Improvement | Somewhat Effective | Effective | Very Effective | Outstanding |
| | 1 | 2 | 3 | 4 | 5 |

| | | | | | |
|--|--------------------------|---------------------------|------------------|-----------------------|--------------------|
| 6. I-CAP Behavior: Makes observations about the behavior of locals and changes own behavior to better adhere to rules and norms for appropriate interactions. | | | | | |
| Frequency | Never | Rarely | Sometimes | Often | Very often |
| | 1 | 2 | 3 | 4 | 5 |
| Effectiveness | Needs Improvement | Somewhat Effective | Effective | Very Effective | Outstanding |
| | 1 | 2 | 3 | 4 | 5 |

| 7. I-CAP Behavior*: Adjusts behavior to defuse highly charged situations. | | | | | |
|--|--------------------------|---------------------------|------------------|-----------------------|--------------------|
| Frequency | Never | Rarely | Sometimes | Often | Very often |
| | | 1 | 2 | 3 | 4 |
| Effectiveness | Needs Improvement | Somewhat Effective | Effective | Very Effective | Outstanding |
| | 1 | 2 | 3 | 4 | 5 |

| 8. I-CAP Behavior*: Picks up on non-verbal cues from host nation personnel and responds appropriately. | | | | | |
|---|--------------------------|---------------------------|------------------|-----------------------|--------------------|
| Frequency | Never | Rarely | Sometimes | Often | Very often |
| | | 1 | 2 | 3 | 4 |
| Effectiveness | Needs Improvement | Somewhat Effective | Effective | Very Effective | Outstanding |
| | 1 | 2 | 3 | 4 | 5 |

| 9. I-CAP Behavior*: Expresses respect for the beliefs, actions, and values of individuals from a different culture. | | | | | |
|--|--------------------------|---------------------------|------------------|-----------------------|--------------------|
| Frequency | Never | Rarely | Sometimes | Often | Very often |
| | | 1 | 2 | 3 | 4 |
| Effectiveness | Needs Improvement | Somewhat Effective | Effective | Very Effective | Outstanding |
| | 1 | 2 | 3 | 4 | 5 |

| 10. I-CAP Behavior*: Responds to individuals from a different culture in a non-evaluative, non-judgmental way. | | | | | |
|---|-------------------|--------------------|-----------|----------------|-------------|
| Frequency | Never | Rarely | Sometimes | Often | Very often |
| | | 1 | 2 | 3 | 4 |
| Effectiveness | Needs Improvement | Somewhat Effective | Effective | Very Effective | Outstanding |
| | 1 | 2 | 3 | 4 | 5 |

| 11. I-CAP Behavior: Changes behavior to help people from different backgrounds feel comfortable. | | | | | |
|---|-------------------|--------------------|-----------|----------------|-------------|
| Frequency | Never | Rarely | Sometimes | Often | Very often |
| | | 1 | 2 | 3 | 4 |
| Effectiveness | Needs Improvement | Somewhat Effective | Effective | Very Effective | Outstanding |
| | 1 | 2 | 3 | 4 | 5 |

| 12. I-CAP Behavior: Considers the viewpoint of members of other cultures. | | | | | |
|--|-------------------|--------------------|-----------|----------------|-------------|
| Frequency | Never | Rarely | Sometimes | Often | Very often |
| | | 1 | 2 | 3 | 4 |
| Effectiveness | Needs Improvement | Somewhat Effective | Effective | Very Effective | Outstanding |
| | 1 | 2 | 3 | 4 | 5 |

| 13. I-CAP Behavior: Demonstrates culturally appropriate influence/negotiation tactics. | | | | | |
|---|-------------------|--------------------|-----------|----------------|-------------|
| Frequency | Never | Rarely | Sometimes | Often | Very often |
| | | 1 | 2 | 3 | 4 |
| Effectiveness | Needs Improvement | Somewhat Effective | Effective | Very Effective | Outstanding |
| | 1 | 2 | 3 | 4 | 5 |

| 14. I-CAP Behavior: Effectively influences foreign nationals through culturally relevant motivators and rewards. | | | | | |
|---|-------------------|--------------------|-----------|----------------|-------------|
| Frequency | Never | Rarely | Sometimes | Often | Very often |
| | | 1 | 2 | 3 | 4 |
| Effectiveness | Needs Improvement | Somewhat Effective | Effective | Very Effective | Outstanding |
| | 1 | 2 | 3 | 4 | 5 |

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Note: I-CAP_(T) was comprised of items with * (items 4, 7, 8, 9, and 10).

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BIOGRAPHY

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