# TOWARD AN OPERATIONAL DEFINITION OF CROSS-CULTURAL COMPETENCE FROM THE LITERATURE

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Table of Contents

# Introduction

## Purpose

The task documented here is part of a project to support Cultural Readiness for the Department of Defense. The purpose of this project is to derive a preliminary operational definition of cross-cultural competence and test and validate related measures in the military population. We define measurement for this purpose as establishing an understanding of the level of expertise in the target population. *Cross-cultural competence* (CCC) is the expertise which enables an individual in the military to perform in any number of cultures to achieve organizational goals (in contrast to more specific regional knowledge and language skills).

The first part of this task, documented here, was to operationalize[1] the definition of CCC by using constructs previously investigated in the literature. The second half of this task, to be documented in a subsequent report, will further develop the operational definition through the conduct of critical incident interviews conducted to examine the role of CCC within the context of mission success.

## Project Overview

The project includes five tasks:

       1) Identify Measures Related to Culture

       2) Establish Key Operational Definition

              a) Operational Definition of CCC from the Literature

              b) Operational Definition of CCC from Critical Incident Interviews

       3) Review of the Literature

       4) Collection of Baseline Measures

       5) Preliminary Report of Results

To develop a measurement tool, researchers must first engage in a *conceptualization phase*. Task 1 of the project, in which we identified measures of cross-cultural competence in the literature and examined their psychometric properties, addressed the

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[1] to define a concept or variable so that it can be measured or expressed quantitatively

first part of our conceptualization process. Here, we continue the conceptualization phase by examining the nature of existing constructs to come up with a definition of *what exactly is to be measured*. First and foremost in the conceptualization process, the conceptual criteria should be carefully identified to include all of the important dimensions of performance. This will involve not only theoretically-based hypotheses about important constructs, but also detailed explication of what performance success looks like that can be tied to the important and relevant outcomes of mission effectiveness.

Thus, we are undertaking a two-tiered approach to an operational definition of CCC by defining it both in terms of psychological variables *and* in relation to the unique performance challenges required in the context of mission performance.[2] We expect that we will find some constructs that lend themselves to self-report measurement via questionnaire administration and others that are skill-based behaviors and must be measured in a performance context (or at least with "performance-inspired" questionnaire items such as those found in Situational Judgment Tests or SJTs; e.g., Ascalon, 2005) to ensure that CCC is related to mission effectiveness. Thus, the results of Task 2a and 2b will provide us with the direction needed to address Task 3, in which we will bring our findings together.

In Task 3, we will finalize which constructs we wish to measure and develop a preliminary model of CCC by integrating constructs from the literature and findings from our interviews. We will review any additional relevant literature needed to validate our conclusions and to identify our initial item pool. We will then format our prototype questionnaire for pilot administration in Task 4, describe our rationale for the resulting pilot questionnaire, and explain the research findings and practical issues related to performance-based measurement. Task 4 includes administration of the questionnaire. Several administrations are required to develop a final version.

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[2] Only a preliminary set of interviews can be funded as part of this project. They will allow us to understand the nature of the challenges and competencies, but will not provide results that are extensive enough to fully develop a complete approach to performance–based assessment or a full model of performance–based competency.

This project concludes with Task 5, our final report on this preliminary project. The report will include an integration of the findings from each task, including results from the administration of the initial measures, as well as conclusions and recommendations for a model of CCC and its measurement.

## Existing Constructs of Interest

A myriad of cross-cultural knowledge, skills, personality attributes, cognitive dimensions, and attitudes have been proposed across different bodies of literature and various domains of practice ranging from medicine, management, humanitarian relief efforts, and social work to counseling psychology, to name a few. As such, several overarching and multi-faceted concepts, such as "Cultural Intelligence" (Early & Ang, 2003), "Multicultural Competency" (Dun, Smith, & Montoya, 2006), and "Intercultural Competence" (Hammer, Bennett, & Wiseman, 2003) have been created and measured.

More specific variables relevant to CCC have also been proposed, sometimes as part of such overarching concepts or sometimes as stand alone variables that might be related to CCC. Not all of these variables have been measured. Abbe, Gulick, and Herman (2007) divided the overarching concepts and specific variables into three types: antecedents (predictors), components of competence (knowledge, skill, affect, motivation), and outcome variables (interpersonal relationships, job performance, personal adjustment) which are simply indicators of effectiveness. The various concepts have often relied more on theoretical constructs and less on what competencies were actually needed to accomplish the mission or a particular task within a given domain. The sheer volume of different constructs suggested in the literature, as well as inconsistencies in operational definitions and research methods, make it difficult to settle on the important and relevant components of the competency in question. To address this problem, we discuss below the proposed variables of interest that we have derived from the literature. For each variable, we provide an explanation of what the variable is, how it has been measured, and the usefulness we believe it has for further work based on the literature. Finally, we provide our condensed list of variables that we will pursue for the remainder of the project.

## Candidate Constructs

Constructs found in the literature that may be related to CCC are described in this section. Each variable is described, including measurement information, and a rationale is given for its exclusion or selection for further research in this project. Our long-term development goal is to combine the various types of measures that are currently considered antecedents or predictors of CCC, along with specific dimensions of CCC itself, as well as evidence of the outcomes of CCC, to the extent possible, to understand the nature of CCC and to be able to assess an individual or population as to the current level of CCC.

**1)      Enthnocultural Empathy** as defined by the Scale of Enthnocultural Empathy (SEE; Wang, et al., 2003). Empathy is a variable that has been discussed in the literature as important to CCC, but not well-defined and measured as a construct (Abbe et al., 2007). Because there is some evidence that empathy may be important, we have chosen to include an existing measure of empathy as part of the item pool. The scale has four factors: Empathic Feeling and Expression, Empathic Perspective Taking, Acceptance of Cultural Differences, and Empathic Awareness. Thus, the items from this scale may provide insight into the affective component of CCC. Because there is a defined factor structure, high internal consistency, information about reliability and validity available, and this set of constructs offers one view of how to measure insight into other cultures, we will include this measure and its subordinate constructs. Such a measure may be useful in future multi-trait, multi-method studies, because we believe we may find that the items on the scale are related to mental model development as well as perspective-taking skills (see below). This is because the SEE includes a subscale of intellectual empathy, the cognitive component of empathy.

**2)      Experience in Cross-Cultural Settings** is expected to be a relevant predictor of the level of CCC. It is a multi-dimensional construct that includes a range of experiences, each of which may yield differing outcomes. For measurement development purposes, the use of standardized items to collect experiences from the target population should be used to provide comparable findings across participants for correlation with other variables of interest. Experience, in and of itself, should not be assumed to be equivalent to expertise. Without specific study to link experiences to

other variables in a population, no assertions can be made about general outcomes in performance competence across a population simply based on experience.

**3)      Flexibility** is the ability to switch easily from one strategy to another, adjusting behaviors as the situation demands. This skill comes about when one has learned from experiences and mistakes. Abbe et al., (2007) report that studies of flexibility vary widely in their operational definitions, thus rendering existing findings not applicable to this issue. They suggest that flexibility be subsumed under a specific skill set that includes other skills, such as perspective-taking, frame-shifting, or code-switching as part of the ability to see a situation from different perspectives. We address these skills under the development and application of mental models below. Inclusion of the existing scales that we reviewed in Task 1 (or some items from them) which focus on flexibility (among other constructs) could allow us to also examine this variable as a psychological construct instead of a skill. The Intercultural Adjustment Potential Scale (ICAPS; Matsumoto et al., 2001) has validity information that suggests a model of psychological components we may want to consider in our initial measurement. Due to the strong validity findings from work already done in its development related to "pulling out" and validating the relevant personality variables, the use of this scale may also allow us to avoid the confusing findings in the literature when personality measures, per se, are used in CCC research (see below). The constructs assessed in this instrument include a mixture of predictors of CCC (e.g., cultural empathy, open-mindedness, emotional stability, orientation to action, adventurousness/curiosity, extraversion), as well as flexibility itself, which allows us to cover a number of potentially important variables in addition to flexibility by inclusion of this measure.

**4)      Interpersonal Skills and Communication** – Interpersonal skills encompass a wide category of behaviors. As such, there is no specific validated measure that has been used in research. Studies tend to be qualitative in nature and specific to the type of communications required in context. Individuals who interact successfully across cultures are able to display respect and maintain a nonjudgmental stance in interaction (Ruben & Kealey, 1979, as reported by Abbe et al., 2007), which allows us one possible way to operationalize the predictors of this dimension in a questionnaire, perhaps as emotional regulation and empathy. As these are observable behaviors/skills, we feel the best approach to measuring this important set of skills in a questionnaire format is

through the use of Situational Judgment Tests (SJTs) as noted above. Most SJTs measure a constellation of skills and abilities, and vary in format. Some use paper-and-pencil tests with written descriptions of situations (Chan & Schmitt, 2002) and others using computerized multimedia scenarios (McHenry & Schmitt, 1994; Olson-Buchanan et al., 1998; Weekley & Jones, 1997). SJT response options also vary. Some SJTs propose solutions to problems, to which respondents rate their agreement. Others offer multiple solutions from which respondents choose the best and/or worst option (Motowidlo et al., 1990; Olson-Buchanan et al., 1998). In the typical SJT, a respondent is presented with a variety of situations he or she would be likely to encounter in their mission or on the job. These situations are usually gathered from critical incidents or other job analytic methods. The respondent is then asked to select the best, and oftentimes the worst, course of action from several possible ways of handling the situation (Weekley & Ployhart, 2005). Scoring is done by comparing the respondent's choices to a key of correct or incorrect answers, which themselves can be determined either rationally or empirically. Although most SJTs are of the paper-pencil variety, a few have been adapted to video and more recently to PC- or Web-based administration (e.g., Ployhart, Weekley, Holtz, & Kemp, 2003). For the preliminary measurement development being undertaken here, a small number of SJT items would need to be developed.

**5)**     **Mental Model Development and Application** – Mental models are a way in which the brain organizes knowledge, skills and experiences into retrievable, related memories for application to situations requiring assessment, decision-making skills and problem-solving. Constructs previously identified in the literature such as cross-cultural schema, cultural awareness, complexity of schema, cognitive complexity, cultural acceptance, and worldview all fall under this broad dimension. Perspective-taking, frame shifting, and code switching are all ways of describing the skills one can develop as part of a robust mental model of differing cultures. We have grouped these variables into one category which we are calling mental model development and the skills encompass mental model application. We believe that mental models are the basis for all expertise. Thus, the accuracy and richness of such an expert mental model will be an indicator of CCC. As noted above, the ability to apply the knowledge encoded in a mental model of CCC is probably predicted by cultural empathy, which allows one to achieve flexibility in applying interpersonal skills across cultural situations. We believe mental model

development and the ability to apply the mental model may be accessed by the use of SJT items. Other methods of accessing mental models directly are not appropriate for a questionnaire format.

**6)      Metacognition/Self-monitoring** - Metacognitive knowledge includes planning, monitoring, and revising one's behavior in order to reach a targeted goal (Brown, Bransford, Ferrara, & Campione, 1983). Metacognitive knowledge is theorized to lead to self-control and self-regulation. In other words, it has been described as having knowledge of and control over one's cognitions (Flavell, 1979). Self-monitoring has to do with the stability or flexibility of one's persona across situations (Snyder, 1974). Thus, high self-monitors are able to readily change their behavior according to the specific environment in which they are placed or in response to a dynamic situation. According to Snyder (1974), three characteristics of an individual scoring high on self-monitoring include: (1) concern for behaving in an appropriate manner; (2) sensitivity to cues in the environment; and (3) changes in behavior according to what the environment demands. These characteristics are linked to the ability and motivation behind reading situational cues and gearing one's actions in such a way as to maximize the likelihood of a positive outcome. Abbe et al. (2007) reviewed the self-monitoring variable (but not metacognition) and found it may be related to extraversion and it is not consistently reported as to the effect on competent performance. While it seems likely that metacognition is an important predictor of self-monitoring, no measures of either were found in the context of CCC measurement, other than one factor of the Cultural Intelligence (CQ) scale. The CQ assesses four dimensions of cultural intelligence: cognitive, behavioral, motivation, and strategic/metacognitive (Earley, 2002; Earley & Ang, 2003). Of interest for predicting performance are findings that cognitive CQ and metacognitive CQ are related to the development of decision-making processes (Ang, Van Dyne, Koh, & Ng, 2004; Ang, Van Dyne, & Koh, 2007). Because the CQ has demonstrated validity and covers the important skill of decision-making, as well as the fact that it serves as a measure of personality variables while avoiding the problems of direct measurement of personality (see below), the 20-item CQ scale is a likely candidate for inclusion in the initial item pool. We will also further examine the work by Snyder to understand what other items may be candidates for measurement.

**7)     Motivational CQ, Adventurousness; Curiosity; Willingness to Engage; Open-mindedness; Openness to Experience; Orientation to Action** – We grouped these variables together under one concept that we are defining as the tendency to actively search and explore new situations and to regard them as a challenge. This overall dimension or composite variable can also be defined as an individual's extent of interest and drive to adapt to new cultural surroundings (Ang et al., 2004) or the willingness or persistence to stay engaged in the process of making sense of unfamiliar social events and situations in dissimilar cultures (Earley & Ang, 2003). Obviously, this type of open-mindedness and willingness to engage and stay engaged seems to be an important aspect of competence in any number of fields. Because the CQ scale addresses the motivational aspect and has been validated as related to adjustment, it seems parsimonious to include its items here for examination. The ICAP discussed above also examines "orientation to action" and "adventurousness/curiosity," allowing us sufficient coverage of variables related to motivation.

**8)     Need for cognitive closure** – This motivational variable may be the opposite of the willingness to engage variable in that engagement is prematurely ended due to an immediate need for answers or solutions and a reluctance to look for other ways of seeing things. Abbe et al. report that this is a different variable than tolerance for ambiguity, though do not state how the two are differently defined and measured in the literature. As a personality construct, the need for cognitive closure is presently treated as a latent variable manifested through several different aspects, namely, desire for predictability, preference for order and structure, discomfort with ambiguity, decisiveness, and close-mindedness (Webster & Kruglanski, 1994). The most common operationalization of "need for closure" is the unidimensional use of the Need for Closure Scale (NFCS; Webster & Kruglanski, 1994). The scale assesses five facets. Facet 1 is the Preference for Order (e.g., "I hate to change my plans at the last minute."). Facet 2 is the Preference for Predictability ("I don't like to go into a situation without knowing what I can expect from it."). Facet 3 assesses Decisiveness ("When faced with a problem I usually see the one best solution very quickly."). Facet 4 measures the Discomfort With Ambiguity ("I don't like situations that are uncertain."). Facet 5 assesses Closed-Mindedness ("I dislike questions which could be answered in many different ways.") We

may find that the ICAPS accesses this variable sufficiently in terms of Tolerance for Ambiguity (see below), and that any difference between the two variables is not clear enough or important to consider in developing an understanding of this type of competence. SJT items may be able to access this variable. In our Stage Model of Cognitive Development (Ross, Phillips, Klein, & Cohn, 2005), we find that less advanced performers display more rigidity and need for structure and adherence to the plan, and this may be related to the need for cognitive closure. Performance items may reveal insights into this variable as a function of the level of expertise.

**9)    Personality Constructs -** The Five Factor Model (FFM; Costa & McCrae, 1992) broadly defines five personality factors (extraversion, emotional stability, agreeableness, conscientiousness, and openness to experience) that represent a comprehensive approach to personality structure (Wiggins & Trapnell, 1997). In a meta-analysis that included self, co-worker, and supervisor ratings of job performance, four traits—extraversion, emotional stability, agreeableness, and conscientiousness, were positively related to job performance, with only openness showing no relationship (Mol et al., 2005). However, Abbe et al (2007) report that overall, "the somewhat inconsistent findings across studies, as well as the relatively small effect sizes provide rationale for seeking other predictors of intercultural effectiveness," (p. 7). Additionally, according to Winfred, Woehr, and Graziano (2001), other problems associated with the use of the five-factor approach include: (1) failure to test for non-linearity (the relation between personality and job performance is non-linear, yet out of 248 journal articles on personality and job performance written between 1990-2000, none tested for non-linearity); (2) people make vocational choices based on personality (Holland, 1997) with resulting personality-related self-selection effects; (3) the multi-dimensionality of personality and the failure to test for interaction effects; (4) biases associated with impression management and "faking" with the use of top-down selection models; and (5) the legal implications of using personality assessment in employment contexts. In view of the above, we strongly urge that personality inventories not be used for our purposes. For this reason, we eliminated direct measurement of the Big Five Personality Traits as part of the CCC model or measurement approach. Other instruments which correlate well with these personality variables while attempting to measure CCC directly are more applicable. Specifically, the Cultural Intelligence (CQ) scale composed of four

dimensions (cognitive, behavioral, motivation, and strategic or metacognitive; Earley, 2002; Earley & Ang, 2003) will be included in our pool of items and the constructs included for consideration.

**10)** **Relationship Building** – We discussed interpersonal skills as important to CCC, but we believe relationship building is such a key interpersonal skill that it should be addressed separately and seen as a primary component skill of CCC. We also believe the skill may be predicted by openness and the motivation/willingness to engage. Again, SJTs or performance-based measurement may be necessary in order to assess which respondents already possess this skill. In future work, if experts could be identified, then scores on questionnaire items of those found to have this skill could serve as the "Gold Standard," allowing us to reliably assess which other individuals in the population are likely to possess this necessary skill.

**11)** **Self-efficacy** – This variable is the belief in one's ability to be successful in particular endeavors. Wood and Bandura (1989) said that self-efficacy "refers to beliefs in one's capabilities to mobilize the motivation, cognitive resources, and courses of action needed to meet situational demands" (p. 408). Kanfer (1990, p. 223) said that it refers to "complex cognitive judgments about one's future capabilities to organize and execute activities requisite for goal attainment." Meyer and Gellatly (1988, p. 411) saw it as "a generalized belief concerning one's task relevant capabilities." In summary, self-efficacy refers to what a person believes he or she can achieve given a particular task or situation. Abbe et al. (2007) reported a number of studies relating this variable to various dimensions of CCC. We found no specific measures of self-efficacy designed specifically for assessing CCC, as each measure that has been developed has been for other purposes or tasks, such as teaching, computer use, etc. Thus, it may be worth developing or adapting some existing items. We believe the use of the CQ may also provide insight into this variable, because in our review of the items, we concluded that some of the motivation questions are really about self-efficacy.

**12)** **Self-regulation or emotional regulation** – This variable refers to the ability to control oneself during performance and, it is a "trainable" skill, as opposed to being a personality trait. We hypothesize at this point that this variable is important component of CCC performance. The ICAPS includes the dimension of emotional regulation and if its items are included, then this variable will be among those assessed.

**13)    Tolerance for ambiguity** - The ICAPS lists this variable as one it assesses though there is a lack of consensus in the literature as to what this variable is. Abbe et al. (2007) report a number of studies relating this variable to aspects of CCC, and since it is already included in the ICAPS, we will examine this variable.

## Constructs Chosen for Further Study

Our final list of variables or constructs to consider in the creation of a model of CCC and its measurement are largely captured for our item pool by the inclusion of a few key existing scales designed to measure CCC (though they may call similar constructs by various names), as well as by assessing demographic variables to capture experience levels, and by the creation of and inclusion of a few exploratory SJT items. The existing scales include:

- The Intercultural Adjustment Potential Scale (ICAPS) (Matsumoto et al., 2001)
- The Cultural Intelligence (CQ) scale (Earley, 2002; Earley & Ang, 2003)
- The Scale of Enthnocultural Empathy (Wang, et al., 2003).

Additionally, the use of these existing scales in our development work provides an opportunity to norm them in the military population due to the large sample available. Norming provides a way to interpret an individual's score relative to the scores of others. The psychological norm represents the distribution of scores in the norming sample. Thus, the collection of normative data from a representative sample of the target population is critical, if a measurement scale is to be norm-referenced. There is a paucity of such normative data in the current CCC literature; thus, this opportunity offers the chance to meet this shortfall. If any scales are not available for research use, then alternative measures of the constructs of interest will be found or generated.[3] If we use the scales intact, then we will produce those as Appendices in Task 3 as part of our item pool.

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[3] We are currently gathering the scales and assessing any requirements for permission for research use.

The dimensions to be assessed include:

- Empathy
- Experience
- Flexibility
- Interpersonal Skills
- Mental Models (specifically in terms of a model of cultural variables that may be used to understand a wide range of specific cultures and to perform perspective-taking behavior)
- Metacognition/Self-monitoring
- Motivation/Willingness to Engage/Openness
- Need for Closure (which may be combined with Tolerance for Ambiguity)
- Relationship-Building Skills
- Self-efficacy
- Self-regulation
- Tolerance for Ambiguity

# Conclusions

### *Toward An Operational Definition of Cross-Cultural Competence*

We have examined the existing constructs and measures related to CCC and condensed them into a list of those that appear most promising and relevant for assessing this expertise in the military. The resulting list of competencies and characteristics provides an orientation to the domain of interest, as well as a language for understanding and describing the findings that will emerge from the interviews. Thus, the list is not an end in itself, but an organizing template for further development of an operational definition, the development of a model of CCC, and the foundation for the development of assessment. It is likely that many, but not all, of the constructs initially identified here will end up being included in a preliminary measure of CCC once we conduct critical incident interviews and analyze the data.

*As a result of our review, we believe that an operational definition of CCC is the development of knowledge and skill through experience and training that results in a complex schema of cultural differences, perspective-taking skills, and interpersonal skills,*

*all of which an individual can flexibly (or adaptively) apply through the willingness to engage in new environments even in the face of considerable ambiguity, through self-monitoring and through self-regulation to support mission success in a dynamic context.*

### Reaching an Operational Definition of Cross-Cultural Competence

> Like nearly everything else in psychology, the concept of cultural or intercultural competence is easy to grasp as a worthwhile human attribute. However, the exact nature of its component parts seems to be rather ephemeral and multifaceted. It is particularly important to try to understand why some people have a healthy degree of intercultural competence and others do not.
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> <div align="right">Lonner & Hayes, 2004, p. 107</div>

These observations are typical of many attempts to study any type of expertise in any domain. One reason why expertise is difficult to understand is because the expert cannot explain it themselves, and although those who observe the expertise may acknowledge its presence, they are likewise baffled when trying to put their fingers on what they are seeing (Klein, 1998). For this reason, only an examination of the tacit knowledge, skills, and strategies of the experts in a particular context will yield a complete picture of CCC. Such an examination to understand expertise requires the use of methods specifically designed to "unpack" the knowledge of experts, such as critical incident interviews.

To gain a more complete understanding of the expertise we are calling cross-cultural competence in the military, we must complete the next steps as outlined in our project overview above. However, this is a preliminary study and as such will not yield a completely reliable and valid instrument or a fully articulated model. Critical to development is additional work beyond the current project to expand our understanding of how the constructs relate to one another and how field performance relates to the measures. A more complete job analysis through interviews is needed to provide this information, after which CCC measurement and its underlying model can be more rigorously defined.

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