Assessing Cross-Cultural Competence

Implications for Selection and Training in the Canadian Forces

Kelly A. Piasentin
Organizational Behaviour Group
Socio-Cognitive Systems Section

Defence R&D Canada – Toronto

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Principal Author

Original signed by Kelly Piasentin

Kelly Piasentin

Defence Scientist

Approved by

Original signed by Keith Stewart

Keith Stewart

Section Head/Socio-Cognitive Systems Section

Approved for release by

Original signed by [Released By Name]

Joe Baranski

Chief Scientist

Project 12og, JIMP Essentials in the Public Domain: Implications for Training and Education for the Tactical Commander (PG2: Land Command).

Abstract

This report focuses on the construct of cross-cultural competence (3C) in terms of (a) what it comprises, (b) the methodologies that can be used to assess 3C, and (c) the utility of these methods for selection and training within the Canadian Armed Forces (CAF). Section 1 provides background information on parallel research pursuits within the CAF that prompted this report. In Section 2, conceptual and operational definitions of 3C are discussed. In Section 3, two considerations for assessing 3C are presented: (1) differences in the need for 3C between military and civilian populations (the latter is where the bulk of 3C research has been generated and validated); and (2) the extent to which 3C can be influenced through training, education, or experience. In Section 4, six methodologies for assessing 3C are described: self-report questionnaires/inventories; biodata instruments; situational judgment tests; behaviourally-based interviews; behavioural observations; and assessment centres. For each method, relevant examples of current 3C measures are presented. Section 5 presents practical implications of the available research on 3C with regards to how the CAF can make effective use of both selection and training to acquire a cross-culturally competent workforce. Finally, in Section 6, recommendations for future research are provided.

Résumé

Le présent rapport étudie la construction de la compétence interculturelle (CIC) sous trois angles : a) le contenu du concept; b) les méthodes pouvant être utilisées pour évaluer la CIC; c) l'intérêt de ces méthodes pour la sélection et la formation dans les Forces armées canadiennes (FAC). La partie 1 donne une information générale sur les recherches parallèles menées au sein des FAC qui ont donné lieu au présent rapport. La section 2 étudie les définitions conceptuelles et opérationnelles de la CIC. La section 3 analyse deux éléments à prendre en compte pour évaluer la CIC : 1) les besoins différents en matière de CIC entre personnels militaires et populations civiles (c'est parmi les populations civiles que l'essentiel de la recherche sur la CIC a été produit et validé); 2) la mesure dans laquelle la CIC peut être influencée par la formation, l'éducation ou l'expérience. La section 4 décrit six méthodes d'évaluation de la CIC : les questionnaires ou les inventaires d'autodéclaration; les instruments de données biographiques; les tests de jugement situationnel; les entrevues axées sur les comportements; les observations comportementales; les centres d'évaluation. Pour chaque méthode, des exemples pertinents de mesures de la CIC sont présentés. La section 5 décrit les implications pratiques de la recherche disponible sur la CIC quant à la manière dont les FAC peuvent utiliser efficacement la sélection et la formation pour se doter d'un effectif compétent sur le plan interculturel. Enfin, la section 6 contient des recommandations sur les recherches futures.

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Executive summary

Assessing Cross-Cultural Competence: Implications for Selection and Training in the Canadian Forces

Kelly A. Piasentin; DRDC Toronto TR 2012-067; Defence R&D Canada – Toronto.

This report was written as part of a broader applied research project (ARP) being conducted at Defence Research and Development Canada – Toronto (DRDC Toronto), entitled *JIMP Essentials in the Public Domain: Implications for Education and Training for the Tactical Commander*. One major purpose of the ARP is to explore the psychological dimensions involved in the Canadian Armed Forces' (CAF's) requirements to operate within a more coordinated, "comprehensive" approach to operations, referred to as JIMP (Joint, Interagency, Multinational, Public). Of the various components of JIMP, the *Public* dimension poses some of the greatest challenges for the CAF, particularly because it involves interfacing with a wide range of non-military, civilian entities. These entities are diverse not only in terms of their values and cultures (including organizational cultures), but also in terms of their goals, ideologies, biases, political agendas, communication systems, decision-making frameworks, organizational structures, and capabilities. Yet, in order to be "JIMP-capable," the CAF must be willing and able to adapt to new cultural settings and to actively engage other players in cooperative, collaborative working relationships.

Cross-cultural competence (3C) refers to a cluster of knowledge, skills, abilities, and other characteristics (KSAOs) that contribute to intercultural effectiveness. The purpose of this report is to shed light on the specific KSAOs associated with 3C in order to improve our knowledge of how to effectively assess 3C in military personnel as well as to identify which aspects of 3C should be the focus of training and which should be considered from a selection perspective. To address these issues, an extensive review of the literature on 3C (both military and civilian) was conducted, and important findings from this review were summarized.

The findings in this report are organized into six sections. Section 1 provides background information on three parallel research pursuits within the CAF that prompted this report: Canadian Forces Leadership Institute research on cultural intelligence (CQ) and CAF leadership; Canadian Defence Academy research on the "soft-skills" required for interagency operations; and DRDC Toronto research on the competencies required to operate effectively within the *Public* domain of JIMP.

In Section 2, the conceptual and operational definitions of 3C are discussed, with particular emphasis placed on the distinction (and often lack thereof) between 3C and CQ. Also in this section, the specific KSAOs thought to comprise 3C are reviewed in terms of seven competency categories identified in previous DRDC Toronto research: individual characteristics; motivation; professionalism; problem-solving; culture-specific skills; thinking skills; and social skills.

In Section 3, two considerations for assessing 3C are discussed. The first pertains to recognizing differences between military populations and civilian populations in the measurement of 3C (the bulk of 3C research has been generated and validated on civilian samples). Many of the

assumptions that apply to understanding 3C among civilians who work in foreign countries (e.g., expatriates) may not carry over to military populations; therefore, existing 3C assessment tools should not be presumed to generalize to the military context. A second consideration pertains to understanding the extent to which factors associated with 3C can be influenced through training, education, or experience. In the literature, knowledge and skills are generally considered to be dynamic in nature, whereas abilities and other characteristics (such as traits and affect), are thought to be relatively stable. However, the state of the literature illustrates that many of the competencies associated with 3C require further exploration as to how they are acquired (i.e., nature versus nurture) and the extent to which they can be developed or trained.

In Section 4, six distinct methodologies for assessing 3C are described: self-report questionnaires/inventories; biodata instruments; situational judgment tests; behaviourally-based interviews; behavioural observations; and assessment centres. For each method, relevant examples of current 3C measures are presented. Each assessment technique has a unique set of advantages and limitations, and some methods demonstrate greater utility than others, depending on the intended use. Deciding which assessment method is most appropriate requires consideration of a number of factors including (a) the type of variable(s) being assessed, (b) the availability of a construct-relevant measure that is suitable for a military population, or (c) if no measure is available, the cost associated with developing a tool, (d) the cost of administering the tool, and (e) the ability of the tool to predict relevant criteria (e.g., intercultural effectiveness).

Section 5 of the report presents some practical implications of the available research on 3C in terms of how the CAF can make effective use of both selection and training to acquire a cross-culturally competent workforce. From a selection perspective, specific issues that are addressed include (a) identifying which aspects of 3C are required of *all* military personnel versus which are required only for specific ranks, occupations, or assignments, and (b) understanding the practical challenges and legal implications of assessing 3C for selection purposes. From a training perspective, specific issues that are addressed include considerations of (a) when cross-cultural training should take place (e.g., pre-deployment vs. during the regular training cycle); (b) who requires cross-cultural training (i.e., understanding the developmental needs of trainees); and (c) the types of training programs that will be most effective.

Finally, in Section 6, recommendations for future research are provided. These include identification of (a) the specific performance criteria that result from being cross-culturally competent, (b) the extent to which the different KSAOs associated with 3C can be trained, (c) whether certain aspects of 3C constitute core competencies that are required of all CAF personnel, and (d) current cross-cultural training initiatives in the CAF and how they can be improved. Other recommendations include establishing a precise operational definition of 3C that is relevant and meaningful for the CAF, and continuing to explore and validate the specific set of KSAOs that comprise 3C.

Sommaire

Assessing Cross-Cultural Competence: Implications for Selection and Training in the Canadian Forces

Kelly A. Piasentin ; DRDC Toronto TR 2012-067 ; R & D pour la défense Canada – Toronto.

La rédaction du présent rapport fait partie d'un projet de recherche appliquée (PRA) plus vaste réalisé à Recherche et développement pour la défense Canada – Toronto (RDDC Toronto), qui s'intitule *IIMP Essentials in the Public Domain: Implications for Education and Training for the Tactical Commander/ Éléments interarmées, interorganisationnels, multinationaux et publics (IIMP) essentiels du domaine public : exigences relatives à l'instruction et à l'éducation des commandants tactiques*. Le PRA doit notamment permettre d'étudier les dimensions psychologiques liées à la nécessité, pour les Forces armées canadiennes (FAC), d'adopter une approche plus coordonnée et plus « globale » des opérations, ce que l'on a appelé une capacité interarmées, interorganisationnelle, multinationale et publique (IIMP). Parmi les diverses composantes de cette capacité, la dimension *publique* est celle qui présente des difficultés importantes pour les FAC, en particulier parce qu'elle concerne l'interaction avec un vaste éventail de groupes non militaires et civils. Ces groupes sont divers non seulement parce que leurs valeurs et leurs cultures sont différentes (y compris leurs cultures organisationnelles), mais également parce que leurs buts, leurs idéologies, leurs partis pris, leurs objectifs politiques, leurs systèmes de communication, leurs cadres décisionnels, leurs structures organisationnelles et leurs capacités sont différents. Toutefois, pour acquérir une capacité IIMP, les FAC doivent être prêtes et aptes à s'adapter à de nouveaux contextes culturels, et à s'engager activement avec d'autres acteurs dans des relations de travail fondées sur la coopération et la collaboration.

La compétence interculturelle (CIC) désigne une série de connaissances, d'aptitudes, d'habiletés et autres qualités personnelles (les « KSAO ») qui contribuent à l'efficacité interculturelle. Dans le présent rapport, nous cherchons à mettre en lumière les « KSAO » spécifiquement associées à la CIC, dans le but de mieux comprendre comment évaluer efficacement la CIC du personnel militaire. Nous cherchons également à déterminer sur quels aspects de la CIC la formation devrait mettre l'accent et sur quels aspects de la CIC la sélection devrait être surtout axée. Pour aborder ces questions, nous avons procédé à une étude documentaire sur la CIC (militaire et civile) et résumé les résultats de notre étude.

Le rapport est divisé en six sections dans lesquelles les résultats sont présentés. Dans la section 1, nous donnons une information générale sur trois recherches parallèles menées au sein des FAC qui ont donné lieu au rapport : celle de l'Institut canadien des Forces canadiennes sur l'intelligence culturelle (IUC) et le leadership des FAC, celle de l'Académie canadienne de la Défense sur les compétences comportementales requises dans les opérations de nature interorganisationnelle et celle de RDDC Toronto sur les compétences requises pour travailler efficacement dans le domaine *public* de la capacité IIMP.

La section 2 porte sur les définitions conceptuelles et opérationnelles de la CIC. Nous mettons particulièrement l'accent sur la distinction (et souvent l'absence de distinction) établie entre compétence interculturelle et intelligence culturelle. Nous étudions également la série de

« KSAO » considérée comme des éléments de la CIC, compte tenu des sept catégories de compétences décrites dans une recherche antérieure de RDDC Toronto à savoir les caractéristiques individuelles, la motivation, le professionnalisme, la résolution de problèmes, les aptitudes particulières en matière culturelle, les aptitudes à la réflexion et les compétences sociales.

Dans la section 3, nous analysons deux aspects à prendre en compte dans l'évaluation de la CIC. Le premier est la reconnaissance nécessaire des différences entre personnels militaires et populations civiles lorsqu'on mesure la CIC (l'essentiel de la recherche sur la CIC a été produit et validé au sein des populations civiles). Beaucoup d'hypothèses exploitables pour comprendre la CIC parmi les civils travaillant dans un pays étranger (p. ex., expatriés) peuvent ne pas pouvoir être transposées au contexte militaire; il ne faut donc pas supposer qu'on puisse généraliser les outils actuels d'évaluation de la CIC au contexte militaire. Un second aspect à prendre en compte est la nécessité de déterminer dans quelle mesure les facteurs associés à la CIC peuvent être influencés par la formation, l'éducation ou l'expérience. Dans la documentation étudiée, les connaissances et les compétences sont généralement considérées comme étant de nature dynamique, tandis que les aptitudes et d'autres caractéristiques (par exemple les traits et l'affect) sont considérées comme étant de nature relativement stable. Toutefois, l'étude documentaire a montré que, pour bon nombre des compétences liées à la CIC, il sera nécessaire de continuer à examiner la manière dont elles sont acquises (c'est-à-dire nature c. culture) et la mesure dans laquelle elles peuvent faire l'objet d'un perfectionnement ou d'une formation.

La section 4 décrit six méthodes d'évaluation distinctes de la CIC : les questionnaires ou les inventaires d'autodéclaration; les instruments de données biographiques; les tests de jugement situationnel; les entrevues axées sur les comportements; les observations comportementales; les centres d'évaluation. Pour chaque méthode, nous présentons une série d'exemples pertinents de mesures actuelles de la CIC. Chaque technique d'évaluation comporte une série d'avantages et de limitations, et selon le but visé, certaines techniques sont plus valables que d'autres. Pour déterminer quelle méthode convient le mieux, il faut tenir compte d'un certain nombre de points, dont les suivants : a) le type de variable(s) évaluée(s), (b) une mesure axée sur un construit convenant à du personnel militaire est disponible ou c) si aucune mesure n'est disponible, le coût associé à la mise au point d'un outil, (d) le coût d'administration de l'outil et (e) la capacité de l'outil à prédire les critères pertinents (p. ex., efficacité interculturelle).

La section 5 du rapport décrit certaines des implications de la recherche disponible actuellement sur la CIC quant à la manière dont les FAC peuvent utiliser efficacement la sélection et la formation pour se doter d'un effectif compétent sur le plan interculturel. Du point de vue de la sélection, voici certaines des questions abordées : a) déterminer les aspects de la CIC que l'ensemble du personnel militaire doit maîtriser, quel que soit le grade, le métier ou l'affectation, et les aspects de la CIC qui n'ont à être requis que pour certains grades, métiers ou affectations et b) comprendre les difficultés pratiques et les incidences juridiques de l'évaluation de la CIC aux fins de la sélection. Du point de vue de la formation, voici certaines des questions abordées : a) le moment où la formation interculturelle doit se dérouler (p. ex., avant le déploiement ou pendant le cycle régulier d'instruction, b) qui a besoin de formation interculturelle (c'est-à-dire les besoins de perfectionnement des stagiaires) et c) quels types de programmes de formation sont les plus efficaces.

La section 6 contient des recommandations sur les recherches futures. Il s'agira notamment de déterminer a) quels critères particuliers de rendement découlent de la CIC, b) la mesure dans laquelle les différentes connaissances, aptitudes, habiletés et autres qualités (KSAO) associées à la CIC peuvent être acquises par la formation, (c) si certains aspects de la CIC font partie des compétences essentielles que doit maîtriser l'ensemble du personnel des FAC et d) les initiatives actuelles de formation interculturelle au sein des FAC et la manière dont il est possible de les améliorer. L'établissement d'une définition opérationnelle précise de la CIC qui soit pertinente et valable pour les FAC et la poursuite de l'examen et de la validation d'un ensemble donné de KSAO constituant la CIC font partie des autres recommandations.

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1 Introduction

1.1 Background

This report was written as part of a broader applied research project (ARP) being conducted at Defence Research and Development Canada – Toronto (DRDC Toronto), entitled *JIMP Essentials in the Public Domain: Implications for Education and Training for the Tactical Commander*. One major purpose of the ARP is to explore the psychological dimensions involved in the Canadian Armed Forces' (CAF's) requirements to operate within a more coordinated, "comprehensive" approach to operations, referred to as JIMP (Joint, Interagency, Multinational, Public).

The JIMP concept is a descriptor identifying the various categories of players (e.g., organizations, agencies, interest groups, populations, etc.) that inhabit the broad environment in which military operations take place[1] (Leslie, Gizewski, & Rostek, 2008). *Joint* includes national military elements (Army, Navy, Air Force) and support organizations; *Interagency* includes other (non-defence) government departments (OGDs) and agencies (OGAs), both domestic (e.g., Department of Foreign Affairs and International Trade/DFAIT) and international (e.g., United Nations (UN) agencies); *Multinational* includes Canada's allies and other international coalition partners; and *Public* includes a diverse array of civilian non-governmental organizations (NGOs) and groups, such as public volunteer organizations (PVOs), international organizations (IOs), host nation populations, media agencies, and private security firms hired to support the local government of the host nation receiving military assistance.

Of the various components of JIMP, the *Public* dimension poses some of the greatest challenges for the CAF, particularly because it involves interfacing with a wide range of non-military, civilian entities. These entities are diverse not only in terms of their values and cultures (including organizational cultures), but also in terms of their goals, ideologies, biases, political agendas, communication systems, decision-making frameworks, organizational structures, and capabilities, to name a few areas of difference (Brown & Adams, 2011; Thomson, Adams, Hall, & Flear, 2010). Yet, in order to be "JIMP-capable," which is recognized as a key means for achieving mission success in an increasingly complex security environment (Directorate of Land Concepts and Designs, 2011), the CAF must be willing and able to actively engage other players in cooperative, collaborative working relationships (Gizewski & Rostek, 2007).

One objective of the above-noted ARP includes identifying important individual difference characteristics that enable military personnel to work effectively with key players in the *Public* aspect of the JIMP environment. Cross-cultural competence has been identified as one of these important characteristics (Brown & Adams, 2011) and is the focus of this report.

[1] The JIMP approach has been emphasized primarily by the Army in land force operations (Gizewski & Rostek, 2007), but can be applied to all elements of the CAF in order to fully embrace a "whole of government" or Comprehensive Approach to CAF operations.

1.2 Importance of Cross-Cultural Competence in the Canadian Armed Forces

Cross-cultural competence (also known as "3C") generally refers to a cluster of competencies or knowledge, skills, abilities, and other characteristics (KSAOs) that enable an individual to work effectively in other cultures and environments. The study of 3C in the context of military operations has steadily increased over the past decade, with interest in the topic accelerating as a result of the cultural landscape in which militaries now operate. In today's complex security environment, military personnel must be prepared to engage in multiple deployments, which take place in a variety of cultural contexts that may vary dramatically from their own. Moreover, they are required to perform a wide range of roles other than combat and counterinsurgency operations, including humanitarian assistance, disaster relief, stabilization and reconstruction missions, and peacekeeping (Leslie et al., 2008; Spencer, 2007). To perform effectively, then, military personnel must be able to adapt to new cultural settings and engage in complex multicultural interactions (Ford & Davis, 2007). These requirements demand a broad cultural capability that extends beyond learning basic language skills and regional knowledge for a specific mission (Abbe, Gulick, & Herman, 2007). 3C provides military personnel the breadth to operate in any culture and to effectively interact with many diverse groups and organizations (each with their own unique cultures) through the development and use of culture-general knowledge and skills. Thus, 3C is not an end in itself but, rather, a set of variables or competencies that contribute to intercultural effectiveness (Abbe et al., 2007).

The implications of 3C can be observed at the individual, group, and organizational levels of analysis. Furthermore, the effects or consequences of 3C (or lack thereof) include both subjective outcomes (i.e., perceptions) and objective outcomes (i.e., external quantifiable data). For example, at the individual level, the variables associated with 3C are positively related to psychological and physical adjustment to the new cultural environment as well as general well-being (e.g., Abbe et al., 2007; Tucker, Bonial, & Lahti, 2004). Researchers have also found that, in non-military samples (i.e., international assignees or expatriates), 3C is related to job satisfaction (e.g., Lee, 2006) and organizational commitment (e.g., Florkowski & Fogel, 1999), as well as improved intercultural decision making (e.g., Graf & Harland, 2005) and job performance in the foreign assignment (e.g., Mol, Born, Willemsen, & Van Der Molen, 2005).

At the individual and group levels of analysis, 3C is associated with an improved ability to work collaboratively and effectively with other groups and organizations (Abbe et al., 2007). This outcome is particularly important for the CAF, given the increasing requirements of military personnel to anticipate the actions of, comprehend, interact with, and influence individuals and groups whose cultural contexts differ vastly from their own (Abbe et al., 2007; Hajjar, 2010).

At the group and organizational levels, 3C is associated with greater operational effectiveness and mission success (Brown & Adams, 2011; Earley & Ang, 2003; Hajjar, 2010). According to Ng, Ramaya, Teo, and Wong (2005), 3C contributes to mission success by improving the ability of military leaders to (a) make effective tactical, operational and strategic decisions in multinational operations, (b) utilize appropriate strategies for understanding the needs of different groups, and (c) manage conflicts due to cultural differences. Hajjar (2010) further notes that 3C is vital for the productive development and application of plans, policies, decisions, and actions that impact military operations.

1.3 Research on Cross-Cultural Competence in the Canadian Armed Forces

Within the Canadian defence scientific research community, knowledge of 3C has expanded out of two parallel, yet related, research pursuits: (1) research on cultural intelligence and CAF leadership, and (2) research on the competencies required to operate effectively within a JIMP environment. Such efforts have the potential to provide the building blocks to greatly enhance our understanding of how 3C can be applied in the CAF in order to improve mission success. A brief summary of some of the key findings from these two research streams is presented below.

1.3.1 Research on Cultural Intelligence and CAF Leadership

At the Canadian Forces Leadership Institute (CFLI), researchers have been examining the construct of cultural intelligence (referred to as "CQ") in terms of how it can be incorporated into the CAF's professional development framework (PDF)[2] to enhance the effectiveness of CAF leaders (Davis & Wright, 2009; Ford & Davis, 2007; Ford, Winton, & Davis, 2009; Korabik, Oliver, & Kondratuk, 2009). The bulk of this research has been at the conceptual level in an attempt to better understand the meaning of CQ, how it can be measured, and how it can be developed and applied within the CAF at tactical, operational, and strategic levels.

CQ is defined by Davis and Wright (2009) as "the ability to recognize the shared beliefs, values, attitudes and behaviours of a group of people and, most importantly, to effectively apply this knowledge toward a specific goal or range of activities" (p. 9). According to Davis and Wright, CQ is "particularly essential to mission success when the CAF operates within international cultures and societies, and across both domestic and internationally-based networks and organizations" (p. 17). Important contributions from CFLI's research on CQ include the following findings:

- CQ is a multidimensional construct comprising cognitive (i.e., knowledge), motivational (i.e., attitudes), and behavioural (i.e., skills) domains (Ford & Davis, 2007; Korabik et al., 2009);
- Highly effective CQ cannot be achieved in the absence of any one of these domains (Davis & Wright, 2009);
- There is substantial overlap between the three domains of CQ and the five leadership elements used in the CAF's PDF (i.e., expertise, cognitive capacities, social capacities, change capacities, professional ideology; Davis & Wright, 2009; Ford & Davis, 2007);
- CQ applies to all levels of military leadership (Korabik et al., 2009);
- CQ is related to, but conceptually distinct from, emotional intelligence[3] (Ford & Davis, 2007);
- CQ can be developed through education and training (Ford & Davis, 2007); and

[2] The PDF provides a framework to guide the integration of the attributes of effective leadership into professional development processes in the CAF. The PDF is framed by five leader elements: expertise, cognitive capacities, social capacities, change capacities, and professional ideology.

[3] Emotional intelligence is defined as "the ability to monitor one's own and others' emotions, to discriminate among them and to use the information to guide one's thinking and actions" (Davis & Wright, 2009, p. 143).

- There are many different tools available to measure CQ, and different tools tend to capture different components of cultural intelligence (Ford & Davis, 2007).

1.3.2 Research on Competencies Required in the JIMP Environment

At the Canadian Defence Academy (CDA) and DRDC Toronto, researchers have been exploring the competencies or skills thought to be important for operating in the JIMP environment. Scoppio, Idzenga, and Miklas (2009) conducted qualitative research to learn about the needs and requirements of CAF members working in interagency operations. Based on their review of relevant literature and consultations with key stakeholders, they identified several "soft skills"[4] considered essential for working effectively within an interagency environment, including cultural awareness/sensitivity, communication/media relations, negotiation/persuasion, dispute/conflict resolution, team building, agility of thinking, trust building/maintenance, and leadership.

Expanding on the work of Scoppio et al. (2009), Scoppio (2011) created an inventory of 20 soft skills required for interagency operations (see Table 1). Among the most important soft skills for interagency complex operations (as identified by key stakeholders) were: trust building and maintenance; team building/collaboration; conflict resolution/problem-solving; communication; flexibility/adaptability; cultural awareness/diversity/sensitivity; and interpersonal skills.

Table 1: Soft skills relevant to the interagency domain (Scoppio, 2011).

Build/maintain trust/trustworthiness	Imagination/creativity/innovation
Communication/verbal/written	Initiative/motivation/goal oriented
Conflict resolution/problem-solving/persuasion	Interpersonal skills/social skills
Critical thinking/analytical/agility of thinking	Leadership/decision-making/risk management
Cultural awareness/diversity/sensitivity	Professionalism/ethics
Detail orientation/attention to detail	Self-management/ability to work under pressure
Diplomacy/negotiation skills	Taking responsibility/maturity/work ethic
Empathy	Team building/collaboration
Flexibility/adaptability	Time management/organization/planning
Foreign language skills	Willingness to learn/continuous learning capacity

Focusing on the *Public* domain, Brown and Adams (2011) reviewed the scientific, military, and academic literature related to both 3C and CQ for DRDC Toronto's *JIMP Essentials in the Public Domain* ARP. Brown and Adams' goal was to obtain a better understanding of the different sets of factors that are likely to impact the ability of military personnel to perform effectively within the *Public* context of JIMP. Based on their review, Brown and Adams identified a number of individual difference variables and thematically grouped these variables into seven competency categories: individual characteristics; motivation; professionalism; problem-solving; culture-specific skills; thinking skills; and social skills. The authors referred to these categories

[4] In the military context, "soft skills" are abilities that fall in the range of human dynamics, interpersonal communications, and personal relations, as opposed to "hard skills," which comprise the technical skills required of military personnel such as weapons handling, combat, and survival and interrogation skills (Scoppio, 2011).

collectively as the IMPPaCTS framework (based on the first letter of each of the seven competency categories).

The IMPPaCTS framework reflects the integration of several streams of research, including the CQ research conducted at CFLI, the interagency soft skills research conducted at CDA, as well as other research efforts conducted in other military settings (e.g., 3C research on United States/US Army leaders; see Abbe et al., 2007). As such, the IMPPaCTS framework represents a starting point for more precisely identifying the myriad of factors associated with 3C.

1.4 Purpose of this Report

In spite of the wealth of knowledge gained from the above mentioned research pursuits, a number of research questions have yet to be thoroughly explored. Two specific gaps in the literature include (a) understanding how to effectively measure 3C, and (b) determining which aspects of 3C should be the focus of training and which should be considered from a selection perspective.

In recent years, several review papers have emerged summarizing various tools available to measure 3C or specific aspects of 3C (e.g., Abbe et al., 2007; Brown & Adams, 2011; Korabik et al., 2009). The majority of the tools reviewed in these reports, however, are self-report questionnaires or inventories. Other methods for assessing 3C, such as biodata (i.e., biographical information), tests, interviews, behavioural observations, and assessment centres, have received comparatively little attention. Thus, an important goal of this report is to identify and review different methodologies and tools that can be used to assess 3C, with specific emphasis placed on their utility for the CAF.

A second goal of this paper is to better understand the "nature" of the competencies that comprise 3C in terms of the degree to which they can be influenced, developed, or trained. Although many analysts have assumed that 3C can be learned through education, training, and experience (e.g., Abbe et al., 2007; Bean, 2006; Brown & Adams, 2011; Ford & Davis, 2007), a closer examination of the factors associated with 3C suggests that some of these competencies may in fact represent relatively stable dispositions (e.g., personality traits) that are difficult to alter. Thus, an important goal of this paper is to explore the types of competencies associated with 3C in terms of their degree of "trainability."

1.5 Structure of the Report

Following this introduction (Section 1), the report is organized into the following sections. In Section 2, the conceptual and operational definitions of 3C are discussed, with particular emphasis placed on the distinction (and, often, lack thereof) between 3C and CQ. Also in this section, the IMPPaCTS framework is described in further detail with regard to the specific factors thought to comprise 3C.

In Section 3 of the report, two considerations for assessing 3C are discussed. The first pertains to recognizing differences between military populations and civilian populations in the measurement of 3C (the bulk of 3C research has been generated and validated on civilian samples). A second consideration pertains to understanding the degree of stability in the factors associated with 3C. In this section, the IMPPaCTS framework is again revisited in order to identify specific competencies that may be more or less stable and thus more or less amenable to training.

In Section 4, six different types of assessment methods are described in terms of: (a) what they are and how they are used; (b) their reliability and validity; (c) their utility (e.g., for training or selection purposes); and (d) challenges to their development and use. In this section, relevant examples of current 3C measures are presented for each method.

Section 5 of the report discusses some of the implications of 3C assessment for training and selection in the CAF. Finally, in Section 6, recommendations and future research directions are provided.

2 Defining Cross-Cultural Competence: What are We Trying to Measure?

Prior to delving into a discussion about the various methodologies and tools available for measuring 3C, it is important to achieve conceptual clarity about the construct – how it is defined, what it entails, and so on. As Brown and Adams (2011) have pointed out, a number of terms can be used to describe the competencies required to be JIMP-capable in the *Public* context, including 3C and CQ as well as a host of other terms such as "cultural competence," "intercultural communication competence," "cross-cultural adjustment," and "intercultural sensitivity," among others. While these other terms are semantically connected to 3C and/or CQ, or represent components or outcomes of 3C/CQ, they do not fully capture what it means to be cross-culturally competent.

Cultural competence refers to being competent in one's own culture. Although this term is frequently used interchangeably with 3C (e.g., Culhane, 2011; Jackson, 2002), cultural competence is distinct from 3C and the terms should not be treated as synonymous. Semelski (2007) notes that "almost everyone is competent in their own culture as a result of enculturation" (p. 4). The same, however, cannot be said for 3C. Both *intercultural sensitivity* (an awareness of cultural differences and the ability to react appropriately in different cultural contexts; Bücker & Poutsma, 2010) and *intercultural communication competence* (the ability to function in a manner that is perceived to be consistent with the needs, goals, and expectations of others in the environment, while at the same time satisfying one's own needs, goals and expectations; Ruben, 1976) are encompassed within the broader constructs of 3C. Moreover, *cross-cultural adjustment* (the process through which an individual becomes psychologically comfortable with respect to the job tasks of the foreign assignment; Black, Mendenhall, & Oddou, 1991) is more appropriately viewed as a consequence or outcome of 3C, as opposed to a component of 3C.

It is also important to note that the terms "cross-cultural" and "intercultural" tend to be undifferentiated in the literature and are also used interchangeably, yet there appears to be a dichotomy between researchers and theoreticians who prefer one term over the other. Proponents of the term *intercultural competence* argue that "intercultural" is a more accurate descriptor because it pertains to two (or more) culturally-different groups coming together, interacting, and communicating, whereas "cross-cultural," by definition, is a comparison and contrast between two cultural groups. For example, Gudykunst (2003) published a book entitled "Cross-cultural and Intercultural Communication," whereby each is differentiated and discussed as separate concepts. In this book, *cross-cultural communication* refers to the comparison of communication across cultures (e.g., comparing how speech convergence in initial interactions differs between Japanese and Americans), whereas *intercultural communication* refers to communication between people from different cultures (e.g., individuals' effectiveness at interacting with people from different cultural backgrounds). Given that the term "cross-cultural" is used predominantly throughout the military literature (e.g., Abbe et al., 2007; Abbe, Geller, & Everett, 2010; Brown & Adams, 2011; Hajjar, 2010; McCloskey, Grandjean, & Behymer, 2010; Ross, 2008; Ross & Thornson, 2008; Ross, Thornson, McDonald, & Arrastia, 2009; Selmeski, 2007), 3C will be the term used throughout this report.

In general, the most well established areas of military research on culture pertain to the constructs of 3C and CQ. Nevertheless, precise definitions of 3C and CQ are still subject to debate (Reid, 2010) and there is still no consensus in the literature as to what falls into the domain of 3C versus CQ. Moreover, there is conceptual overlap between these two constructs, as well as commonalities in how they are operationalized (Bücker & Poutsma, 2010). Many researchers and practitioners even use these terms interchangeably (e.g., Grosse, 2011), or use measures of CQ to assess 3C (e.g., Abbe et al., 2007, 2010; Ross & Thornson, 2008).

In an attempt to better understand the concept of 3C and how it differs from or relates to CQ, the extant literature was reviewed in terms of how these constructs evolved and how they are conceptualized. Note that the purpose of this review is not to provide a systematic overview of available research on these constructs but, rather, to de-construct their conceptual and operational definitions in order to shed light on how 3C and CQ may be different.

2.1 Definitions of Cross-Cultural Competence

The concept of 3C has been the topic of research and discussion for several decades in various academic disciplines, including psychology, sociology, anthropology, international management, education, and health care. Most of the rigour in the study of 3C comes from the field of international management, where interest in the topic arose out of efforts to deal with the practical problems encountered by individuals working overseas, including overseas failures and premature termination of the assignment. Variables such as culture shock, personal adaptation and adjustment, and cross-cultural effectiveness were explored in an attempt to learn how they impact expatriate success (Rueben, 1989). In addition, various personnel selection models (e.g., Miller, 1972) and intercultural training programs (e.g., Hammer, 1984) were developed in order to predict or improve expatriate success. The topic of 3C was also the focus of early research on the Peace Corps where emphasis was placed on understanding the challenges encountered by Peace Corp volunteers in terms of personal adjustment difficulties (e.g., Harris, 1970; Maretzki, 1969). More recently, 3C has become a salient term in the military literature and it is now a popular topic of study in the US Army (e.g., Abbe, 2008; Abbe et al., 2007, 2010; McCloskey et al., 2010; Ross, 2008; Ross & Thornson, 2008; Ross et al., 2009). 3C also aligns well to the CAF's current emphasis on the Comprehensive Approach to operations and the need for CAF members to be JIMP-capable (Brown & Adams, 2011; Gizewski & Rostek, 2007).

Despite the long history of research on 3C and related constructs, consensus has yet to be reached on a consistent, meaningful, and measurable definition of 3C. For instance, Table 2 lists 10 different examples of how 3C has been conceptualized recently in the international management, psychology, and military literatures. These definitions use an array of terminology and have varying degrees of specificity. Nevertheless, each of these definitions can be compartmentalized into the following three components: (a) the antecedent(s) of behaviour; (b) the behaviour itself, and (c) the recipient of the behaviour.

(a) The *antecedent* represents *what* the individual needs to possess (or acquire/develop) in order to properly demonstrate the behaviour. Based on the definitions in Table 2, this may include knowledge, skills or a skill set, abilities, attitudes, affect or motivation, awareness, personal attributes, expertise, and so on.

(b) The *behaviour* itself represents *how* individuals act based on the competencies or attributes they possess. These behaviours include being able to adapt, function or operate

effectively, work successfully or ethically, accomplish given tasks, achieve desired effects, and so on.

(c) The *recipient* represents *where*, or to whom, the behaviour is applied, such as in cross-cultural environments or in culturally diverse situations, in tasks/missions that involve cultural diversity, with people from different national cultural backgrounds, and so on.

In summary, then, 3C entails having some combination of KSAOs that enable an individual to act appropriately and effectively in a culturally complex environment in order to achieve a desired effect. Of key importance to 3C is not just the mere possession of these KSAOs, but also acting upon them in the appropriate manner. In other words, having certain knowledge, skills or other attributes is necessary, yet insufficient, to be considered cross-culturally competent. 3C is based on how an individual *applies* these KSAOs (Bücker & Poutsma, 2010; Johnson, Lenartowicz, & Apud, 2006).

Table 2: Definitions of cross-cultural competence.

Abbe, Gulick, & Herman (2007)	"the knowledge, skills, and affect/motivation that enable individuals to adapt effectively in cross-cultural environments" (p. 2)
Bean (2006)	"the ability to function or work effectively in culturally diverse situations in general and in particular encounters with people from different cultures" (p. 15)
Hajjar (2010)	"the knowledge, attitudes, and behavioural repertoire and skill sets that military members require to accomplish all given tasks and missions involving cultural diversity" (p. 249)
Johnson, Lenartowicz, & Apud (2006)	"an individual's effectiveness in drawing upon a set of knowledge, skills, and personal attributes in order to work successfully with people from different national cultural backgrounds at home or abroad" (p. 530)
Knoetzke (2007)	" the awareness, knowledge, and skills necessary to work effectively and ethically across cultural differences" (p. 5)
Ross (2008)	"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)" (p. 1)
Ross & Thornson (2008)	"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" (p. 12)
Selmeski (2007)	"the ability to quickly and accurately comprehend, then appropriately and effectively engage individuals from distinct cultural backgrounds to achieve the desired effect despite not having an in-depth knowledge of the other culture, and even though fundamental aspects of the other culture may contradict one's own taken-for-granted assumptions/deeply-held beliefs" (p. 12)
Watson (2010)	“a culture-general skill set that includes awareness of one’s “self” in the context of culture, an open mind towards and appreciation of diversity, and the ability to apply “culture analytical models” to any region” (p. 93)
Womack (2009)	"the affective, cognitive, and behavioural capacity to effectively operate in an unfamiliar culture" (p. 8)

2.1.1 Operationally Defining Cross-Cultural Competence: IMPPaCTS Framework

Operationally defining a construct means defining it in a way that allows it to be measured or expressed quantitatively. In order to derive an appropriate operational definition of 3C (particularly one that is appropriate for the military context), it is necessary to first and foremost determine what combination of KSAOs is required for 3C.

As mentioned in Section 1 of this report, Brown and Adams (2011) conducted a detailed review of the competencies required to work within the *Public* domain of the JIMP context. This included a review of models and frameworks related to 3C and CQ, as well as other similar constructs (e.g., intercultural competence, intercultural sensitivity). Based on their review and integration of relevant and available research, they developed the IMPPaCTS framework, which comprises seven categories that reflect a range of personal attributes, skills, knowledge, and attitudes thought to be critical for operating successfully in the *Public* context of the JIMP environment. These broad categories were developed in an attempt to parallel how military personnel might think about the competencies required within the *Public* domain. The seven categories, along with the specific variables thought to fit within each category, are presented in Table 3. Descriptions of the variables in each category (as described by Brown & Adams, 2011) are also provided.

The IMPPaCTS framework is still in the early stages of development. For instance, an initial instrument to measure various factors in the IMPPaCTS framework is being developed by drawing from a variety of existing validated self-report measures, as well as by generating new items, in an attempt to discern the most important factors associated with 3C.

Table 3: The IMPPaCTS framework (Brown & Adams, 2011).

Individual Characteristics	
Big Five	Includes the following five broad personality traits: i. *Extraversion* (assertiveness; energy and spontaneity; dominance; confidence; agency; sociability) ii. *Emotional stability* (tendency to remain calm in stressful situations) iii. *Agreeableness* (being helpful and friendly; likability; friendly compliance) iv. *Conscientiousness* (purposeful planning and persistence; acceptance of responsibility, dependability, task interest; will to achieve) v. *Openness to new experiences* (interest and drive to learn about and gain new experiences)
Tolerance for ambiguity	Low tolerance for ambiguity is characterized by rigidity, dichotomous thinking, authoritarianism, and ethnocentrism
Non-ethnocentrism	Ethnocentrism is the belief that characteristics of one's own group or race are superior to those of other groups or races
Valuing people of other cultures	Caring for, respecting, and understanding people of different cultures; respecting cultural differences
Open-mindedness	An open and unprejudiced attitude toward outgroup members and towards different cultural norms and values

Self-regulation/emotional regulation	Ability to regulate or control one's emotions so that they do not interfere with one's performance
Motivation	
Willingness to engage	A tendency to actively seek out and explore unfamiliar cross-cultural interactions and to regard such interactions as a positive challenge
Low need for cognitive closure	Need for cognitive closure refers to the motivation to find immediate answers and solutions, as well as to resist new information that would conflict with these answers and solutions
Orientation to action	An individual's courage to take action or to "make things happen"; striving for results; taking initiative; problem-solving; knowing what you want to achieve
Adventurousness/curiosity	People in novel cultural situations are less likely to be fearful and more likely to feel attracted to the situation and view it as a challenge; more likely to want to experience new cultures
Motivation to learn	Motivation to learn more about a country or its culture than what was provided during training
Self-efficacy	Belief in one's capabilities to organize and execute the course of action required to produce given attainments; belief that one has the power to produce an effect
Professionalism	
Stress management	Ability to deal with stressful situations, to make sense of them, to control one's reactions to the situation, and to remain patient until an outcome is achieved
Leadership	Includes both cognitive and behavioural leadership skills; ability to establish authority; ability to influence others
Problem-solving	
Negotiation	Ability to use both cognitive and behavioural skills to share information directly or indirectly within one's own culture and between one's own culture and another culture
Conflict resolution	Includes preventing, managing, defusing and resolving conflicts between others (e.g., between locals, between military personnel and locals)
Culture-Specific Skills	
Language skills	Ability to recognize and understand relevant words/and word phrases within a specific language
Cultural knowledge	Knowing basic facts about a specific region or ethnicity including knowledge of the political system and the economy, how decisions are made, social norms, and major influences such as education and religion
Thinking Skills	
Cognitive complexity	Ability to organize perceptions of events into more differentiated categories; ability to make fine discriminations among phenomena in a particular domain (e.g., culture)
Meta-cognitive knowledge	A heightened sense of self-awareness, enhanced perceptive abilities, and a proclivity to reflect on experience
Self-monitoring	An individual's motivation and ability to observe and adjust his/her behaviour in a socially appropriate way depending on situational cues
Flexibility	Ability to adjust one's behaviour or cognitive frames of reference in response to situational cues – in particular, in response to cultural cues; includes perspective taking (ability to view events as another person views them) and frame shifting (ability to apply different schemas depending on the situational context)

Conceptual knowledge of culture	Culture-general knowledge including knowing cultural concepts and processes at a broad level, as well as knowing how culture affects one's own and another's perceptions
Social Skills	
Cultural empathy	Ability to empathize with the feelings, thoughts, and behaviours of members from different cultural groups
Relationship building	Ability to build rapport and to foster and develop human relationships; includes using both cognitive and behavioural skills to quickly build a positive, short-term interpersonal cross-cultural relationship; involves establishing credibility, trust and respect
Communication skills	Effective conveying of thoughts, opinions and ideas, both verbally and nonverbally (e.g., using appropriate hand gestures)
Influence and persuasion	Changing others' opinions or behaviour, providing guidance, and persuading others to accept a new idea
Patience	Ability to endure waiting, delay, or provocation without becoming annoyed or upset

2.1.2 Other Models of Cross-Cultural Competence

In spite of the current lack of validation research on the IMPPaCTS framework, there is some empirical evidence from other research pursuits that gives credence to the operational definition of 3C developed by Brown and Adams (2011). For example, Ross et al. (2009) used a rational-empirical approach (e.g., used data from the literature and in-depth interviews with subject matter experts/SMEs) to develop a model of 3C for the US military. Their model incorporates many of the same factors discussed in Table 3 (including self-efficacy, ethnocultural empathy, openness to new experience, willingness to engage, cognitive flexibility, self-monitoring, emotional self-regulation, low need for cognitive closure, and tolerance for ambiguity). Based on these factors, the authors created a self-report measure (referred to as the Cross-Cultural Competence Inventory or CCCI), and tested the instrument on a diverse military sample from all branches of the US military service. Initial item analyses using classical test theory revealed six reliable scales (see Table 4). Ross et al. noted that the various dimensions were significantly correlated with one another, suggesting the possibility that 3C can be construed as a general factor.

Table 4: Cross-Cultural Competence Inventory (Ross et al., 2009).

Dimension	Authors' Description of the Dimension
Willingness to engage *	An individual's willingness or persistence to stay engaged in making sense of unfamiliar social situations in dissimilar cultures
Cognitive flexibility & openness *	Having a rich mental model that includes a repertoire of strategies from which to choose and being able to switch easily from one strategy to another during assessment, decision-making, and problem-solving; related to openness and adaptability
Emotional regulation *	Ability to regulate or control one's emotions effectively so that they do not interfere with one's performance
Tolerance of uncertainty *	A general disposition that broadly influences cognition, attitudes, and behaviour; low tolerance for uncertainty is characterized by rigidity, dichotomous thinking, authoritarianism, and ethnocentrism
Self-efficacy *	Belief that one is capable of performing in a certain manner or attaining certain goals, or that one has the capabilities to execute the courses of action required to manage situations
Ethnocultural empathy *	Ability to understand another's emotions, as well as the cognitive ability to take on the perspective of another person

* Competencies that correspond with those identified in the IMPPaCTS framework

Other research on 3C in the context of the US military has also focused on factors similar to those comprised within the IMPPaCTS framework. Specifically, Abbe et al. (2007) developed a preliminary model of 3C for Army leaders that consists of three components: knowledge/ cognition, skills, and affect/motivation (KSAs). These components, along with the factors corresponding to each component, are presented in Table 5. Note that, in this model, culture-specific variables (i.e., language and cultural knowledge) are acknowledged as predictors of intercultural effectiveness, yet they are thought to be only distally associated with 3C given their relatively weak predictive validity in comparison to culture-general factors (Mol et al., 2005). The authors also consider personality traits (i.e., the Big Five) and other dispositions with a high degree of stability (e.g., tolerance for ambiguity, self-monitoring, self-efficacy) to be *antecedents* of 3C, but they do not include them as components of 3C. Although Abbe et al.'s model has not yet been subject to validation research, it nonetheless supports many of the concepts included in Brown and Adams' (2011) IMPPaCTS framework as ones that are relevant to 3C in military personnel; however, Abbe et al. use different terminology for some of the concepts associated with 3C (e.g., *cross-cultural schema* as opposed to *conceptual knowledge of culture*).

Table 5: KSA model of cross-cultural competence (Abbe et al., 2007).

Knowledge/Cognition	
Cultural awareness *	Awareness that culture shapes beliefs, values, and behaviour and that one's own beliefs, values, and behaviour reflect a cultural context
Cross-cultural schema *	Culture-general knowledge (i.e., an understanding of cultural differences in general)
Cognitive complexity *	Increasing complexity in one's understanding of culture
Skills	
Interpersonal skills *	Ability to initiate conversation and to establish and maintain relationships
Self-regulation *	Related to emotion regulation, stress management, and coping
Flexibility *	Ability to adjust one's behaviour or cognitive frames of reference in response to situational cues; includes perspective taking, frame shifting, and code switching
Affect/Motivation	
Attitudes and initiative *	Attitudes toward other cultures and motivation to engage in intercultural interactions; includes factors such as non-ethnocentrism, tolerance, and sensitivity, social initiative, and willingness to communicate when in cross-cultural situations
Empathy *	Ability to put oneself in another's shoes or to behave as if one could; ability to feel as another person feels
Low need for closure *	Need for closure refers to the motivation to find immediate answers and solutions and to resist any new information that conflicts with those answers; includes need for structure and predictability, and a tendency toward decisiveness and closed-mindedness, and low tolerance for ambiguity

* Competencies that correspond with those identified in the IMPPaCTS framework

A third model of 3C designed for the US military context was developed by McCloskey et al. (2010). Using multiple methodologies (including a review of existing models and interviews with soldiers who had had recent deployment experience), the authors developed a model of 3C that includes 28 knowledge, skills, attitudes, and abilities (KSAAs). This model was intended to be used as a starting point to inform the development of different tools for assessing 3C in soldiers, as well as for providing soldiers with relevant feedback about their strengths and weaknesses. Table 6 presents a description of these variables, as defined by the authors. Note that the majority of the competencies listed in this table also correspond with factors identified in the IMPPaCTS framework, although some of the competencies use different terminology (e.g., *awareness of cultural differences* instead of *conceptual knowledge of culture* and *self-presentation* instead of *self-monitoring*).

Table 6: KSAA model of cross-cultural competence (McKloskey et al., 2010).

Cognitive Competencies	
Perspective-taking *	Ability to see events as another person sees them
Anticipate-predict	Ability to foresee potential, likely outcomes based on current assessment of a cross-cultural situation
Awareness of cultural differences *	Knowledge and awareness that culture shapes beliefs, values, and behaviour and that one's own beliefs, values, and behaviour reflect a cultural context
Diagnose nature of resistance	Ability to integrate an understanding of the cultural environment with perspective taking to determine root causes of an interpersonal conflict
"Big picture" mentality	Ability to maintain awareness of the high-level drivers within an operational environment
Self-awareness/self-monitoring *	Ability to see self as others see you and to recognize subtle changes in your own personal affect and adjust outward behaviours accordingly
Observation	Ability to determine relevant environmental cues and attend to them in an operational environment
Frame shifting *	Ability to detect situational cues that indicate a particular cultural schema or behavioural script is relevant
Planning	Ability to proactively generate workable courses of action based on observations and interpretations of the cultural environment
Affective/Attitude Competencies	
Cultural openness *	One's interest and drive to learn about new cultures and to gain new cross-cultural experiences
Open-mindedness *	Ability to withhold personal or moral judgment when faced with novel experiences, knowledge, and points of view
Willingness to engage *	The tendency to actively seek out and explore unfamiliar cross-cultural interactions and to regard them positively as a challenge
Emotional empathy *	Ability to feel as another person feels
Dedication	Attitude of disregarding or deemphasizing personal interests, comfort and gain in service of supporting broader mission goals; high motivation to do more than minimum required
Self/emotional regulation *	Ability to regulate/control one's own emotions and emotional expression to support mission performance
Withhold on closure *	Ability to restrain from settling on immediate answers and solutions, and to remain open to any new information that conflicts with those answers
Patience *	Ability to cope with cultural frustrations without expressing hostility
Tolerance for ambiguity *	General disposition that broadly influences cognition, attitudes, and behaviour; low tolerance for ambiguity is characterized by rigidity, dichotomous thinking, authoritarianism, and ethnocentrism
Emotional endurance	Ability to mentally tolerate emotionally shocking, frustrating or exhausting (due to repetition) circumstances
Self-efficacy *	Belief in one's capabilities to mobilize the motivation, cognitive resources, and courses of action needed to meet situational demands

Resilience	Ability to retain task focus and enthusiasm when faced with repeated setbacks, failures and/or obstacles to success
Behavioural Competencies	
Self-presentation *	Ability to consciously modify overt behaviours and appearance in response to changing demands of the cross-cultural interaction
Relationship-building *	Long-term ability to create and manage enduring interpersonal cross-cultural relationships
Rapport-building *	Ability to rapidly build a positive, short-term interpersonal cross-cultural relationship
Manipulate/persuade *	Ability to proactively direct the structure and/or outcome of cross-cultural interactions to achieve individual or higher-level goals
Flexibility *	Ability to adjust one's behaviour or cognitive frames of reference in response to situational cues – in particular, in response to cultural cues
Communication skills *	Ability to both convey and receive information accurately and efficiently in cross-cultural interactions
Leveraging own personality attributes	Ability to recognize one's own individual personality-based strengths (e.g., sense of humour) and use them to consciously support cross-cultural interactions

* Competencies that correspond with those identified in the IMPPaCTS framework

Still yet another model relevant to 3C is the profile of the Interculturally Effective Person (IEP), which was developed by researchers at DFAIT's Centre for Intercultural Learning (CIL)[5]. The IEP is a behaviour-based profile that outlines the intercultural competencies (and corresponding behavioural indicators) considered essential to successful intercultural performance (Vulpe, Kealey, Protheroe, & MacDonald, 2001). The profile serves as the theoretical foundation for several assessment tools that have been developed and validated at CIL (to be discussed in Section 4), and is intended for multiple uses, including performance appraisal, selection, and training.

Although the concept of intercultural effectiveness, which is defined by Vulpe et al. (2001) as the ability to "live contentedly and work successfully in another culture" (p. 5), is somewhat different than that of 3C, many of the IEP competencies thought to be important for intercultural effectiveness are similar to those in the IMPPaCTS framework. Specifically, the IEP profile contains nine competencies in the form of knowledge, skills, attitudes, and other characteristics, many of which overlap with the IMPPaCTS competencies (e.g., conceptual knowledge of culture, cultural knowledge, cultural empathy, relationship building, communication, valuing people of other cultures). Table 7 provides a description of the nine IEP competencies. These competencies were designed to be broad in nature in order to serve the needs of various types of organizations and individuals working abroad (e.g., diplomatic and government personnel, international development workers, foreign students, and the military).

[5] CIL is part of DFAIT and, more specifically, the Canadian Foreign Service Institute. The mandate of CIL is to support organizations and individuals involved in international activities to develop the intercultural competencies essential for international success (Centre for Intercultural Learning, 2010).

Table 7: Profile of the Interculturally Effective Person (Vulpe et al., 2001).

Competency	Authors' Description of the Competency
Adaptation skills	Ability to cope personally, professionally, and in one's family context with the conditions and challenges of living and working in another culture
An attitude of modesty and respect *	Demonstrating modesty about one's own culture's answers to problems and a respect for the ways of the local culture
Understanding the concept of culture *	Conceptual understanding of how culture affects people and societies, the influence of one's own cultural conditioning, how one's own cultural values may cause problems in the host culture
Knowledge of the host country *	Culture-specific knowledge of the host country as well as a desire to learn about the host culture
Relationship-building *	Basic social ability, as well as ability to establish rapport, develop networks and purposefully develop relationships
Knowledge of self	Knowledge of one's own background, motivations, strengths, and weaknesses
Intercultural communication *	Ability to convey thoughts, opinions, and expectations in a way that is understandable yet culturally sensitive; includes establishing shared meanings with local people, possessing sufficient local language capacity and the ability to empathize with how the locals see the world
Organizational skills	Ability to improve the quality of organizational structures, processes, and staff morale, and promote a positive atmosphere in the workplace
Personal and professional commitment	Capacity to live day to day and seek balance in one's life and outlook while living and working interculturally, to seek proactive engagements, and to serve as a role model and show leadership in personal and professional life and the broader intercultural environment

* Competencies that correspond with those identified in the IMPPaCTS framework

2.2 Definitions of Cultural Intelligence

CQ is a relatively new construct that originated from the field of organizational psychology (Earley, 2002; Earley & Ang, 2003) as a basis for explaining individual differences in the ability to adapt to new cultural environments. Despite its limited history, the literature on CQ is already quite robust, presumably because it is grounded in the well established stream of intelligence research (Van Dyne, Ang, & Koh, 2009). CQ has also been well marketed in the business world as a key ingredient for achieving corporate success, particularly for multinational companies (e.g., Earley & Mosakowski, 2004).

CQ can be thought of as an extension of existing models anchored on the theory of multiple intelligences (Ng et al., 2005). It is related to other forms of nonacademic intelligences (i.e., social and emotional intelligence), yet extends beyond the applications of these other types of intelligences to reflect adaptation to varying cultural contexts (Bücker & Poutsma, 2010).

Table 8 lists 10 definitions of CQ that have emerged in the scientific literature within the past decade. Note that CQ, as it is defined here, is an academic construct rooted in management and organizational psychology theory (Earley & Ang, 2003), and is different from militaries' traditional use of the term "cultural intelligence" to describe the process or outcomes of collecting

and analyzing cultural information for military purposes (Selmeski, 2007). It also differs from *cultural variation of intelligence*, which pertains to the influence of culture and context on the concept of intelligence (Ng & Earley, 2006).

Table 8: Definitions of cultural intelligence.

Source	Definition
Ang & Van Dyne (2008)	"an individual's capability to function and manage effectively in culturally diverse settings" (p. 3)
Davis & Wright (2009)	"the ability to recognize the shared beliefs, values, attitudes and behaviours of a group of people and, most importantly, to effectively apply this knowledge toward a specific goal or range of activities" (p. 9)
Earley & Ang (2003)	"a person's capability to adapt effectively to new cultural contexts" (p. 59)
Earley & Peterson (2004)	"a person's capability to gather, interpret, and act upon these radically different cues to function effectively across cultural settings or in a multicultural situation" (p. 105)
Korabik, Oliver, & Kondratuk (2009)	"the knowledge, motivation, and behaviours that enable individuals to adapt effectively in cross-cultural environments" (p. 3)
Ng, Ramaya, Teo, & Wong (2005)	"an individual's capability to deal effectively with people from a different cultural background and understanding" (p. 5)
Spencer (2007)	"the ability to recognize the shared beliefs, values, attitudes and behaviours of a group of people and, most importantly, to apply this knowledge toward a specific goal" (p. 3)
Thomas (2006)	"the ability to interact effectively with people who are culturally different" (p. 80)
Thomas et al. (2008)	"a system of interacting knowledge and skills, linked by cultural meta-cognition, which allows people to adapt to, select, and shape the cultural aspects of their environment" (p. 126)
Van Dyne, Ang, & Koh (2009)	"the capability to cope and interact effectively in situations that are culturally diverse" (p. 234)

Similar to the definitions of 3C, definitions of CQ are equally varied, yet they also tend to comprise the same three components described above for 3C; that is, (a) the antecedent(s) of the behaviour, (b), the behaviour itself, and (c) the recipient of the behaviour.

(a) The *antecedents* of the behaviour are mainly described in terms of capabilities or abilities, although some definitions instead use terms such as knowledge, skills, motivation, behaviours, and meta-cognition.

(b) The *behaviour* component in these definitions represents what the capability/ability is used for, such as to function and manage effectively, to recognize and respond, to adapt effectively or deal effectively, to cope and interact effectively, and so on.

(c) Finally, the *recipient* of the behaviour represents where or to whom individuals are demonstrating the behaviours, such as in culturally diverse settings, new cultural contexts, or cross-cultural environments, or with people from different cultural backgrounds.

Based on the definitions presented in Table 8, CQ can be summarized as representing a set of abilities or capabilities that enable an individual to adapt and perform effectively in culturally diverse environments.

2.2.1 Operationally Defining Cultural Intelligence: Four-Factor Model

One of the most widely cited operational definitions of CQ originated from its pioneer, Christopher Earley (Earley, 2002). Earley and Ang (2003) conceptualized CQ as a multifaceted construct consisting of four dimensions: (a) meta-cognitive, (b) cognitive, (c) motivational, and (d) behavioural.

(a) *Meta-cognitive CQ* pertains to an individual's cultural consciousness and awareness during interactions with people from diverse cultural backgrounds. According to Van Dyne et al. (2009), metacognition is a critical component of CQ because it promotes active, critical thinking about people and situations when cultural backgrounds differ, and it enables individuals to revise their mental maps in order to improve their understanding of others.

(b) *Cognitive CQ* refers to an individual's declarative and procedural knowledge about different cultures, for example, knowledge of specific norms, practices, and conventions in new cultural settings. Cognitive CQ includes knowledge of cultural universals as well as knowledge of cultural differences (Ang & Van Dyne, 2008).

(c) *Motivational CQ* pertains to the direction of energy (i.e., an individual's drive) toward learning about and functioning in cross-cultural situations. Van Dyne et al. (2009) view motivational CQ as a special form of self-efficacy and intrinsic motivation in cross-cultural situations.

(d) *Behavioural CQ* represents an individual's capability to exhibit appropriate verbal and non-verbal actions when interacting with people from different cultural backgrounds.

Three of the CQ dimensions (a-c) are considered to be mental capabilities and one (d) is considered behavioural (in the form of overt actions). The factor structure of this model has been validated in non-military populations, including domestic and international student samples (e.g., Van Dyne et al., 2009; Ward, Fischer, Lam, & Hall, 2009).

2.2.2 Other Models of Cultural Intelligence

Other attempts to operationally define the domain of CQ have also emerged, which reflect varying degrees of departure from Earley and Ang's (2003) four-factor model. For example, Thomas (2006) conceptualized CQ in terms of three interrelated components: knowledge, mindfulness, and behaviour. *Mindfulness* is described as a key linking process between knowledge and behaviour. It refers to the conscious awareness and continuous monitoring of one's internal state and of the external environment. Thomas defined mindfulness as a specific meta-cognitive strategy that regulates cognition. In this sense, it conceptually overlaps with Earley and Ang's description of meta-cognitive CQ.

More recently, Thomas et al. (2008) conceptualized CQ as comprising cultural knowledge, cultural skills, and cultural meta-cognition (see Table 9). Specifically, the authors posited that CQ is a system of interacting knowledge and skills, and emphasized the importance of meta-cognition as a linking function that translates CQ into culturally intelligent behaviour. This model has not been empirically tested or validated.

Table 9: Cultural intelligence as knowledge, skills, and meta-cognition (Thomas et al., 2008).

Cultural Knowledge	
Content	Content knowledge in a specific cultural domain (e.g., knowledge about cultures, social interactions, personal history)
Process	Culture general processes directed to the solution of specific problems (e.g., knowledge of the effect of culture on one's own nature or the nature of another)
Cultural Skills	
Perceptual	Information gathering; paying attention to and appreciating critical differences in culture and background between oneself and others; includes open-mindedness, tolerance of uncertainty, and non-judgmentalness
Relational	Interpersonal; flexibility, sociability, empathy
Adaptive	Ability to generate appropriate behaviour in a new cultural setting; includes self-monitoring, behavioural flexibility and self-regulation
Cultural Meta-cognition	
Monitoring	Ability to consciously and deliberately monitor one's own knowledge processes and cognitive and affective states; includes awareness of the assumptions, emotions, motivations, intentions, behaviours, and skills of oneself and culturally different others
Regulation	Ability to regulate one's knowledge processes and cognitive and affective states in relation to an objective; involves processes that are used to self-regulate and control cognitive activities and to ensure that a cognitive goal (e.g., effective handling of a cross-cultural situation) has been met

Ford and Davis (2007) also presented a model of CQ, whereby CQ is thought of as a three-dimensional construct consisting of cognitive/knowledge elements, behavioural/skills elements, and emotive/mindfulness/motivational/attitude elements (refer to Figure 1). This model reflects the integration of Earley and Ang's (2003) model as well as Thomas' (2006) emphasis on mindfulness. Again, this model has not been empirically tested or validated.

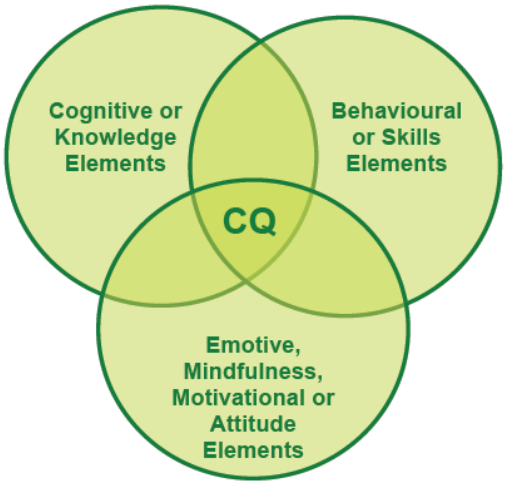

Figure 1: Three-dimensional model of CQ (Ford & Davis, 2007).

2.3 Distinguishing between Cross-Cultural Competence and Cultural Intelligence

Are 3C and CQ truly distinct constructs? Or are they the same constructs just packaged differently (i.e., one packaged as a set of competencies, the other as a type of intelligence)? Based on the definitions presented in Tables 2 and 8, it is difficult to distinguish conceptually between 3C and CQ. For example, both constructs entail having some set of capabilities or KSAOs in order to perform effectively in culturally diverse environments. Implied in these conceptual definitions are the notions that 3C and CQ are multi-dimensional constructs (Reid, 2010). Moreover, both constructs focus on culturally relevant capabilities that are not specific to any one particular culture but, rather, reflect a more general capacity to function effectively in culturally diverse settings. Note however, that the IMPPaCTS framework also includes a culture-specific component, as having regional knowledge about a specific culture, including basic language skills, has been identified as relevant to 3C (McDonald, McGuire, Johnston, Selmeski, & Abbe, 2008).

A look at the operational definitions of 3C and CQ also suggests overlap in the constructs. Both 3C (as defined by Brown and Adams, 2011) and CQ (as defined by Earley and Ang, 2003) include factors such as general knowledge about culture, self-efficacy, motivation to learn, flexibility, and communication.

Nonetheless, some potential differences between 3C and CQ have been identified. 3C is generally considered to be a more all-encompassing construct in comparison to CQ (Reid, 2010), and this is particularly true as it is defined in the IMPPaCTS framework. For example, unlike CQ, the competencies associated with 3C in the IMPPaCTS framework include individual characteristics, including personality and other dispositions or traits.

Other researchers have focused on the complementary nature of 3C and CQ. According to Ng et al. (2005), whereas 3C focuses on specific domains of KSAOs, CQ focuses on an individual's broader capabilities that are necessary to acquire such KSAOs. In other words, CQ taps at the underlying capabilities that are critical for the successful acquisition of specific cross-cultural competencies. Ng et al. provide an illustrative example of how 3C and CQ interconnect. They state that, in order to acquire the competencies that facilitate relationship building (a competency listed in the IMPPaCTS framework), an individual first needs to have the following CQ elements: (i) an understanding of the social interaction norms of that culture (*Cognitive CQ*); (ii) strategies that allow the individual to acquire such knowledge, as well as to form and maintain relationships (*Meta-cognitive CQ*); (iii) the desire and confidence to form relationships with diverse individuals from different cultural contexts (*Motivational CQ*); and (iv) the appropriate behaviours that can put the other party at ease and, thus, help build relationships more effectively (*Behavioural CQ*). Nevertheless, in spite of it being thought of as a prerequisite for 3C, CQ is argued to be a malleable capability that can change over time as a result of cultural exposure, training, modeling, mentoring or socialization (Earley & Ang, 2003).

Some researchers have argued that CQ represents the ability to *reason* in culturally diverse contexts, whereas 3C represents the ability to *function* in culturally diverse contexts. For example, Ang and Van Dyne (2008) argue that one's successful functioning and proficiency in culturally diverse settings are consequences of CQ as opposed to factors of the actual

construct. CQ, therefore, may not include certain attitudes (e.g., low need for closure, non-ethnocentrism) that are considered to be integral to 3C (Ang & Van Dyne, 2008).

In summary, the literature on 3C and CQ is inconclusive as to the precise definitions of each construct and how they are best operationalized. While there definitely appears to be overlap in these constructs, it would be premature and most likely inaccurate to say that they are one and the same. Likewise, the precise interrelationship between them is also unclear, although 3C and CQ do appear to complement one another. For the purpose of this report, the construct of 3C appears to fit best with the notion of being "JIMP-capable" given its broader scope and inclusion of many diverse KSAOs within the operational definition of the construct. As such, 3C is the focus of discussion for the remainder of this report.

In the next section of this report, two important considerations are addressed with regard to the assessment and measurement of 3C. The first pertains to differences in 3C between military populations and civilian populations, and the second pertains to understanding the degree of stability in the factors associated with 3C.

3 Considerations for Assessing Cross-Cultural Competence

In order to determine which variables listed in the IMPPaCTS framework are truly important for CAF personnel to work effectively in the *Public* domain of the JIMP environment, we need to be able to measure these factors. To this end, a significant portion of this report focuses on current assessment tools available for measuring 3C, as well as the different assessment methodologies that can be utilized. Prior to summarizing the literature on these topics, however, there are two considerations that warrant some discussion. First, it is important to note that much of the research on 3C comes from a non-military context, and more specifically, the international management literature. Many of the assumptions that apply to understanding 3C among civilian individuals who work in foreign countries may not carry over to military populations. Second, it should also be recognized that the extent to which the competencies associated with 3C can be developed or acquired (e.g., through education, training, and experience) is an important consideration that has implications for training and selection. These two points are expanded upon below.

3.1 Cross-Cultural Competence in Military versus Non-Military Populations

As mentioned earlier, research on 3C has been most prominent in the field of international management, where the focus has been on understanding the factors that impact the success or failure of employees who are sent on international assignments (e.g., in terms of job performance, adaptation or adjustment, intercultural effectiveness, premature termination of the assignment, etc.). These employees are typically professionals, executives, or senior managers of multinational companies who work for a specified period of time (usually more than six months but less than five years) in an overseas branch or affiliate of the company (Sinangil & Ones, 2001). Referred to as expatriates (e.g., Mol et al., 2005), international assignees (e.g., Caligiuri, Tarique, & Jacobs, 2009), or sojourners[6] (e.g., Ward & Chang, 1997), this population has been a prominent focus of 3C research because of the requirement to both live and work in a different cultural context in order to accomplish a job- or organization-related goal.

Historically, selection for overseas duties has been determined by informal judgments of a candidate's potential adjustment and effectiveness in the assignment, as well as his or her willingness to relocate (Sinangil & Ones, 2001). Moreover, the criteria for selection (or placement) of international assignees has been largely based on job knowledge and technical or managerial ability (Arthur & Bennett, 1995), as expatriate jobs usually involve a high degree of complexity and responsibility (Sinangil & Ones, 2001). In other words, many companies have assumed that they can select high performers from their local firm for international assignments, and that their success will transfer to the foreign work environment (Van der Zee, Zaal, & Piekstra, 2003). These selection practices have proven ineffective, however, because they do not take into consideration the importance of psychological and psychosocial dimensions associated with working in a new cultural environment, such as those associated with 3C.

[6] The term "sojourners" is more encompassing in that it includes international students, refugees, guest workers, asylum seekers, as well as expatriates and international assignees (Sinangil & Ones, 2001).

Given the high failure rate of expatriates (i.e., the rate at which expatriates return prematurely from foreign assignments) and the high costs associated with these failures (Arthur & Bennett, 1995), coupled with the organizational implications of expatriate failure (e.g., poor relationships with local nationals, negative perceptions of the corporation; Graf & Harland, 2004), the need to select individuals with a high degree of 3C has become increasingly salient. In recent years, much interest has been directed toward developing effective expatriate selection practices, assessment tools, and training programs. As Section 4 of this report will address, there are now several off-the-shelf assessment instruments available that purport to measure 3C, components of 3C, or related concepts (e.g., intercultural effectiveness, intercultural adjustment, intercultural sensitivity). But how well do measures that have been developed and validated for expatriates generalize to military populations? Is the construct of 3C the same for both military and non-military populations?

3.1.1 Expatriates versus Military Personnel: Similarities and Differences

In some respects, expatriates share many similarities with military personnel. For instance, both populations are sent by a parent organization (i.e., the corporation or the CAF) to live and work in another country for a specified period of time, and both populations eventually leave the foreign country upon completion of their task. For both populations, working in the foreign country entails operating in unfamiliar cultural contexts and interacting with host nation people – individuals and groups whose cultural contexts differ from their own (Abbe et al., 2010). Thus, both populations require certain psychosocial skills, abilities, attitudes, and personal qualities (e.g., personality traits) in order to adapt effectively to the new cultural context and to interact appropriately with the host population.

Nonetheless, there are some key differences between military and expatriate populations. For expatriates, self-selection is often an important deciding factor in determining who to send on an international assignment, and many expatriates bring their families abroad with them for the duration of the assignment. Conversely, military personnel typically do not have a choice in deciding where and when to deploy (i.e., military personnel usually deploy because the unit or sub-unit in which they serve has been assigned to participate in a particular mission), and usually requires the family unit to stay behind. These are meaningful differences that can have a significant impact on adjustment.

Military personnel also have a unique operating environment that differs from the experience that expatriates have when working and living abroad. Although the majority of military personnel are not likely to be immersed in a foreign culture to the same degree as expatriates (e.g., expatriates might be working and living with other expatriates of similar cultural backgrounds, but could also be on their own without the support of other expatriates for extended periods of time), the interactions between military personnel and local populations are nonetheless significant, perhaps even more so, in some cases, than for expatriates. As Selmeski (2007) points out, the consequences of intercultural effectiveness for military personnel are potentially far greater than for expatriates. Whereas for expatriates, operational success is typically measured in terms of accomplishment of assignment objectives, attrition rates, or increased revenues (Shaffer, Harrison, Gregersen, Black, & Fersandi, 2006), for the military, operational success can be measured in terms of life and death. Moreover, “winning the hearts and minds” of the local population – a key objective of contemporary military operations (Leslie et al., 2008) – is not as

important a criterion measure in defining expatriate effectiveness as it is in defining military operational effectiveness.

Military populations also differ from expatriates in terms of the types of intercultural interactions they engage in as well as the types of individuals and groups with whom they are required to interact. As mentioned earlier, the CAF is increasingly required to work collaboratively with many diverse non-military entities in order to achieve greater interoperability and mission effectiveness. While expatriates are required to interact with local populations and culturally diverse employees at the affiliate company, military personnel have the added challenge of having to cooperate and collaborate with many other domestic and international entities (e.g., OGDs, OGAs, NGOs, PVOs, IOs). Each of these entities has their own unique organizational cultures that add a layer of complexity to the already challenging component of working in a foreign cultural context.

Military personnel are also distinct from expatriate populations in that the military may have a comparatively greater power differential with the local population (Selmeski, 2007). To this end, building rapport and establishing trust in the host country may present a significant challenge for the military. Yet trust between the military and local population is argued to be essential for mission success, for example, in terms of being able to provide effective support and assistance to the local population and to establish a secure environment (Gill, Thompson, & Febbraro, 2011; Van der Kloet, 2006). Therefore, having a military force that has the capability to effectively engage, interact with, and influence people from diverse cultural backgrounds is especially important.

Given the above considerations, the validity and utility of many of the existing measures of 3C, which have been developed primarily for civilian expatriates, should not be presumed to generalize to military populations. Moreover, the KSAOs required in order to be cross-culturally competent may not be the same for expatriates and military personnel.

3.2 Stability of Cross-Cultural Competence

Another important consideration is the extent to which the competencies associated with 3C can be influenced through education, training, and experience. Many analysts who study 3C make the assumption that the construct reflects a dynamic set of competencies that can be taught and learned. However, the stable or dynamic nature of 3C might very well depend upon how the "competencies" associated with 3C are, themselves, defined. Competencies can be traits, motives, attitudes, values, knowledge, skills, or abilities. In other words, virtually any individual characteristic that can be reliably measured and that can distinguish between superior and average performers, or between effective and ineffective performers, may be conceptualized as a competency (Spencer, McClelland, & Spencer, 1994). More commonly, competencies are viewed as the knowledge, skills, abilities, and other factors (KSAOs) that underlie effective performance on the job (Catano, Wiesner, Hackett, & Methot, 2010).

As was described in Section 2 of this report, 3C entails having some combination of KSAOs that enable an individual to act appropriately and effectively in a culturally diverse environment in order to achieve some sort of desired effect. Thus, it is important to tease out the different K, S, A, and O components associated with 3C (e.g., those presented in the IMPPaCTS framework) to

better understand how they can be assessed and for what purpose (e.g., training and development vs. selection and assignment).

3.2.1 Knowledge

Knowledge refers to "a body of information, usually of a factual or procedural nature, that makes for successful performance of a task" (Catano et al., 2010, p. 134). Knowledge that is relevant to 3C can be culture-general or culture-specific (Brown & Adams, 2011; Johnson et al., 2006), and both types of knowledge are considered to be dynamic in nature; that is, they can be learned through education, training, and/or experience (Leiba-O'Sullivan, 1999; Spencer et al., 1994). Based on Brown and Adams' (2011) IMPPaCTS framework, *conceptual knowledge of culture* (i.e., culture-general knowledge) and *cultural knowledge* (i.e., cultural-specific knowledge) represent the "knowledge" component of 3C.

Culture-general knowledge focuses on awareness and knowledge of culture and cultural differences, and pertains to information that can be applied to any cultural environment (Johnson et al., 2006). Examples of culture-general knowledge include declarative knowledge such as knowing what culture is, what 3C is, and why 3C is important to mission success, as well as conceptual knowledge such as knowing cultural concepts and processes, knowing how culture affects one's own and other's perceptions, and understanding how cultures evolve and are different (McDonald et al., 2008).

Culture-specific knowledge focuses on specific knowledge about another culture (Johnson et al., 2006). According to Leiba-O'Sullivan (1999), culture-specific knowledge can be compartmentalized into three types: (a) factual (e.g., knowledge of a country's history, politics, economy, institutions, and social conditions); (b) conceptual (e.g., understanding of a cultural group's value system and how values are reflected in people's behaviours); and (c) attributional (e.g., awareness of contextually appropriate behaviour in the culture). Factual and conceptual knowledge are considered to be *explicit* types of knowledge (i.e., formal and systematic) that can easily be transmitted through lectures and/or readings. Attributional knowledge, on the other hand, is a type of *tacit* knowledge that builds upon the other two types of knowledge (Johnson et al., 2008). Nonaka (2007) describes tacit knowledge as consisting of mental models, beliefs, and perspectives that are ingrained and internalized, and therefore, not easy to articulate. As such, attributional knowledge tends to be more difficult to convey in a classroom-based training approach; rather, it is often learned more informally through socialization (e.g., observation, imitation, and practice).

Nonaka and Takeuchi (1995) present an interesting perspective on how culture-general knowledge and culture-specific knowledge relate to one another and contribute to overall 3C. They state that "the culture-general approach prepares for learning how to learn… and eases the movement to culture-specific knowledge" (p. 430). In other words, culture-general knowledge is the foundation for the acquisition of culture-specific knowledge. This line of thinking is consistent with how other researchers view the distinction between culture-general and culture-specific knowledge (e.g., Hajjar, 2010).

3.2.2 Skills

Skills refer to observable verbal and non-verbal behaviours (e.g., motor, psycho-motor, and/or meta-cognitive) that are required to perform a learned act (McDonald et al., 2008). They are dynamic, non-enduring characteristics of an individual that depend on experience and practice, and that can be acquired through on-the-job or off-the-job training (Heneman & Judge, 2006; Leiba-O'Sullivan, 1999).

McDonald et al. (2008) distinguished between four types of *procedural skills* considered to be relevant for 3C in military personnel: (a) planning and execution skills (e.g., integrating cultural knowledge/skills into feedback and learning, or into planning and mission execution; (b) sense making/interpretation skills (e.g., understanding the influence of culture on own and others' perceptions of self and others; interpreting verbal and non-verbal cues and cross-cultural communications); (c) behavioural skills (e.g., projecting verbal and non-verbal cues; employing cross-cultural communication strategies); and (d) complex interaction skills (e.g., building rapport and relationships; negotiating; collaborating).

In addition to procedural skills, McDonald et al. (2008) also discussed *meta-cognitive skills* as a separate type of skill set for which they listed a variety of meta-cognitive and affective factors (e.g., suspending judgment, perspective taking, self-monitoring, emotion self-regulation, self-efficacy, willingness to engage, patience/persistence, tolerance for ambiguity, low need for closure, flexibility, and openness). Yet, despite labelling these factors as skills, McDonald et al. described them as personal characteristics that reflect "attitudes, affect/feelings, or behavioural tendencies (including meta-cognitive processes) that influence an individual's choices or decisions to act in a certain way under particular circumstances" (pp. 11-12). They further defined meta-cognitive processes as "one's ability to learn about one's self, learn how to learn, and control thinking processes" (p. 22). This suggests that the variables described by McDonald et al. as meta-cognitive skills may represent relatively stable abilities or dispositions (or "other" competencies) and, therefore, it may not be appropriate to categorize them as skills.

Of the factors in Brown and Adams' (2011) IMPPaCTS framework, the following variables comprise the "skills" component of 3C: *leadership*; *negotiation*; *conflict resolution*; *language skills*; *relationship building*; *communication skills*; and *influence and persuasion*. These variables are discussed in the literature as competencies that can be developed through various training approaches. For example, negotiation skills may be acquired or enhanced through didactic or experiential training courses that teach trainees (e.g., through role-play, debriefing, and lectures) how to avoid irrationalities and behavioural biases and behave in a manner that maximizes the outcome in negotiation situations (El Shenawy, 2010).

It is also possible that *stress management* and *flexibility* fall into the "skill" category; however, the literature is somewhat inconsistent as to the nature of these two competencies and how they are acquired. Stress management (defined as the ability to make sense of and deal with stressful situations and to control one's reactions to the situation; Brown & Adams, 2011) is sometimes viewed as a dynamic skill and, at other times, a stable disposition (Leiba-O'Sullivan, 1999). Although there is a biological basis to how people experience stress (Admon et al., 2009), the preponderance of research on stress management training, and on stress reduction strategies and techniques, suggests a dynamic skill component to stress management (e.g., Walton, 1990).

Flexibility (i.e., the ability to adjust one's behaviour or cognitive frames of reference in response to situational cues; Brown & Adams, 2011), is described by some cross-cultural researchers as a skill (Abbe et al., 2007; Ross et al., 2009; Shaffer et al., 2006), and there is evidence that sensitivity training to develop attitudinal flexibility can be effective (Tung, 1982), thus suggesting it has a dynamic component. Nevertheless, "flexibility" tends to be an elusive construct. Depending on how it is defined, flexibility can also be viewed as an ability, reflecting a broader cognitive ability related to perspective taking and frame-shifting (see next section on Abilities), or a disposition, reflecting adaptability and versatility (Pulakos, Dorsey, & White, 2006). For instance, flexibility is included in the Multicultural Personality Questionnaire as one of five personality dimensions thought to be relevant to multicultural effectiveness (Van der Zee & Van Oudenhoven, 2000).

3.2.3 Abilities

Abilities are generally thought of as more general, enduring capabilities that an individual possesses at the time he or she first begins to perform a task (Catano et al., 2010). To this end, they are considered to be relatively stable and, therefore, less amenable to training than skills. It is important to note that the terms "ability" and "skill" are often used interchangeably in the literature or are defined in terms of the other (e.g., defining a skill as "the ability to…"), and there is much confusion about how they are different, if at all (Rotundo & Sackett, 2004). Although skills and abilities are related (i.e., abilities influence a person's potential to develop certain skills; Leiba-O'Sullivan, 1999), some key distinctions between them have been proposed. Generally speaking, abilities reflect the underlying attributes that bring out the skills of an individual. Furthermore, skills tend to be more goal-directed because having certain skills can allow a person to attain a higher level of performance, whereas possessing a specific ability does not necessarily equate to exceptional performance. In many ways, abilities are more basic, whereas skills refer to the application of these basic abilities (Ackerman, 1988).

Rotundo and Sackett (2004) point out that the distinction between skills and abilities is quite apparent when a skill is job-specific (e.g., a skill in applying calculus to solve a research problem), but becomes less clear when the skills in question are not job-specific (e.g., reading comprehension, problem-solving). Given that many of the skills associated with 3C fall into this latter category of being non job-specific, determining which components represent dynamic skills, and which are better thought of as stable abilities, is challenging. This might explain why some researchers and practitioners avoid making the distinction between skills and abilities altogether when they refer to KSAOs. Instead, they often use the terms *attitudes* or *affect* to represent the "A" component (e.g., Abbe et al., 2007; Hajjar, 2010; Ross et al., 2009). However, in KSAO terminology, attitudes and affect are subsumed under the "other" category.

The literature on selection and assessment focuses on four types of general abilities or aptitudes that are relevant to the prediction of work performance: cognitive ability (also referred to as mental ability or intelligence), physical ability, psychomotor ability, and perceptual or sensory ability (Salgado, Viswesvaran, & Ones, 2001). Abilities relevant to 3C primarily reflect the cognitive domain.

There are many types of cognitive abilities that have the potential to influence individuals' effectiveness in working in diverse cultural environments. For instance, the Occupational

Information Network (O*NET)[7], which is a research-driven government database that contains occupational information on hundreds of standardized and occupation-specific descriptors, includes a comprehensive taxonomy of 21 different cognitive abilities relevant to job performance (see Table 10). Examples include *category flexibility* (the ability to generate different sets of rules for combining or grouping things in different ways), deductive reasoning (the ability to apply general rules to specific problems), *inductive reasoning* (the ability to combine pieces of information to form general rules or conclusions), *perceptual speed* (the ability to quickly and accurately compare similarities and differences among objects, pictures, numbers or patterns), *problem sensitivity* (the ability to tell when something is wrong or is likely to go wrong), and *oral/written comprehension* (the ability to listen to/read and understand information presented through spoken words/in writing).

*Table 10: Taxonomy of cognitive abilities from the O*NET.*

Category Flexibility	Memorization	Selective Attention
Deductive Reasoning	Number Fluency	Spatial Orientation
Flexibility of Closure	Oral Comprehension	Speed of Closure
Fluency of Ideas	Oral Expression	Time Sharing
Inductive Reasoning	Originality	Visualization
Information Ordering	Perceptual Speed	Written Comprehension
Mathematical Reasoning	Problem Sensitivity	Written Expression

From Brown and Adams' (2011) IMPPaCTS framework, *cognitive complexity* and *meta-cognitive knowledge*[8] best reflect the "abilities" component of 3C. Specifically, both of these factors appear to reflect a broad cognitive capability that is relatively enduring and applicable across a wide range of tasks. In support of this hypothesis, researchers examining the temporal stability of CQ have shown that meta-cognitive CQ (which is similar to Brown and Adams' concept of meta-cognitive knowledge), remains stable over time, even when individuals are exposed to training in the form of experiential activities designed to improve CQ (Van Dyne et al., 2009). Nonetheless, some researchers view cognitive complexity and meta-cognitive knowledge as skills that can be learned, rather than abilities (e.g., Abbe et al., 2007; McDonald et al., 2008; Ross et al., 2009). Given the lack of consensus, additional research on these constructs is needed in order to understand their degree of stability or malleability.

3.2.4 Other Characteristics

Other characteristics represents a catchall category that refers to virtually any other attributes that are integral to job performance, but that do not fit neatly into the K, S, or A categories (Heneman & Judge, 2006). This includes personality traits (i.e., stable patterns of feelings, thoughts, and behaviours; McCrae & Costa, 2008) or dispositions (i.e., behavioural tendencies) as well as affectively-based variables such as attitudes ("preferences and internal states associated with

[7] O*NET is sponsored by the Employment and Training Administration of the US Department of Labor, and is developed by the National Center for O*NET Development (see http://www.onetonline.org/).

[8] Although Brown and Adams (2011) refer to this as "knowledge," they define *meta-cognitive knowledge* as a heightened sense of awareness, enhanced perceptive abilities, and a proclivity to reflect on experience; as such, this definition is more reflective of a cognitively-oriented ability than knowledge.

one's beliefs and feelings"; Saks & Haccoun, 2004, p. 55), motives (underlying needs or thought patterns that drive and direct individual behaviour; Spencer et al., 1994), and values ("Long-ensuring judgments appraising the worth of an idea, object, person, place or practice"; Dodd, 1998, p. 102). Competencies in this "other" category typically reflect psychological characteristics that are relatively fixed and may constrain the potential to develop a skill (Leiba-O'Sullivan, 1999). Nonetheless, there is some debate about the extent to which affect-based characteristics (i.e., attitudes, motives, and values) are stable across the lifespan. For instance, researchers who study attitude formation and change suggest that *implicit* attitudes (i.e., automatic preferences that are considered to be highly stable and resistant to change, and which are thought to develop over the long term largely because of socialization; Albarracin & Vargas, 2010), can shift in response to contextual variables, motivational states, and cognitive factors (Banaji & Heiphetz, 2010). Moreover, recent research suggests that intergroup attitudes and stereotypes may be considerably more malleable than originally assumed (Bosak & Diekman, 2010). Thus, more research is needed on attitudes that are important for 3C, particularly with respect to their malleability in adulthood.

In terms of Brown and Adams' (2011) IMPPaCTS framework, the majority of variables seem to fall into the "other" category. For the purpose of this report, these variables may be categorized into two sub-groups: traits (i.e., the *Big Five; tolerance for ambiguity; adventurousness/ curiosity; self-monitoring; patience*), and affect/attitudes/motives (*non-ethnocentrism; open-mindedness; cultural empathy; motivation to learn; need for cognitive closure; orientation to action; valuing people of other culture*).

It is also possible that *self-efficacy*, *willingness to engage,* and *self-regulation/emotional regulation* fall into the "other" category, although there is some disagreement in the literature with regard to the nature of these constructs and whether they are skill-based or trait/affect-based. For example, in their model of 3C for Army leaders, Abbe et al. (2007) categorized self-efficacy (i.e., the belief in ones' capability to perform in a certain manner or attain certain goals) as an antecedent of 3C that is influenced by dispositional traits. They acknowledged, however, that self-efficacy may be less stable than other dispositions (e.g., Big Five traits) because self-efficacy is thought to be dependent upon the interaction of an individual with his/her environment. Moreover, Leiba-O'Sullivan (1999) described self-efficacy as a dynamic self-maintenance skill associated with 3C, whereas Ross et al. (2009) described it as a motivational component of 3C.

Willingness to engage (i.e., the tendency to actively seek out and explore unfamiliar cross-cultural interactions and to regard such interactions as a positive challenge; Brown & Adams, 2011) is also vaguely defined in the literature. For instance, Ross et al. (2009) discussed that, although it may be predicted by an individual's level of extraversion, willingness to engage is a skill that can be trained. On the other hand, McDonald et al. (2008) described willingness to engage as a type of personal characteristic.

Likewise, self-regulation/emotional regulation is sometimes thought of as a skill and, at other times, a personal disposition. For example, while Abbe et al. (2007) acknowledged that self-regulation has a clear basis in disposition, they also argued that it is a skill set that can be developed for cross-cultural assignments. McDonald et al. (2008) defined the construct as a personal characteristic that pertains to managing one's own emotions and monitoring one's own behaviours.

In summary, although knowledge and skills are generally considered to be dynamic, whereas abilities and other characteristics, such as traits and affect, are thought to be stable (Leiba-O'Sullivan, 1999), the state of the literature illustrates that many of the competencies associated with 3C require further exploration as to how they are acquired (i.e., nature versus nurture) and the extent to which they can be developed or trained. It may be the case that the factors that comprise 3C should be thought of as having varying degrees of stability rather than attempting to dichotomously categorize the variables into "stable" versus "dynamic" (or into K, S, A, and O categories). While some competencies might be fairly stable and resistant to change, others may be less influenced by abilities or personality and, therefore, more amenable to training. Table 11 summarizes the different KSAOs in the IMPPaCTS framework. This table presents a potential starting point for understanding how the different components of 3C can be assessed and whether they should be the focus of selection or training[9].

Table 11: KSAOs in the IMPPaCTS framework.

Relatively Dynamic Competencies		**Relatively Stable Competencies**	
Knowledge	**Skills**	**Abilities**	**Other**
Cultural knowledge	Leadership	Cognitive complexity?	***Traits***
Conceptual knowledge of culture	Negotiation	Meta-cognitive knowledge?	Big Five
	Conflict resolution		Tolerance for ambiguity
	Language skills		Adventurousness/curiosity
	Relationship building		Self-monitoring
	Communication skills		Patience
	Influence/persuasion		Self-efficacy?
	Stress management?		Self/emotional regulation?
	Flexibility?		***Affect/Attitudes/Motives***
			Non-ethnocentrism
			Open-mindedness
			Cultural empathy
			Motivation to learn
			Need for cognitive closure
			Orientation to action
			Valuing people of other cultures
			Willingness to engage?

[9] Note that the classifications used in this table were developed primarily for pragmatic considerations but have not been formally validated.

4 Methods for Assessing Cross-Cultural Competence

This section focuses on different assessment techniques and tools for measuring 3C. Over the years, many different approaches have been used to examine the extent to which individuals possess or demonstrate 3C. This variance stems from differences in (a) how 3C is conceptualized, (b) assumptions about what makes individuals interculturally effective, (c) the intended purpose of the assessment (e.g., training versus selection), and (d) the methodological choice (e.g., self-report questionnaire versus performance-based assessment). Today, there are dozens of increasingly sophisticated off-the-shelf instruments purporting to measure 3C, aspects of 3C, or related concepts such as cross–cultural or intercultural adaptability, suitability, or sensitivity (Stuart, 2009). Of these instruments, some are targeted for internal or external selection purposes, some are aimed at training and development, and some have more than one focus. Often, the dividing line between assessment instruments used for selection versus training or development is blurry.

The bulk of current 3C assessment tools are in the form of self-report questionnaires, surveys, or inventories. Within the military literature, three recently published reports (one that was written for the US Army and two that were written for the CAF) include reviews of various self-report measures of 3C and related constructs (see Abbe et al., 2007; Brown & Adams, 2011; Korabik et al., 2009). Together, these three reports summarize 25 different instruments that have been developed for various populations with varying degrees of psychometric evidence, and which purport to measure broad constructs related to 3C (e.g., intercultural competence, cross-cultural adaptability, cross-cultural sensitivity, cultural intelligence) or more specific aspects of 3C-related competencies (e.g., openness, leadership, empathy).

Self-report instruments, however, represent just one method of assessing the competencies associated with cross-cultural effectiveness. Beyond questionnaires and inventories, there are several other assessment procedures that offer alternative, complementary, or potentially superior methods of measuring 3C, including biodata instruments, situational judgment tests, behavioural-based interviews, behavioural observations, and combination methods such as assessment centres. In the following paragraphs, the various methodologies are broadly described in terms of (a) what they are and how they are used, (b) their reliability and validity, (c) their utility (e.g., for selection or training purposes), and (d) challenges to their development and use. In addition, for each methodology, examples of 3C measures relevant to the competencies identified in the IMPPaCTS framework are described.

4.1 Self-Report Questionnaires/Inventories

What they are and how they are administered. As mentioned above, there is no shortage of questionnaires or inventories that measure, or purport to measure, factors associated with 3C. This is due, in part, to the cross-cultural training and development service industry that has evolved over the past few decades with the goal of reducing expatriate failures and improving cross-cultural performance (Dodd, 2007). Today, dozens of proprietary measures are available (at a cost) for organizations seeking to assess the extent to which their employees will be cross-culturally effective, to gauge individuals' readiness to take on international assignments, or to determine cross-cultural training needs. Along with these commercially available tools, a diverse

range of non-commercial assessment instruments, which have been developed for the purpose of understanding 3C and related constructs (usually among civilian populations), are available in the academic literature.

Self-report assessment tools tend to focus on psychological variables such as attitudes, interests, values, preferences, affect, or personality – variables that can be difficult to assess through other means due to their subjective nature and lack of direct observability. A typical self-report questionnaire or inventory presents a series of short, written statements along with instructions for respondents to indicate the extent to which they agree or disagree with each statement (usually on a 5- to 7-point rating scale) in terms of how well it reflects how they feel, what they believe, how they perceive people/things/situations, and so on. Responses to the questionnaire are then summed to produce an individual's "score" (or sub-scores) on the variable(s) of interest.

Table 12 presents an extensive list of self-report questionnaires, surveys, and inventories that have been developed to measure 3C, components of 3C, or related constructs such as CQ, cross-cultural or intercultural adjustment/adaptability, intercultural effectiveness, and cross-cultural sensitivity. Some of the instruments have been developed primarily or solely for research purposes, whereas others are commercially available. The instruments also vary considerably in terms of the number and types of variables they are intended to measure. While a few are designed to measure a single attribute or skill thought to be relevant to 3C (e.g., openness, leadership skills), the majority focus on multi-dimensional constructs comprised of several KSAOs.

The measures listed in Table 12 appear in alphabetical order (by name of measure) and include information on the specific construct(s) that each instrument is designed to assess, the number of items they contain, their intended use, and their psychometric properties (where available). Annex A includes sample items, or the complete questionnaire (where available), for each measure. Note that all of the measures define *culture* somewhat narrowly in that they focus on national or ethnic culture (e.g., the ability to adapt to, or work effectively in, diverse national environments). However, as mentioned earlier in Section 1, being JIMP capable also requires that military personnel are able to work effectively with different groups and organizations, each which may have their own *organizational cultures* (i.e., attitudes, values, meanings, assumptions, and practices that characterize members of a particular organization; Ashkanasy & Jackson, 2002). Thus, an important empirical question to address in future research is whether the self-report measures presented in this report have utility for assessing 3C using a broader notion of culture that includes both national or ethnic culture and organizational culture.

Examples of self-report questionnaires/inventories relevant for assessing 3C. In spite of the large number of measures that have been developed over the past three decades (albeit with varying degrees of rigour and psychometric evidence), no one measure appears to capture all of the factors identified by Brown and Adams (2011) as potentially important for operating in a JIMP environment. The instruments from Table 12 that appear to have the most relevance to 3C (i.e., instruments that comprise the *greatest number* of factors identified in the IMPPaCTS framework, but not necessarily the most well-validated) include (a) the *Cross-Cultural Competence Inventory* (CCCI), (b) the *E-model Scale for Intercultural Effectiveness* (E-Model), (c) the *Intercultural Readiness Check* (IRC), and (d) the *Overseas Assignment Inventory* (OAI). These four measures are described below.

(a) The CCCI was developed by Ross et al. (2009) as a tool to aide in the assessment and training of 3C in US military personnel. The instrument includes 47 items that are rated on a 6-point Likert scale (1 = *strongly disagree* to 6 = *strongly agree*). The CCCI includes six dimensions, all of which are also included in the IMPPaCTS framework: *willingness to engage* (a willingness or persistence to stay engaged in making sense of unfamiliar social situations in dissimilar cultures); *cognitive flexibility and openness* (having a rich mental model that includes a repertoire of strategies from which to choose, depending upon the given situation, and being able to switch easily from one strategy to another during assessment, decision-making, and problem-solving); *emotional regulation* (the ability to regulate or control one's emotions effectively so that they do not interfere with one's performance); *tolerance of uncertainty* (a general disposition that broadly influences cognition, attitudes, and behaviour and whereby low tolerance for uncertainty is characterized by rigidity, dichotomous thinking, authoritarianism, and ethnocentrism); *self-efficacy* (the belief that one has the capabilities to execute the courses of action required to manage situations); and *ethnocultural empathy* (the ability to understand another's emotions, as well as the cognitive ability to take on the perspective of another person).

    Ross et al. reported that each of the six CCCI dimensions are significantly correlated with one another, suggesting the possibility of a general factor of 3C, and that each dimension demonstrates sufficient reliability, with internal consistencies[10] (coefficient alphas) ranging from a low of .69 for ethnocultural empathy to a high of .86 for self-efficacy and emotional regulation. Criterion-related validity[11] evidence for the CCCI is not available or has not been published.

(b) The E-Model scale, with the E standing for "effectiveness" (Walter, Choonjaroen, Bartosh, & Dodd, 1995; cited in Dodd, 1998) was developed as a tool for assessing individuals' adaptability and relationship potential in culturally diverse environments. The scale includes 22 items that are rated on a 5-point scale (1 = s*trongly disagree* to 5 = *strongly agree*). Adaptability competencies measured in the scale include *flexibility*, *knowledge of and respect for host culture*, *language skills*, *patience*, *open-mindedness*, *tolerance for ambiguity*, and *display of appropriate behaviours*. Interpersonal relationship competencies measured in the scale include *emotional control*, *sense of humour*, *empathy*, *trust* and *non-ethnocentric attitudes*. All but three of the adaptability and relationship competencies (i.e., display of appropriate behaviours, sense of humour, and trust) have been identified in the IMPPaCTS framework as important for the CAF. No psychometric evidence for this scale was unattainable.

[10] Internal consistency is the most common reliability index for questionnaires and inventories, and refers to the extent to which items that propose to measure the same general construct produce similar scores.

[11] Criterion-related validity can be established through *concurrent* or *predictive* validity studies. In a concurrent validation strategy, information is obtained on a predictor (e.g., the CCCI) and a criterion variable (e.g., cross-cultural performance) at the same time, whereas in *a predictive v*alidation strategy, the data is collected over time (e.g., the CCCI would be administered to a sample of CAF members pre-deployment and then their level of cross-cultural effectiveness would be examined during the deployment). Both validation strategies are designed to examine the relationship between two variables (i.e., a predictor and a criterion).

(c) The IRC (©2001-2012 Intercultural Business Improvement[12]) was developed as a measure of intercultural effectiveness and comprises 60 items that are rated on a 5-point scale (1 = s*trongly disagree* to 5 = *strongly agree*). The instrument focuses on four learnable competencies thought to be crucial to effective intercultural interaction: *intercultural sensitivity (*the degree to which a person takes an active interest in others, their cultural background, needs and perspectives); *intercultural communication* (the degree to which a person actively monitors his/her own communicative behaviours)*; intercultural relationship building* (the degree to which a person actively influences the social environment, or is concerned with integrating different people and personalities); and *management of uncertainty* (the degree to which a person is able to manage the added uncertainty of intercultural situations). All four of these dimensions are also included to some extent in the IMPPaCTS framework. The instrument is designed to provide an in-depth intercultural assessment and to assist organizations with their intercultural training programs.

According to the publisher (see www.irc-center.com), the IRC has undergone extensive reliability and validity testing, although the results of these studies are not publicly available. In one of the few empirical studies on the IRC that is available in the literature, the reliability (internal consistency) of the dimensions ranged from .59 to .84[13] (Van Der Zee & Brinkman, 2004). In terms of criterion-related validity, Van Der Zee and Brinkman reported that scores on the IRC significantly predicted individuals' international orientation (as indicated by one's interest in and self-rated capability for intercultural assignments) as well as individuals' amount of previous international experience (i.e., experience living in another country).

(d) The OAI was developed by Tucker (1994; © Tucker International[14]) as a commercially available tool to assess individuals' adaptability potential. The instrument includes 54 items that measure attributes and motivations found crucial for successful adaptation to another culture as well as motivations for accepting or wanting an international assignment. Specific variables measured include the following 14 attributes/motivations: *expectations*; *open-mindedness*; *respect for others' beliefs*; *trust in people*; *tolerance*; *personal control*; *flexibility*; *patience*; *social adaptability*; *initiative*; *risk taking*; *sense of humour*; *interpersonal interest*; and *spousal communication*. The majority of these variables have been identified in the IMPPaCTS framework as those relevant for operating in the *Public* domain of the JIMP environment.

Available since the early 1970s (the first version was designed for the US Navy), the OAI is used primarily as a tool for self-selection; however, it has also been used to support management in its selection process for international assignments (although, for use in selection, the OAI is combined with a behavioural interview technique). The tool can also be integrated into pre-departure intercultural training curriculum to provide a baseline of an

[12] Intercultural Business Improvement is a consulting firm based in the Netherlands whose primary goal is to assist organizations and individuals in improving their intercultural effectiveness.

[13] Van Der Zee and Brinkman's (2004) study appears to have used an older version of the IRC that includes six dimensions.

[14] Tucker International is a US-based consulting firm that specializes in providing international candidate assessment and development, and delivering customized intercultural training programs.

individual's level of adaptability. Similar to the IRC, reports on the psychometric properties of the OAI are not publicly available; however, according to the author (see www.tuckerinternational.com), the OAI is a highly reliable instrument that assesses intercultural competencies required for success on an international assignment, and it has been validated using a longitudinal, external criterion method (i.e., the prediction of intercultural adjustment over time).

Reliability and validity of self-report measures of 3C. Due to the variety of constructs measured by the different questionnaires, as well as disparities in the number of items in each questionnaire (ranging from 20 to over 100 items), the populations they are intended for (e.g., military versus civilian), and their intended uses (e.g., personnel selection for an international assignment, identification of training needs, evaluation of training effectiveness, self-awareness, self-selection), it is not meaningful or appropriate to make broad validity or reliability claims about self-report instruments as a whole. Of the measures presented in Table 12, many have published information regarding the psychometric properties of the tool (in terms of the internal consistency and factor structure of the scales), which range from moderate to excellent. Unfortunately, however, validation of these instruments is lacking, and only a handful of instruments (e.g., the *Cross-Cultural Interaction Inventory*/CCII, the *Cultural Intelligence Scale*/CQS, the IRC, the *Intercultural Development Inventory*/IDI, the *Intercultural Readiness Assessment*/IRA, the *Multicultural Personality Questionnaire*/MPQ) have published data on their criterion-related validity. Based on the available validation evidence, measures of 3C have been found to predict various outcomes, including overseas adjustment (Yellen & Mumford, 1975), cultural adaptation (Dodd, 2007), work performance in international contexts (Ang, Van Dyne, Koh, & Ng, 2004), and intercultural decision quality (Graf & Harland, 2005). Of the measures included in Table 12, the most popular or most widely used include the *Big Five Inventory* (BFI), the CQS, the *Intercultural Adjustment Potential Scale* (ICAPS), the IDI, and the MPQ.

Utility. Self-report assessment instruments are frequently used as a means for understanding or predicting who is likely to demonstrate 3C effectively and who would benefit from cross-cultural training and education. These types of measures are a popular method for assessing 3C because of their simplicity and low cost (Heneman & Judge, 2006). They can be developed fairly quickly and with minimal resources, although development and validation of the scales may require the use of large samples of participants at various stages of the development process. Another advantage of self-report measures is that they can be administered to large groups of applicants or employees simultaneously, either as a paper-and-pencil survey or on-line, and very few of the 3C measures require any special training by certified administrators[15]. In addition, the results of self-report instruments can often be used for several purposes, such as selection, training, and/or development. For instance, as training tools, self-report instruments can be used for pre- and post-training assessment to obtain a baseline of individuals' 3C as well as to determine how effective the cross-cultural training program was at teaching or developing certain skills, knowledge or awareness. For selection purposes, self-report instruments provide a means for assessing and comparing candidates on various attributes that have been identified as important for performance in international assignments, and can also be used for self-selection purposes by allowing individuals to assess their own level of readiness to take on an international assignment (although, in the context of military operations, self-selection may not be a realistic goal).

[15] Exceptions include proprietary measures such as the IRC and OAI, which require the organization to become licensed (via completion of a multi-day certification course) to administer the instrument.

Challenges to their development and use. Self-report assessment tools rely on the assumption that (a) individuals have the ability (i.e., self-awareness) to report on their level of 3C, or attributes associated with 3C, and (b) individuals will be honest and accurate in their self-assessments (Ruben, 1989). One of the major criticisms of self-report measures is that they are prone to faking and socially desirable responding; that is, individuals may distort their responses (either intentionally or subconsciously) by choosing answers that they believe will present them in a positive light, rather than choosing answers that reflect their true beliefs or feelings (Catano et al., 2010). The motivation to provide socially desirable responses is a particular concern when the outcomes of the inventory will be used for selection decisions (e.g., to determine suitability for certain positions). Research does suggest, however, that it is possible to counter the effects of potential faking or socially desirable responding by providing warnings to applicants (e.g., that information will be verified or that faking can be detected) as well as by incorporating a "faking" scale into the measure (MCAFarland, 2003; Paulhus, 1984, 1991). For example, to evaluate the impact of socially desirable responding on participants' responses to a measure of cross-cultural sensitivity, Pruegger and Rogers (1993) embedded a 16-item social desirability sub-scale into their initial 118 measure of cross-cultural sensitivity. Only those items that maximally correlated with the cross-cultural sensitivity score *and* minimally correlated with the social desirability score were chosen for inclusion in the final scale, the *Cross-Cultural Sensitivity Scale* (CCSS).

It is also recommended that the results of self-report measures be supplemented with data from other methods, including ratings from supervisors and peers. For instance, multi-rater approaches, such as 360 degree feedback systems, can be beneficial because they have greater objectivity and can increase the stability and accuracy of ratings. To date, a variety of instruments using a multi-rater approach have been developed for the purpose of measuring concepts related to 3C. For instance, the *Global Candidate Assessment* (GCA 360; © Aperian Global) is designed to help assess whether a candidate for an international assignment is likely to be successful in an overseas role. It includes both a self-assessment component and assessment by up to 10 colleagues, supervisors, and subordinates on the same items. In addition, some of the self-report measures presented in Table 13 (e.g., *Cross-Cultural Adaptability Inventory*/CCAI, CQS, *Global Leadership Life Inventory*, *Objective Job Quotient*/OJQ, and *Prospector*) have been adapted to allow for multiple raters (e.g., self, peer, supervisor) in order to provide a more "objective" assessment of the candidate.

Table 12: Self-report measures of 3C and related constructs.

Scale	Source	What it Measures	Items	Intended Use	Psychometric Properties
Attitudinal & Behavioral Openness Scale (ABOS) [b]	Caligiuri, Jacobs, & Farr (2000) Full scale in Annex A	Personality trait, *openness*, with four behavioural and attitudinal indicators: *participation in cultural activities*; *foreign experiences*; *openness attitudes*; and *comfort with differences*	24	Tool for identifying cross-cultural training needs, predicting expatriate cross-cultural adjustment, and selecting employees who can work effectively internationally in foreign environments and/or intra-nationally with foreign colleagues/clients	Good internal consistency (coefficient alpha = .81) and factorial validity (four identified factors), as well as some evidence of construct (i.e., convergent and discriminant) validity
Big Five Inventory (BFI) [c]	John, Naumann, & Soto (2008) Full scale in Annex A	Five broad personality dimensions: *extraversion*; *emotional stability; agreeableness*; *conscientiousness*; and *openness to new experiences*	44	Used for research purposes and in personnel selection systems as a predictor of job performance	Coefficient alphas range from a low of .79 (for agreeableness) to a high of .87 (emotional stability); mean of .83 across the 5 dimensions; demonstrates convergent validity with other Big 5 measures (e.g., NEO-FFI); no criterion-related validity evidence established
Cross-Cultural Adaptability Inventory (CCAI) [a, b]	Kelley & Meyers (1992; 1995)	Mix of traits (*flexibility/openness*; *emotional resilience*; and *personal autonomy*) and skills (*perceptual acuity*) related to cross-cultural adaptability and thought to contribute to cross-cultural interaction and communication effectiveness	50	Designed to provide information about one's potential for cross-cultural effectiveness; intended to be used as part of a battery of instruments to assess an individual's ability to adapt to any culture; can be used to help trainees develop self-understanding about their cross-cultural ability	Kelley and Meyers (1995) reported internal reliabilities ranging from .68 to .90 and that the instrument demonstrates face, content, and construct validity; Davis and Finney (2006) conducted a confirmatory factor analysis and found a poor fit of the four-factor model; the instrument's developers warn against the use of the CCAI for diagnostic purposes

Cross-Cultural Adaptability Scale (CCAS) [a, b, c]	Vanderpool (2002) Full scale in Annex A	Five components of intercultural effectiveness: *interpersonal relations/sense of identity*; *openness to experience*; *organizational goals/cross-cultural experience*; *personal goals*; and *problem-solving*	52	Developed for use in selecting and training military personnel for peacekeeping operations	Factorial validity established in Australian and Canadian military samples; evidence for criterion validity has not been published
Cross-Cultural Competence Inventory (CCCI) [c]	Ross et al. (2009) Full scale in Annex A	Six dimensions of 3C: *willingness to engage*; *cognitive flexibility & openness*; *emotional regulation*; *tolerance of uncertainty*; *self-efficacy*; and *ethnocultural empathy*	47	Designed for assessment and training of 3C in military personnel	Reliabilities (Cronbach's alpha) range from .69 (for *ethnocultural empathy*) to .86 (for *emotional regulation* and *self-efficacy*); no criterion-related validity data available.
Cross-Cultural Interaction Inventory (CCII)	Yellen & Mumford (1975)	Intercultural adjustment through biographical and attitudinal questions reflecting eight dimensions: *sociability*; *empathy*; *intellectual curiosity*; *patience*; *adaptability*; *acceptance*; and *morality*	38	Intended to supplement procedures for screening and selecting personnel for overseas assignments	Developed and validated on US Navy personnel stationed in Japan; items found to differentiate with high accuracy between successful and unsuccessful overseas adjustment
Cross-Cultural Sensitivity Scale (CCSS) [b]	Pruegger & Rogers (1993) Full scale in Annex A	Attitude-based measure of cross-cultural sensitivity (i.e., the "valuation and tolerance of different cultures")	24	Designed to measure cross-cultural awareness and understanding in the Canadian context	Good internal consistency (.87); not contaminated by social desirability bias
Cross-Cultural World-Mindedness Scale (CCWMS) [b]	Der-Karabetian (1992)	Attitudes and values about race, religion, immigration, patriotism, economics, war, world government, and global education	26	Assessment tool for study-abroad pre-departure programs	Alpha coefficients range from .80 to .85

Cultural Intelligence Scale (CQS) [a, b, c]	Earley & Ang (2003); Van Dyne et al. (2009) Full scale in Annex A	Four dimensions of CQ: *meta-cognitive CQ*; *cognitive CQ; motivational CQ*; and *behavioural CQ*	20	Assessment tool for predicting performance (e.g., cultural judgement and decision making) and adjustment to culturally diverse situations	Instrument has sound internal consistency and test-retest reliability, as well as factorial and discriminant validity (Ang & Van Dyne, 2004); dimensions correlate with cross-cultural adjustment and performance in international contexts (Ang, Van Dyne, Koh, & Ng, 2004)
Culture Shock Inventory (CSI) [b]	Reddin (1975)	Eight dimensions associated with culture shock: *ethnocentrism*; *intercultural experience*; *cognitive flexibility* (open-mindedness); *behavioural flexibility* (openness to change); *general intercultural knowledge*; *specific intercultural knowledge*; *adequate behaviour;* and *interpersonal skills*	80	Assessment tool for predicting difficulty in dealing with culture shock; acquaints individuals who will be working outside of their own culture with some of the factors that may cause them to be less efficient; used widely by the Peace Corps in their training programs	Test-retest reliability scores range from .57 to .86 on the eight subscales
E-model Scale for Intercultural Effectiveness [b]	Walter, Choonjaroen, Bartosch, & Dogg (1995); cited in Dodd (1998) Full scale in Annex A	Two categories of competencies required for intercultural effectiveness: *adaptability competencies* (flexibility, knowledge of and respect for host culture, language skills, patience, open-mindedness, tolerance for ambiguity, and display of appropriate behaviours); and *Interpersonal relationship competencies* (emotional control, sense of humour, empathy, trust and non-ethnocentric attitudes)	22	Assessment of adaptability potential and relationship potential	No psychometric data reported.

Global Awareness Profile (GAP-test)	Corbitt (1998)	Tests "common knowledge" of six geographic regions (Asia, Africa, N. America, S. America, Middle East, and Europe), six subject areas (environment, politics, geography, religion, socioeconomic & culture), and 12 questions about broad global issues	120	Culture-specific measure that gives participants a graphic representation of their global awareness; no published evidence of its use in selection systems or 3C training programs.	Test-retest reliability of .83; no evidence of criterion-related validity established.
Global Leadership Life Inventory (GlobeInvent) [b]	Kets de Vries, Vrignaud, & Florent-Treacy (2004) Sample items in Annex A	12 dimensions of effective leadership: envisioning; empowering; energizing; designing and controlling; rewarding and giving feedback; team-building; outside stakeholder orientation; global mindset; tenacity; emotional intelligence; life balance; and resilience to stress	109	Developed as a 360-degree leadership feedback instrument to help identify areas of leadership behaviour where improvement is needed	Validated on individuals from more than 40 different nationalities; the 12 dimensions have good internal consistency (.76-.91) and factorial validity
Global-Mindedness Scale [b]	Hett (1993) Full scale in Annex A	Five dimensions of global-mindedness (attitudes, beliefs, and behaviours reflecting a sense of connection to the global community and responsibility to its members): *cultural pluralism*; *responsibility*; *efficacy*; *global centrism*; and *interconnectedness*	30	Developed to measure attitudes of students related to their sense of connection to, interest in, and responsibility for, the global community; designed to assess the affective change that might result from individuals who study abroad or have significant contact with people outside one's own culture	Normed on undergraduate sojourners; excellent internal consistency (.90), content, and factorial validity

Individual Global Competency Assessment [b]	Moran & Reisenberger (1994)	12 competencies of global managers: global mindset; works as an equal with people from diverse backgrounds; long-term orientation; facilitates organizational change; creates learning systems; motivates employees to excellence; negotiates conflicts; manages skillfully in foreign-deployment cycle; effectively leads multicultural teams; understands own culture, values and assumptions; accurately perceives culture of others; avoids cultural mistakes and behaves in manner that demonstrates knowledge of and respect for other cultures	n/a	n/a	No psychometric evidence is available
Intercultural Adjustment Potential Scale (ICAPS) [a, b]	Matsumoto et al. (2001) Sample items in Annex A	Four culture general traits that contribute to intercultural effectiveness: *emotion regulation*; *openness; flexibility*; and *creativity/critical thinking*	55	Originally developed for use with Japanese expatriates in the US; Designed to predict the degree of difficulty a person will have in adjusting to a new culture	Psychometric properties of the instrument are reported by LeRoux and Matsumoto (2006); internal consistency for the full scale is somewhat weak (average alpha across three different samples was .60); test-retest reliability (averaged across four samples) is .83; ICAPS is found to be significantly correlated with self and peer ratings of adjustment (r = .68 and .69, respectively); factor structure shows four main factors that only count for 19% of the variance, suggesting there are other aspects of intercultural adjustment that are not captured by the factors

Intercultural Communication Inventory (ICI) [b]	Talico Inc. (1992). Cited in Lee & Templer (2003)	Knowledge and awareness about workforce diversity, culture shock, verbal and nonverbal communication, cultural misunderstandings, customs, traditions, and ethnocentrism	25	Developed as a learning instrument to help improve the quality of communication and relationships among employees of different cultural backgrounds	No psychometric data available.
Intercultural Development Inventory (IDI) [a, b, c]	Hammer, Bennett, & Wiseman (2003)	Level of intercultural competence along a continuum, with five stages of development: denial/defence; reversal; minimization; acceptance/adaptation; and integration	50	Wide range of uses including: individual assessment in coaching, counseling situations; group analysis in teambuilding efforts; needs assessment for training; program evaluation to assess the effectiveness of various interventions	Theoretically grounded in the developmental model of intercultural sensitivity (DMIS; Bennett, 1993); good internal consistency (coefficient alphas from .80-.84); sound factorial and construct validity, and free from social desirability bias; Hammer (2011) found that scores on the IDI were significantly associated with the following study abroad outcomes: knowledge of the host culture, intercultural anxiety, intercultural friendships, and satisfaction with the study abroad experience.
Intercultural Readiness Assessment (IRA)	Dodd (2007) Sample items in Annex A	16 variables thought to be relevant to intercultural effectiveness: *relationship effectiveness motivation*; *trust*; *initiating communication*; *openness*; *comfort with strangers*; *ethnic inclusion*; *communication control*; *self-worth in a new culture*; *flexibility*; *transition ease*; *acculturation motivation*; *adaptability*; *risk and innovation*; *family adaptability*; *family openness*; and *previous experience*	59	Developed for expatriates as a pre-departure assessment tool to predict individuals' potential for intercultural effectiveness and to identify training needs	Coefficient alphas for the 16 variables range from a low of .19 for initiating communication to a high of .92 for ethnic inclusion; the IRA demonstrates criterion-related validity, accounting for 56% of the variability in interpersonal relationship effectiveness and 63% of the variability in cultural adaptation (Dodd, 2007)

Intercultural Readiness Check (IRC)	Brinkmann, (2001); Van der Zee & Brinkmann (2004) Sample items in Annex A	Four intercultural competencies: *intercultural sensitivity*; *intercultural communication; intercultural relationship building;* and *management of uncertainty*.	60	Designed to provide an in-depth intercultural assessment for international assignments and to assist organizations with their intercultural training programs	Coefficient alphas range from .59 to .84[16] (Van Der Zee & Brinkman, 2004); significantly predicts international aspiration
Intercultural Sensitivity Inventory (ICSI) [a, b]	Bhawuk & Brislin (1992) Full scale in Annex A	Intercultural sensitivity through three sub-scores: an understanding of how one can behave in an individualistic or collectivistic culture; open-mindedness regarding cultural differences; and flexibility for behaving differently in an unfamiliar culture	46	Tool for assessing people's sensitivity to the different behaviours appropriate in US and Japanese cultures	Internal consistency of the instrument reported at .84; the ICSI was found to be significantly correlated with an independent measure of cross-cultural effectiveness; i.e., those with high scores on the ICSI were rated by a panel of experts as most able to interact effectively across cultures (Bhawuk & Brislin, 1992)
Intercultural Sensitivity Scale (ISS)	Chen & Starosta (2000) Full scale in Annex A	Five dimensions related to effective intercultural interactions: *engagement*; r*espect for cultural differences*; *self-confidence*; *enjoyment*; and *attentiveness*	24	Developed as a measure of intercultural sensitivity (viewed as the *affective* component of intercultural communication competence) to assist in the evaluation of intercultural training programs	Internal consistency reported at .86 and .88 using two different samples; scores on the ISS significantly predict intercultural effectiveness and intercultural communication attitudes (Chen & Starosta, 2000); four of the five dimensions also found to be associated with intercultural decision quality (Graf & Harland, 2004)
Monroe Multicultural Attitude Scale (MASQUE) [a]	Munroe & Pearson (2006) Full scale in Annex A	Orientation to cultural differences through three domains: knowledge (e.g., understanding that religious beliefs differ); empathy (e.g., caring about racial inequality); and active experience (e.g., actively challenging gender inequities)	18	Tool for assessing multicultural attitudes rand identifying a person's stage of development	The scale reflects the three domains in its factor structure and has adequate reliability overall (alpha of .80), yet the subscales have low internal consistency (from .58 to .70)

[16] Van Der Zee & Brinkman's (2004) study appears to have used an older version of the IRC that includes six dimensions.

Multicultural Personality Questionnaire (MPQ) [a, b, c]	Van der Zee & Van Oudenhoven, (2000); Van der Zee, Zaal, & Piekstra (2003) Sample items in Annex A	Five personality dimensions relevant to multicultural effectiveness: *cultural empathy*; *open-mindedness*; *social initiative*; *emotional stability*; and *flexibility*	78	Developed on Dutch student samples; designed primarily for self-assessment; can also be used for risk assessment as part of the selection process for international assignments	Subscales correlate with Big 5; the MPQ is related to personal adjustment and predicts incremental variance in international orientation and interest in an international career, above and beyond more general measures of personality
Objective Job Quotient [b]	www.globalinterface.com.au	Cross-cultural employee performance	n/a	Computer-assisted tool that provides cross-culturally appropriate 360-degree feedback to evaluate and rank employee performance.	n/a
Overseas Assignment Inventory (OAI) [b]	Tucker (1994); Tucker, Bonial, & Lahti (2004) Sample items in Annex A	14 attributes crucial for successful adaptation to another culture: *expectations*; *open-mindedness; respect for others' beliefs*; *trust in people*; *tolerance*; *personal control*; *flexibility*; *patience*; *social adaptability*; *initiative*; *risk taking*; *sense of humour; interpersonal interest;* and *spousal communication*	54	Developed as of means of identifying personal attitudes and attributes that impact an employee's and spouse's success or challenges across cultures	Initial research on the OAI began in the 1970s with the American Peace Corps, the US Navy, the Canadian International Development Agency, Youth for Understanding and finally, with corporate executives; alpha reliabilities reported to range between .57 to .79; scale development and validity information available in Tucker, Baier, & Montgomery (1983)
Personal Communication Worldview Scale [b]	Dodd & Garmon (1987) Full scale in Annex A	Level of communication control and elements of locus of control	28	Normed on US military personnel	Internal consistency reported to be .81. In terms of validity, individuals scoring higher in fatalism (i.e., external locus of control) were more likely to have ethnocentric attitudes, greater communication apprehension and culture shock, and less interpersonal comfort

Prospector [a, b]	Spreitzer, McCall, & Mahoney (1997) Sample items in Annex A	14 dimensions associated with executive success in an international context including end-state competencies (*sensitive to cultural differences; business knowledge; courage*; *brings out the best in people*; *integrity*; *insightful;*; *committed*; *takes risks*) and learning potential competencies (*seeks feedback*; *uses feedback*; is *culturally adventurous*; *seeks learning opportunities*; *open to criticism*; *flexibility)*	116	Tool for assessing the potential of aspiring international executives in terms of both end-state competencies (i.e., leadership skills) and the ability to learn from experience	Internal consistencies for the 14 dimensions range from a low of .70 to a high of .92; factor structure accounted for 65% of the total variance; both end-state competencies and learning potential competencies found to predict executive potential
Scale of Ethnocultural Empathy (SEE) [b]	Wang et al. (2003) Full scale in Annex A	Four factors of empathy toward people of different racial and ethic backgrounds: *empathic feeling and expression*; *empathic perspective taking*; *empathic awareness;* and *acceptance of cultural differences*	31	Tool for assessing (a) counselors' empathy toward racially and ethnically diverse clients, (b) student and faculty awareness about multiculturalism and to assist them in their attitude change; and (c) workers' attitude change and the evaluation of diversity training outcomes	A confirmatory factor analysis provided evidence for the stability and generalizability of the four-factors; the SEE was correlated with general empathy and attitudes toward people's similarities and differences; internal consistency for the total scale was .91; alphas for the four dimensions ranged between .71 and .90
Sociocultural Adaptation Scale (SCAS) [b]	Ward & Kennedy (1999) Full scale in Annex A	Behavioural-adaptation difficulty and cognitive-adaptation difficulty	20-41 (depending on sample)	Developed as an assessment of intercultural competence in sojourners	Excellent reliability (α = .97); 7-item cognitive-adaptation difficulty (α = .94) and 22-item behavioural-adaptation difficulty (α = .96) also have good reliability.

[a] reviewed by Abbe et al. (2007); [b] reviewed by Korabik et al. (2009); [c] reviewed by Brown & Adams (2011)

4.2 Biodata Instruments

What they are and how they are administered. The term "biodata" is used in the context of personnel selection as an abbreviation that refers to *biographical* or *background data* (Gatewood, Feild, & Barrick, 2008). In general, biodata measures include a "veritable hodgepodge of ingredients" (Laurence & Waters, 1993, p. 41) that capture information about individuals' personal backgrounds and life experiences. The rationale for using this information for assessment purposes is based on the well known axiom that past behaviour is the best predictor of future behaviour (Dean & Russell, 2005; Mael, 1991).

In the academic literature, there is some disagreement as to what a biodata inventory should comprise. While some researchers restrict the focus of biodata items to objective and verifiable information, such as questions that ask about previous work experience, achievements, extracurricular activities, or education (e.g., Becton, Matthews, Hartley, & Whitaker, 2009), others use more subjective items that are designed to serve as proxies for variables such as preferences, attitudes, and personality. For example, Mount, Witt, and Barrick's (2000) biodata measure included questions such as "About how many nonfiction books have you read during the past year?" and "How often have you invented something to serve a needed purpose?" to measure *problem-solving ability*, and questions such as "When your opinions differ from others, what do you do?" and "About how many new friends have you made during the past year?" to measure *interpersonal relations*. These latter types of "soft" items have been criticized, however, because (a) they are less verifiable and more susceptible to faking, and/or (b) they are difficult to distinguish from other types of instruments such as personality inventories and attitude scales (Breaugh, 2009). For the purpose of this report, only biodata information that is objective (i.e., information that is based on recall, but not on the individual's perception of what he/she is recalling) and verifiable (i.e., information that could be corroborated through a third party) is considered relevant.

Biodata is most commonly collected via paper-and-pencil or on-line questionnaires, although it can also be collected face-to-face or over the telephone. The number of questions asked in a biodata inventory can vary widely, with some instruments asking only a handful of questions (e.g., Baxter & Shultz, 2005) and others, well over a hundred questions (e.g., Mount et al., 2000). Moreover, the number of response choices can vary depending on the question being asked. For instance, some questions might have a dichotomous response option (e.g., "Have you ever lived outside of Canada?"), while other questions might have many response options (e.g., "What is the longest amount of time you have spent in a different country?"). Respondents' answers to biodata questions are analyzed in a systematic and quantitative way based on a detailed and standardized scoring system (e.g., anchored rating scales). There are different strategies that can be used for scoring biodata[17], but all methods involve assigning weights to the biodata items based on their ability to discriminate on the criterion variable(s) of interest (Mount et al., 2000). In the context of assessing 3C in military personnel, biodata items would be weighted based on how well they predict cross-cultural performance or effectiveness.

In the context of military selection, most biodata instruments have been developed for use as screening devices for entry into the military, and they are usually designed to predict general

[17] See Piasentin and Kuschnereit (2010) for a review of different weighting methods for scoring biodata.

adjustment in the military, success in a military occupation, or retention (as opposed to cross-cultural effectiveness). For example, over the past four decades, several major biodata inventories have been developed for use by the US Army, Navy, or Air Force (Steinhaus & Waters, 1991), including the Military Applicant Profile (MAP), the Recruit Background Questionnaire (RBQ), the History Opinion Inventory (HOI), the Assessment of Background and Life Experiences (ABLE), the Armed Services Applicant Profile (ASAP), the Educational and Biographical Information Survey (EBIS), and the Armed Services Applicant Profile questionnaire (ASAP)[18]. While these inventories vary in terms of number and types of biodata items, as well as in the extent to which they were ultimately used by the US military, each was developed for the purpose of reducing military attrition or for predicting military performance or adaptability. The items contained in these instruments were intended to capture a wide range of background information on applicants, including their education credentials, school achievement, adjustment to the school environment, school discipline problems, legal offenses, substance abuse, employment history, family socioeconomic status and stability, and parental discipline. The rationale behind obtaining this type of personal information was based on the ability of the data to predict an applicant's likelihood of success and/or retention in the military.

In 1996, a biodata instrument was also developed for potential use by the CAF as a means for predicting who is most likely to succeed in military training (see Ellis & Spinner, 1997). Referred to as the *Canadian Forces Biographical Questionnaire*, the instrument contained questions that reflected the following domains: physical fitness and physical activity; perseverance; leadership; peer relations and teamwork; ethics and integrity; cognitive ability and motivation; maturity, responsibility and self-reliance; and realistic expectations about the CAF. Although Ellis and Spinner validated the biodata inventory against performance in the CAF's Basic Officer Training Course (BOTC), the instrument was never adopted by the CAF.

Examples of biodata relevant for assessing 3C. Although biodata has been used for decades to predict job performance and other work-related outcomes (Caligiuri et al., 2009), a specific biodata instrument for predicting intercultural effectiveness has yet to be developed. Nonetheless, research has shown that having prior international experience facilitates an individual's ability to function and work effectively in other cultures (Spreitzer, McCall, & Mahoney, 1997; Takeuchi, Tesluk, Yun, & Lrpak, 2005). Such prior international experience is also linked to improved interaction adjustment (Yavas & Bodur, 1999) and overall adjustment to the new cultural setting (Parker & McEvoy, 1993). Moreover, within the military literature, prior international experience is described as an important antecedent for developing 3C (Abbe et al, 2007; Ross & Thornson, 2008). Based on these research findings, a biodata instrument that inquires about individuals' past cross-cultural experiences (including personal and work-related travel and deployments), and other types of exposure to different cultures (e.g., number of friends living abroad; number of foreign friends living in home country) might be useful for predicting who is likely to demonstrate 3C.

Reliability and validity. In terms of reliability, researchers have found that biodata inventories demonstrate evidence of both test-retest reliability (Breaugh, 2009) and internal consistency (Shaffer, Saunders, & Owens, 1986). Moreover, biodata inventories are known to be valid predictors of various work outcomes (Catano et al., 2010), including success in the military (Peckan, 1996). There is also evidence that using biodata is a valid technique for predicting

[18] See Peckan (1996) for a more detailed review of these instruments.

cross-cultural effectiveness. For example, several researchers have demonstrated that having prior international experience can facilitate an individual's ability to function and work effectively in a host country (e.g., Spreitzer et al., 1997; Takeuchi et al., 2005). Prior international experience is also reported to be a significant predictor of cross-border leadership effectiveness (defined as "the effectiveness of observable actions that managers take to accomplish their goals in situations characterized by cross-border cultural diversity," p. 826) in military officers (Rockstuhl, Seiler, Ang, Van Dyne, & Annen, 2011). From a recruitment perspective, researchers have found that early (non-work) international experiences influence individuals' desire to seek out employment opportunities that involves global assignments (Tarique, 2006). The general conclusion from various studies demonstrating the correlation between prior international experience and cross-cultural adjustment and effectiveness suggests that individuals who have prior exposure to other cultural environments tend to perform better when working in an unfamiliar country and culture than others without such prior experiences (Caligiuri et al., 2009).

Utility. Biodata has a long history of use in both civilian and military selection systems, dating back to the First World War, when biographical information was used to identify military officer talent (Gatewood et al., 2008; Peckan, 1996). The main advantage of using biodata (either as an alternative to, or in conjunction with, other assessment methods) is that these types of instruments are relatively objective and inexpensive to develop and administer, yet can be effective at predicting relevant criterion variables. Also, provided that the items are historical, objective, and verifiable, biodata instruments tend to be less "fakable" than other types of self-report instruments (Mael, 1991).

Peckan (1996) notes that military environments are particularly well suited for the development and validation of biodata inventories because of the large sample sizes that can be obtained, combined with the systematic and standardized training and performance records that can be used as criterion measures. Also, the CAF already collects a large portion of biodata information in its current employment application form, including educational background, work experience, physical fitness, activities and interests, and leadership/supervisory experience. All of these categories are common in biodata questionnaires and some of these data may correlate with cross-cultural effectiveness. It would also be fairly simple to modify or even replace the existing application form in order to obtain information about individuals' prior international/intercultural experiences.

Challenges to their development and use. One concern about using biodata inventories as assessment tools pertains to their perceived fairness; that is, the extent to which applicants believe that the instrument is assessing factors related to their ability to perform on the job (Gilliland, 1993). Given the current litigative climate in North America, employers also need to concern themselves with whether or not their biodata items are legal and ethical and whether they are likely to result in formal complaints from applicants due to perceptions that the selection tool is invasive, unfair or invalid (Peckan, 1996). A second limitation of biodata instruments is that, due to the multi-faceted and atheoretical nature of the questions, it is still relatively unclear as to *why* some biodata items are good predictors of various criteria (Breaugh, 2009; Dean & Russell, 2005; Lefkowitz, Gebbia, Balsam, & Dunn, 1999). Even if an initial set of biodata items is developed out of *a priori* hypotheses about the antecedents of cross-cultural effectiveness, ultimately, the items that are chosen for the final instrument are based on their empirical relationship to the criterion variable(s) of interest.

4.3 Situational Judgment Tests

What they are and how they are administered. A situational judgment test (SJT) is a type of situational exercise that is designed to measure a candidate's judgment in a work context (Catano et al., 2010). The assessment usually consists of a paper-and-pencil or on-line multiple-choice test that presents the candidate with a series of hypothetical, yet realistic, problems that might be encountered on the job. The situations or problems being presented are often interpersonal scenarios (Lievens & Sackett, 2006) whereby the candidate is required to identify the appropriate response for each scenario (i.e., what one "would do" or "should do" in order to solve the problem or deal with the situation) from a list of plausible alternatives. The number of alternatives can vary but usually entails a minimum of three or four response options. Endorsement of responses can be either in a forced-choice format or in a Likert-type scale format.

As the name of the test implies, SJTs are designed to measure *judgment* or decision making in various types of work settings (McDaniel, Morgeson, Finnegan, Campion, & Braverman, 2001). For example, in the context of assessing 3C in military personnel, the SJT might be designed to assess problem-solving, leadership, and/or communication skills through a series of cross-cultural scenarios or problems likely to arise in theatre, and each scenario or problem would have a number of response options to choose from that reflect varying degrees of cross-cultural effectiveness. The specific scenarios used in an SJT are almost always multidimensional in nature such that solving or coming up with an adequate solution to the problem involves several skills and abilities (Chan & Schmitt, 1997).

SJT scenarios are typically developed through the input of SMEs, usually job incumbents and supervisors who are knowledgeable about a job and how it is performed (e.g., military personnel and commanding officers who have previous deployment experience working in diverse cross-cultural settings). The response options for the test are generated by having the SMEs identify critical incidents (i.e., examples of effective and ineffective work behaviours that are related to superior or inferior work performance). SJTs are scored by comparing candidates' responses to the opinions of a second group of SMEs regarding the appropriateness of each response option in relation to the competency or competencies being measured.

Examples of situational judgment tests relevant for assessing 3C. From the literature review, two SJTs were identified that measure, or purport to measure, factors related to 3C: (a) The *Intercultural Adaptation Assessment* (IAA) instrument and (b) the *Cross-Cultural Social Intelligence* (CCSI) test.

(a) The IAA was developed by CIL as a tool to measure the level of intercultural effectiveness and suitability of candidates being considered for international assignments (Vulpe et al., 2001). The instrument is based on the profile of the IEP described in Section 2.1.2 and is designed to measure the following competencies: *cultural adaptation*; *knowledge of host country*; *sensitivity and respect*; *network and relationship-building*; *intercultural communication*; *intercultural leadership*; and *personal and professional commitment*. The IAA is available on-line and comprises 20 multiple-choice questions. Each question presents the candidate with a realistic intercultural problem that might be encountered during an international assignment, along with a number of response options. The candidate is asked to pick the response option that best describes what he or she would do to deal with the situation.

Evidence for the validity of the IAA has been established (Hay Group Limited, 2008). Specifically, the results of concurrent and convergent validity tests showed that individuals who were rated by others as being strong in intercultural effectiveness performed better on the IAA than those who were rated as less interculturally effective, and results on the IAA were significantly correlated with the results on another tool designed to measure the same construct. Two parallel versions of the IAA have been developed for use in the context of selection and staffing of international personnel (e.g., diplomatic and government personnel, international development workers, foreign students, and the military), although the test can also be used as a tool for learning and development.

(b) The CCSI is a measure of cross-cultural social intelligence developed by Ascalon, Schleicher, and Born (2008). According to the authors, cross-cultural social intelligence includes the ability to (a) recognize and understand (non)verbal cues of persons from a variety of cultures; (b) make accurate social inferences in a variety of cultural encounters; and (c) accomplish relevant social objectives across cultural negotiations and interactions through one's acceptance and understanding of other cultures. The CCCI is intended to assess two dimensions: *ethnocentrism* (i.e., the extent to which a person is judgmental of other cultures and unwilling or unable to implement culturally relevant solutions) and *empathy* (i.e., the extent to which a person can relate to others and regulates his/her behaviour based on another person's behaviour). Each scenario ($N = 14$) includes four response options that reflect various approaches to dealing with the problem: empathetic-ethnocentric, empathetic-nonethnocentric (best strategy), nonempathetic-ethnocentric, and nonempathetic-nonethnocentric. Rather than selecting one option as their answer, respondents are asked to evaluate each response option in terms of the likelihood that they would perform each alternative (1 = *not at all likely* to 5 = *extremely likely*). Annex B includes a sample scenario from the CCSI.

The CCSI was designed such that five different cultures are represented in the scenarios: American, Chinese, Dutch, German, and Spanish. Specifically, the scenarios were carefully designed to represent important, relevant, and challenging interactions involving two nationalities (e.g., Chinese–German; German–Spanish; Spanish–American). Reliability (internal consistency) of the CCSI has been reported at .68; however, criterion-related validity not has not been established (Ascalon et al., 2008).

Reliability and validity. Overall, SJTs are reported to be good predictors of job performance, including both task and contextual performance (Catano et al., 2010; Chan & Schmitt, 1997). In a meta-analysis by McDaniel et al. (2001) the validity coefficient was reported to be .34. In addition, reliability coefficients for these types of instruments can range from .55 (not using a construct-based approach; Chan & Schmitt, 1997) to .91 (using a construct-based approach; Born, Van der Maessen, & Van der Zee, 2001). Interestingly, the reliability and validity of the test can vary depending on whether the candidate is asked what he or she "should do" versus "would do" in a given situation. For example, Ployhart and Erhart (2003) found that "should do" instructions produced outcomes with less variability but also with lower reliabilities and criterion-related validities than "would do" instructions.

Utility. SJTs are used primarily in personnel selection, although they can also be used as tools for training and development. Once developed, SJTs are fairly easy to administer and score. For example, in the context of pre-deployment cross-cultural training for CAF members, a SJT could

be administered to large groups of military personnel as a diagnostic tool in order to gauge their level of 3C and to identify specific training needs. The test can be administered on-line and can even make use of video clips showing realistic scenarios of typical cross-cultural interactions that might occur while on tour. Research shows that video-based SJTs, which are more interactive, behavioural, and orally-aurally oriented, have greater face validity and predictive validity than paper-and-pencil SJTs (Chan & Schmitt, 1997; Lievens & Sackett, 2006). SJTs are also advantageous as an assessment tool because they are viewed as being job-relevant; that is, they present realistic scenarios that would likely be faced on the job. This realism encourages "buy-in" from candidates and helps create a positive perception of the assessment process (Assessment & Development Consultants, Ltd., 2008).

Challenges to their development and use. In spite of their advantages, the development of a SJT is complex and expensive, and also is dependent upon having access to SMEs who are able to generate realistic work situations and potential responses to these situations that reflect varying degrees of 3C (Hay Group Limited, 2008). Also, some critics argue that SJTs are nothing more than tests of cognitive ability (Weekley & Jones, 1997), although the incremental validity of SJTs above and beyond tests of cognitive ability has been empirically demonstrated (Heneman & Judge, 2006).

4.4 Behavioural-Based Interviews

What they are and how they are administered. A behavioural-based interview (BBI) is a structured process in which the applicant is asked to describe what he or she did in given situations in the past. Often referred to as a Behavioural Event Interview (BEI) or Behaviour Description Interview (BDI), BBIs are based on the premise that past behaviour is the best predictor of future behaviour (Catano et al., 2010). The goal of a BBI is to predict how an individual is likely to perform based on the interviewee's descriptions of his or her behaviour in similar situations in a past.

A typical BBI begins with an opening statement that introduces the problem, followed by an open-ended question asking the candidate to describe a time or situation where he or she had to solve the problem. For example, to assess *relationship building skills*, the interviewer might ask candidates to describe a time when they had to build rapport quickly with someone from a different culture or background. Alternatively, to assess *communication skills*, the interviewer might ask candidates to describe a situation in which they were able to effectively "read" another person and guide their actions by understanding the person's individual needs or values. The interviewer would have a series of probes or prompts that would be used to guide the interviewee's descriptions of the situation or events, or to elicit elaborations of answers. The interviewer would also have a scoring guide for rating the interviewee's responses. For example, interviewees' level of proficiency in the competency being assessed might be rated on a 5-point scale (e.g., 1 = *awareness*; 2 = *basic*; 3 = *intermediate*; 4 = *advanced*; 5 = *expert*) based on how well they applied the competency in the past, the difficulty or complexity of the situation where the competency was demonstrated, and how much guidance they required in order to demonstrate the competency.

Example of a behavioural-based interview relevant for assessing 3C. To date, the only commercially available BBI that has been specifically designed to measure 3C is the *BBI for*

Intercultural Competence developed by CIL[19]. Modeled on the profile of the IEP (Vulpe et al., 2001), this BBI is designed to assess intercultural competence through a structured interview process aimed at assessing candidates for international assignments. The instrument is currently used for the assessment and selection of staff for international assignments in government departments as well as private sector organizations. The specific competencies assessed in the BBI include the following: *cultural adaptation*; *network and relationship-building; personal and professional commitment; sensitivity and respect; intercultural team leadership; intercultural communication;* and *knowledge of host country - commitment to organizational learning*. During the interview, candidates are asked to discuss events or situations in which they have demonstrated these specific competencies. The experiences they draw from may be personal and/or work-related. The rating scales used for scoring the candidate on each competency are broad and allow for a wide range of responses, which are used as indicators of the candidates' ability to adapt their skills and knowledge in a different cultural context.

The BBI is administered by a qualified assessor from CIL. CIL also provides a three-day training program for organizations wishing to administer the BBI on their own. The course is designed for human resource managers, advisors, and recruiters who intend to use the BBI to help select candidates for international assignments, and is intended to teach individuals how to appropriately conduct the interview and assess a candidate's competence in the various areas of intercultural effectiveness. According to CIL, the BBI has undergone an extensive validity testing process, although empirical data is not publicly available.

Reliability and validity. As selection instruments, BBIs demonstrate high reliability and criterion-related validity, with estimated validities ranging from .32 (Pulakos & Schmitt, 1995) to .54 (Janz, 1982). Research has shown that the predictive validity of BBIs is much higher than that of traditional non-structured or situational interviews, and that the use of scoring guides improves the reliability and validity of BBIs (Catano et al., 2010). Because they are more personal than traditional selection assessments (e.g., written tests), but less subjective than unstructured interviews, BBIs also tend to be perceived favourably by interviewees (i.e., they have higher face validity) because they are viewed as more job-related than other types of methods (Heneman & Judge, 2006).

Utility. BBIs are used primarily in organizational selection systems as a means of assessing competencies identified as important for a job (often, between four and six different competencies are assessed). BBIs are a popular methodology for two key reasons. First, they provide a standardized method for evaluating job requirements (e.g., oral communication and interpersonal skills) that are not easily measured with other procedures. Second, BBIs are less susceptible to interviewer-bias and socially desirable responding. For instance, unlike unstructured interviews, BBIs ask each candidate the same questions in the same order and use a common rating scale to evaluate candidates, thus making it more difficult for the interviewer to bring in his or her own biases when providing an assessment of the candidate. With BBIs, it is also more difficult for the interviewee to give responses that are untrue, as the probes are designed to delve deeply into the interviewee's description of the situation or event, thereby uncovering inconsistencies, errors of omission, or untruthfulness.

[19] Information on the BBI is available on CIL's website: http://www.international.gc.ca.

In terms of their specific utility for the CAF, BBIs might be especially useful in selecting individuals for specific deployments where demonstrating 3C is critical to performance and where the candidates have previous deployment experiences from which to draw during the interview. For individuals who do not have any cross-cultural experience, or even experience interacting with people from diverse cultures, responding to the questions in a BBI could be challenging (Heneman & Judge, 2006). In these cases, a situational interview (i.e., a structured interview that asks candidates to respond to hypothetical scenarios where 3C is required) may be preferable. That is, instead of asking candidates "what *did* you do when…?", a situational interview would ask candidates "what *would* you do if…?"

Challenges to their development and use. The major drawback in using BBIs to assess factors related to 3C (e.g., oral communication and interpersonal skills) is that they are time-consuming and expensive to develop and administer. Further, there are not many options for purchasing an off-the-shelf BBI that would be valid and useful for assessing 3C in military personnel. Development of a psychometrically sound BBI is a multi-stage endeavor involving the use of many SMEs (i.e., experienced, high-performing employees or supervisors who possess knowledge of the job at the level of the position to be filled) as well as experts in testing and psychometrics. For example, a typical BBI might involve the following steps: (1) conducting a job analysis (i.e., identifying the requirements of the job and the competencies necessary to perform them); (2) determining the competencies to be evaluated; (3) developing the interview questions and probes; (4) developing rating scales used for evaluating candidates; (5) pilot-testing the instrument; (6) establishing reliability and validity evidence; and (7) developing an administrator's guide or manual to ensure standardization of the instrument (United States Office of Personnel Management, 2008). Also, BBIs are usually administered on a one-on-one basis, making them impractical for the purpose of assessing large numbers of CAF personnel.

4.5 Behavioural Observations

What they are and how they are administered. Behavioural assessments involve measuring what people do or how they behave. As such, the construct of interest is an actual behaviour or skill that can be observed, as opposed to one that reflects intentions, knowledge, attitudes, or desires. These latter types of constructs are viewed as incomplete predictors of cross-cultural effectiveness because they do not necessarily guarantee that an individual *will* enact the appropriate behaviours, even if this individual possesses certain predispositions and knowledge that *should* enable them to enact these behaviours (Ruben, 1976).

In a behavioural assessment, the individual is observed in a situation that closely reflects that for which he or she is being trained or selected. For instance, to assess an individual's ability to effectively interact and negotiate with people of diverse cultures, a cross-cultural negotiation could be "staged" whereby the individual being assessed is required to interact with a culturally different person. The negotiation would be observed by one or more observers who are trained to systematically collect behavioural data along one or more predetermined dimensions and then analyze these data to determine the individual's level of competence on the variable(s) being assessed, such as intercultural communication, conflict resolution, empathy, influence and persuasion, patience, and so on.

Example of a behavioural assessment relevant for assessing 3C. To date, behavioural approaches to assessing 3C have not been widely adopted (Abbe et al., 2007). One behavioural

measure relevant to 3C is the *Behavioral Assessment Scale for Intercultural Communication Effectiveness* (BASIC; Koester & Olebe, 1988; see also Olebe & Koester, 1989). This scale was developed as a measure of intercultural communication effectiveness and is theoretically grounded in Ruben's (1976) pioneering work on the behavioural assessment of communication competence. The instrument includes eight dimensions on which to evaluate an individual's display of intercultural communication effectiveness: *display of respect* (ability to express respect and positive regard for another person); *interaction posture* (ability to respond to others in a descriptive, non-evaluating, and nonjudgmental way); *orientation to knowledge* (ability to recognize the extent to which knowledge is individual in nature); *empathy* (capacity to "put oneself in another's shoes"); *task role behaviours* (behaviours involving the initiation of ideas related to group problem-solving activities); *relational role behaviours* (behaviours associated with harmonizing and mediation in a group); *interaction management* (skill in governing contributions to an interactive situation to meet the needs and desires of participants); and *tolerance of ambiguity* (ability to react to new and ambiguous situations with little visible discomfort).

Each of the components in the BASIC are operationally defined in terms of specific and observable behaviours. The dimensions are rated on a 5-point scale, and operational descriptions are used for each anchor point on the scale to facilitate observers' differentiation of the degree to which a particular behavioural pattern is displayed. For example, behavioural indicators of *display of respect* include the use of appropriate eye contact, body language, voice tone and pitch, and general displays of interest (Ruben, 1976). When assessing this dimension, observers would be instructed to select a rating score of 1 (clear lack of respect and negative regard for others) if they observe the individual using a condescending tone, lack of eye contact, general lack of interest, and so on. On the other hand, they would be instructed to select a rating score of 5 (deep respect for the worth of others) if they observe the individual using eye contact, appropriate tones, showing general interest, and so on.

The BASIC was designed to be used easily by a wide variety of individuals in diverse settings. Specifically, Koester and Olebe (1988) devised the rating scales so that simple, clear language was used to allow for unambiguous interpretation of the dimensions by non-expert peers. Psychometric testing of the instrument revealed the following results: the overall internal consistency of the instrument (Cronbach's alpha) was .84 for the combined dimensions; the factor structure of the scale showed that all eight items load on one underlying dimension (which the authors referred to as intercultural communication effectiveness); and scores on the BASIC measure were significantly correlated with another global measure of communication effectiveness.

Reliability and validity. According to Ruben (1976), behavioural assessments provide a useful and relatively efficient technique for generating reliable assessments of an individual's communication competence. Observation methods provide a thorough and richness of information that often cannot be obtained through other methods, and also offer the most direct form of gathering information because they do not rely on intermediary information sources (e.g., supervisors) or reliance on self-report data (Heneman & Judge, 2006). In many respects, they resemble work sample tests (testing procedures that require candidates to produce behaviours related to job performance under controlled conditions that approximate those that would be found on the actual job; Catano et al., 2010), and research has consistently shown that work

sample tests predict job performance in a reliable and valid manner (Catano et al., 2010), with mean validity coefficients estimated at .54 (Schmidt & Hunter, 1998).

Utility. Behavioural observation techniques are advantageous for assessing behaviour-based competencies or skills (as opposed to cognitively-oriented competencies) that involve interactions between two or more people. They can be useful for assessing individuals' current skill level (e.g., for pre-post training assessment), as well as for predicting future effectiveness (e.g., selecting the most competent person for a position that will involve complex cross-cultural interactions; Koester & Olebe, 1988). According to Ruben (1989), gathering behavioural assessment data is most useful in the following situations/conditions: (a) when individuals are being selected or trained for positions or situations where the consequences of failure are high and mistakes may be irreversible; (b) when the time available for adaptation or adjustment to the new cultural environment is not extensive; and (c) when the perceptions of others are essential to achieving certain goals or objectives (as in negotiation and other intercultural communication situations).

Challenges to their development and use. Two main limitations of behavioural observations pertain to interrater reliability (i.e., the extent to which observations of one rater correspond with observations of another) and cultural bias (Ruben, 1989). Depending on *who* is doing the observing, the extent to which an individual is determined to be competent in the variable(s) being assessed may differ. Careful attention, therefore, must be paid to ensure that raters are using a common frame of reference in their evaluations and, where feasible, the use of multiple raters should be employed. A second limitation pertains to the inherent cultural bias built into behavioural descriptions of what constitutes effective and ineffective behaviours. For instance, even though communication effectiveness is intended to be a culture-general construct that is universal across cultures, its expression and interpretation may vary from one culture to another (Ruben, 1976). For example, some cultures (e.g., Korean) place value on "neutrality of expression" when approaching strangers whereas other cultures (e.g., American) are accustomed to smiling politely at strangers (Mackenzie & Wallace, 2011). These contrasting communicative practices of politeness and respect can be misinterpreted by each culture as disrespectful without understanding of each other's values or, at the very least, that other cultures have different value systems and ways of communicating respect.

4.6 Assessment Centres

What they are and how they are administered. An assessment centre refers to a standardized assessment procedure that involves the use of multiple measurement techniques, as well as multiple assessors, to evaluate candidates. This method is mostly used for internal selection (e.g., promotion) and is usually reserved for higher-level jobs, but it can also be used for training purposes. For example, individual needs identified through an assessment centre can be used to inform the development of training curriculum (Catano et al., 2010). The use of assessment centres is based on the premise that most high-level jobs involve complex behaviours that are associated with many KSAOs and that to assess these KSAOs effectively, it is necessary to use multiple methods (Heneman & Judge, 2006).

Assessment centre procedures usually involve group activities, or a combination of individual and group activities, whereby the activities take place over a period of days (usually two or three days; Heneman & Judge, 2006), and whereby candidates are evaluated by a panel of trained

assessors. Depending on the purpose of the assessment, the specific competencies being assessed may vary; however, assessment centres typically include tests or procedures designed to assess the following competencies: communication (written and oral), leadership, human relations (e.g., teamwork, flexibility), planning, problem-solving, and decision making (Heneman & Judge, 2006). The types of activities common in assessment centres include simulation exercises (e.g., in-basket tasks designed to assess organizational and problem-solving skills), work sample tests, role-plays (e.g., a simulated situation where the candidate is required to interact with a confederate or someone who plays the role of an angry customer or difficult employee), case studies (e.g., cases of actual business situations asking the candidate to describe the nature of the problem, likely causes, and recommended solutions), and leaderless group discussions (e.g., a group activity whereby group members are given a problem to work on in order to assess candidates' leadership, organizational, and communication skills). Other devices, such as those discussed earlier in this report (e.g., interviews, biodata instruments, and personality inventories), are also commonly used (Heneman & Judge, 2006). Following the completion of all the assessment centre components, the team of assessors reviews each individual's performance on the pre-determined variables, and their ratings are combined into an overall score, which can be used to rank the applicants.

Example of an assessment centre relevant to assessing 3C. The *Intercultural Assessment Centre* (IAC) was developed by Kühlmann and Stahl (1996, 1998; cited in Stahl, 2001) as a multi-method, multi-rater approach for assessing the intercultural competence of mangers being considered for international assignments. The IAC includes a variety of individual and group exercises that occur over the course of approximately two days. Specific aspects of intercultural competence being assessed in the IAC include the following seven factors: *tolerance for ambiguity* (the ability to function effectively in a foreign environment where the expatriate experiences ambiguity, complexity, and uncertainty); *goal orientation* (the ability and desire to achieve one's task goals despite barriers, opposition, or discouragement); *sociability* (a willingness to establish and maintain meaningful social relationships, combined with a genuine interest in other people); *empathy* (the capacity to accurately sense other peoples' thoughts, feelings, and motives, and to respond to them appropriately); *nonjudgmentalness* (the willingness to critically re-examine one's own values and beliefs and to avoid judging other people against one's own norms); *behavioural flexibility* (the capacity to vary one's behaviour according to the immediate requirements of the situation and the demands of the foreign culture); and *meta-communication* (the capacity to clarify culturally different perceptions and to sensibly "guide" the intercultural communication process).

Different exercises in the IAC are designed to assess different components of intercultural competence. While some activities (e.g., a self-report intercultural competence questionnaire, group discussion, and international negotiating simulation) are intended to assess all seven competencies, other activities (e.g., cross-cultural role play, impression management exercise, and attributional exercise) are only intended to assess a few of the competencies.

The exercises employed in the IAC are designed to provide diagnostic information about the particular strengths and weaknesses of a candidate with regards to an international assignment, but can also be used as a training tool. For instance, candidates are provided with detailed feedback regarding their particular strengths and weaknesses for an international assignment, as well as suggestions for further training.

According to Stahl (2001), the IAC is commonly used by HR professionals of German multinational corporations to evaluate the capacity of young managers for international assignments, and has been successfully used as a tool for training and development. As an example, Stahl presents a case study whereby a German multinational corporation utilized the IAC for the purpose of identifying gaps in managers being considered for international assignments, and then customizing training and development tools to meet the specific training needs of participants. Using a sample of 22 managers, a longitudinal design was used to evaluate candidates' learning progress, and data collected before and after the training on candidates' level of intercultural competence showed that the managers' level of intercultural competence significantly improved on most of the seven dimensions after the training. Evidence for the effectiveness of the IAC has also been demonstrated through the use of peer ratings, whereby candidates who completed the assessment centre were asked to rank all other participants according to their supposed adjustment and productivity in an international work assignment, and these peer ratings were found to be significantly correlated with the IAC score of intercultural competence. No evidence for the criterion-related validity of the IAC has been reported.

Reliability and validity. Assessment centres have been shown to be useful in predicting job performance, with mean validity coefficients estimated to be .37 (Schmidt & Hunter, 1998). Their validity is higher when multiple predictors are used and when the assessors are trained professionals (e.g., psychologists) as opposed to managers. Assessment centres are also viewed as face valid by those being assessed (Heneman & Judge, 2006).

Utility. Assessment centres are often used internally by organizations who seek to "grow" their own leaders and to identify and develop international management talent (Stahl, 2001). For instance, the Public Service Commission of Canada uses an assessment centre to select candidates for senior managerial positions in the federal civil service and as part of its executive development and education program. One of the primary advantages of assessment centres pertains to the rigour and comprehensiveness with which competencies can be examined. Given the multidimensional nature of 3C, it may not be realistic or feasible to capture all aspects of the construct with one type of assessment method. An assessment centre would enable multiple methodologies to be used for assessing different components of 3C.

Challenges to their development and use. Not surprisingly, assessment centres are complex and expensive both in terms of their development and their administration. Often the process can take several days to administer and is very expensive due to the time and number of personnel involved and the requirements to train the assessors (Heneman & Judge, 2006). As such, their cost often prohibits their use by many organizations.

4.7 Summary of Assessment Methods

The goal of this section of the report was to provide a summary of different methods and examples of off-the-shelf instruments that have been developed for the purpose of measuring 3C and related constructs. Six different assessment methodologies were described, along with a variety of instruments that are currently available for research purposes and/or commercial interests. Each assessment method presents a unique set of advantages and limitations, and some methods demonstrate greater utility than others, depending on the intended use. For example, direct assessment methods (such as interviews and behavioural observations) allow for a more complete and potentially objective assessment of 3C, yet they are also more time-consuming and

expensive to develop and administer than indirect methods (such as self-report personality questionnaires and biodata inventories).

How does one go about choosing among the various assessment methods and tools? Deciding which assessment method is most appropriate requires consideration of a number of factors including (a) the nature of variable(s) being assessed (i.e., the specific aspect or aspects of 3C); (b) the availability of a construct-relevant measure that is suitable for a military population, or (c) if no measure is available, the cost associated with developing a tool, (d) the cost of administering the tool, and (d) the ability of the tool to predict relevant criteria (e.g., cross-cultural communication effectiveness, intercultural adjustment). Table 13 presents a comparative summary of the suggested applications and relative strengths and limitations of the various assessment methodologies.

Table 13: Comparison of assessment methodologies.

Methodology	Ideal for Measuring	Potential Use	Cost	Limitations
Self-report Questionnaires/ Inventories	Attitudes, motives, values, personality, and other dispositions	Initial screening; pre- and post-training assessment; transfer of training[20]	Low	Self-awareness of 3C; socially desirable responding
Biodata	Previous cross-cultural experiences	Initial screening (i.e., suitability for entry into CAF)	Low	Face validity; atheoretical nature
Situational Judgment Tests	Culture-specific/ culture-general knowledge; attitudes; affect	Selection; post-training assessment; transfer of training	Development: moderate; administration: low	Time consuming to develop scenarios; reliance on SMEs
Behavioural-Based Interviews	Cognitive- and behaviour-based skills	Internal selection for higher-level positions	Moderate	Limited to individuals with relevant prior experience; impractical for assessing large numbers of candidates
Behavioural Observations	Behaviour-based skills	Internal selection; transfer of training	Moderate	Interrater reliability
Assessment Centres	Potentially all aspects of 3C	Promotion and placement for high-level positions; identification of training needs	High	Development and administration costs; training of assessors

[20] Transfer of training refers to the extent to which knowledge and skills learned in training are actually applied on the job and maintained over time (Saks & Haccoun, 2004).

5 Implications for Assessment of CAF Personnel

How can the CAF acquire and maintain the cross-cultural capability needed to operate successfully in the *Public* domain of the JIMP environment? This can be accomplished through various means, including selection and assignment, training and development, or some combination of these approaches. Each approach requires some sort of assessment of individuals' capability to work effectively in a culturally diverse environment, although the purpose of the assessment can take on many different forms (e.g., determining skill deficiencies, measuring progress as a result of cultural learning and training interventions, identifying individuals with high intercultural performance potential). Knowing *what* psychological characteristics and behaviours to assess, and *when* and *how* they should be assessed, requires careful consideration of the specific KSAOs that are relatively stable versus dynamic, as well as those most likely to help military personnel "hit the ground running" versus those that can be acquired through on-the-job training (Leiba-O'Sullivan, 1999).

The goal of this section is to discuss some practical implications of the available research on 3C in terms of how the CAF can make effective use of both selection *and* training to acquire a cross-culturally competent workforce.

5.1 Selecting for Cross-Cultural Competence

As discussed in Section 3 of this report, some of the KSAOs associated with 3C may be relatively stable across the lifespan. Personality traits/dispositions, motives, attitudes, and even values – whether they are influenced by one's genetic make-up, acquired through early life experiences, or both – are generally considered to be resistant to change. If this is the case, then education and training programs may do little to "improve" individuals' traits and affective attributes that are deemed important for operational success. In fact, Saks and Haccoun (2004) state that, of the various types of competencies that can be the focus of training (including knowledge, intellectual and motor skills, cognitive strategies, and attitudes), attitudes are considered the most difficult domain to influence through training. Furthermore, Spencer et al. (1994) note that the process of changing attitudes, motives, and traits can be lengthy, difficult, and expensive. They argue that, from a cost-effectiveness standpoint, it is more advantageous to "hire for core motivation and trait characteristics, and develop knowledge and skills" (p. 8).

It has been suggested in the literature that stable competencies are essential for the acquisition of dynamic ones (e.g., Leiba-O'Sullivan, 1999). Meta-analytic research examining the influence of personality on training performance supports this proposition (Barrick & Mount, 1991; Salgado, 1997). Specifically, three of the Big Five facets of personality (i.e., *conscientiousness, openness to experience*, and *extraversion*) have been found to predict training proficiency across various occupations; that is, individuals who are higher on these personality dimensions are more likely to receive higher training performance ratings and/or have higher training productivity data than individuals lower on these traits. There is also evidence that affective attributes, such as *motivation to learn,* improve the acquisition and retention of learned skills (Colquitt, LePine, & Noe, 2000). Given the above findings, the CAF may want to ensure that military personnel who participate in cross-cultural training programs possess the requisite personal characteristics that will improve their likelihood of success in training.

Of the competencies identified in the IMPPaCTS framework, those that have been identified in this report as relatively stable and which, therefore, should be considered from a selection perspective, include cognitive abilities (e.g., *cognitive complexity*), traits/dispositions (e.g., the *Big Five*, *tolerance for ambiguity, patience*), and affective attributes (e.g., *non-ethnocentrism, low need for cognitive closure, cultural empathy*). Although further research is required in order to verify the extent to which these factors (a) are essential to CAF operational effectiveness, and (b) can (or cannot) be trained or developed, the available research at this time suggests that these factors are important components of 3C and that they are relatively stable across the lifespan.

There are two considerations to be made with regard to using a selection model to assess the relatively stable characteristics associated with 3C (i.e., cognitive abilities, traits, and affect). First, are there certain competencies associated with 3C that *all* military personnel should possess to some extent, regardless of their rank and occupation? If so, then assessment methods designed to measure these competencies should be incorporated into the CAF's screening and selection system (i.e., the process used to determine eligibility and suitability for the CAF). Alternatively, is 3C (or certain aspects of 3C) required only for certain positions or assignments within the CAF? If so, then assessment of 3C may be considered from an internal selection or assignment perspective. Second, there are a number of practical and legal implications associated with using 3C assessment as a basis for selection decisions.

5.1.1 External versus Internal Selection

Currently, recruitment into the CAF involves a multiple-hurdle selection process designed to screen applicants in terms of their eligibility and overall suitability for the CAF[21]. The process includes an enhanced reliability check (e.g., criminal records check), aptitude testing (i.e., assessment of verbal skills, spatial ability, and problem-solving ability via the *Canadian Forces Aptitude Test*[22]), a medical examination, and a structured interview (i.e., a series of questions designed to measure conscientiousness, emotional stability, and person-environment fit). Some of the factors discussed earlier as being associated with 3C (e.g., problem-solving, conscientiousness, emotional stability) are already assessed to some extent during the initial screening and selection process. The CAF is also currently pilot-testing a standardized personality test – the *Trait Self Descriptive Personality Inventory* (TSD-PI) – for potential use as an additional screening tool. The TSD-PI is a measure of the Big Five personality traits and is intended to be used as part of the CAF's initial screening process in order to identify individuals who might not be psychologically fit for the military (their scores will be compared against norms established for the CAF, and individuals with extreme scores on one or more dimensions will be "flagged" for follow-up; these individuals would then be required to complete an interview with a qualified CAF recruiter in order to obtain a more in-depth assessment of the individual's personality profile). As noted earlier, the Big Five personality traits have been identified as a potentially important component of 3C. As such, the TSD-PI may offer utility for improving the

[21] Note that enrolment into specific occupations may require applicants to complete additional selection tools once they are determined suitable for the CAF.

[22] The Canadian Forces Aptitude Test is a multiple-choice test comprising 60 items that measure three facets of general mental ability: verbal skills (15 items), spatial ability (15 items) and problem-solving (30 items). The test is timed and applicants must meet a minimum cut-off requirement to proceed in the selection process.

likelihood that incoming military personal have (at least some of) the personal attributes required to work effectively in an intercultural or JIMP environment.

There may well be other abilities, personal characteristics, or affective attributes associated with 3C that are essential at all levels and positions within the CAF in order to achieve operational readiness. These competencies are referred to as *core competencies* in that they apply to every member of the organization regardless of position, function, or scope of responsibility within the organization, and they also serve to support the organization's overall mission, vision, and values (Catano et al., 2010). Given the CAF's current focus on the Comprehensive Approach to military operations and increasing emphasis on becoming a "JIMP-capable" organization, identification of core competencies associated with 3C is important and should be the focus of future research initiatives. Once identified, these core competencies should be factored into the CAF's recruitment and selection system. Assessment of 3C for screening/selection purposes would be most cost-effective by using methodologies such as self-report questionnaires, biodata, or even SJTs, which are among the most economical instruments to administer with large applicant pools.

Unlike core competencies, some of the competencies associated with 3C may be differentially required by military personnel depending on their occupation, position, or rank, as well as the specific mission to which they are assigned. For example, peacekeeping, humanitarian, reconstruction, or stabilization missions require a different set of competencies than traditional combat missions due to the wide range of roles and tasks that encompass such missions, as well as the ambiguity, uncertainty, and risk that tend to go along with these missions (Minister of Public Works and Government Services Canada, 1997). Similarly, leadership or command positions within the military require a different set of competencies than junior appointments due to the complexity and increased responsibility associated with these roles and because personnel in leadership or command positions may be required to interact more frequently with a vast range of "players" in the *Public* domain of the JIMP environment.

Competencies required for specific occupations or positions are referred to as *functional competencies* (i.e., those belonging to a common group or occupational family within the organization) and *job-specific competencies* (i.e., those that apply only to specific positions within the organization), respectively (Catano et al., 2010). From a selection perspective, assessment of the various functional and job-specific competencies associated with 3C is best suited for internal selection decisions. Assessments of 3C might be used in this context to help identify whether a CAF member is qualified to be promoted into a certain position where intercultural effectiveness is essential; such assessments could also be used to compare the skill sets of two or more candidates for a commander position, or to decide which members of a specific unit are suitable to participate in an upcoming mission.

Internal selection in the intercultural context differs from traditional personnel selection in that it starts where the other system stops; that is, only those individuals who have demonstrated competence in the task and duties of the job are considered for assignment in a foreign or intercultural environment (Caligiuri et al., 2009). As Caligiuri et al. note, not all individuals who demonstrate high competence in a domestic context will be successful in an international or intercultural context, even when doing the same job. In other words, technical skills are necessary, but not sufficient, for working in the *Public* domain of the JIMP environment. This is because cross-cultural competencies, such as understanding and respecting cultural differences, being open and unprejudiced towards outgroup members, and comfort with not being fluent in the

host language – which are only marginally related to work performance in a domestic work context – may play a much larger role in determining work success in an intercultural context. Given that internal selection often focuses on job *context* as opposed to job *content*, assessment of 3C for internal selection purposes should be limited to individuals who are capable of performing the tasks and duties of a job from a technical perspective. For example, individuals who may be suitable for a specific assignment based on their competence in technical criteria or "hard skills" should be assessed and compared against non-technical criteria or "soft skills" that may impact their ability to perform in an intercultural context.

As noted in Section 4, a variety of assessment methods can be utilized effectively for internal selection (when the number of candidates to be assessed is small), including interviews (i.e., BBIs), behavioural observations, and assessment centres. Thus, additional research is required in order to identify the types of cross-cultural competencies that are relevant for working in specific occupations, positions, or assignments in the military. It may be the case that certain types of advanced competencies, such as negotiation skills, conflict management skills, or the ability to influence and persuade others, are only relevant for certain higher ranking personnel (e.g., individuals in leadership positions). And although these skills can presumably be developed through appropriate training, military personnel competing for a position may still differ in their ability to negotiate, influence, persuade, and resolve intercultural conflicts, even after being exposed to the same training. As such, assessment of these types of skills may help the CAF identify and select the most qualified candidate for the position. Moreover, by using tools and methods described in Section 4, these assessments can be made in a systematic manner that is objective, impartial, and fair.

5.1.2 Practical and Legal Implications of Selection

The underlying rationale for designing and implementing standardized assessment and selection practices is to improve an organization's ability to obtain and retain the best possible talent. From a practical perspective, developing and implementing a rigorous selection model – one that screens individuals for 3C – may be a particular challenge for the CAF, given that its personnel system is subject to a variety of constrains. In particular, the CAF's ability to effectively screen and select the most qualified applicants is limited by the extent to which these individuals can be effectively recruited in the first place. Given the relatively small size of the CAF, and given a hypothetical recruitment scenario where very few candidates in the applicant pool possess certain attributes and attitudes associated with intercultural effectiveness, the CAF would not be in a position to screen out all individuals who fall below a certain cut-off requirement on the 3C measure. Another constraint in the CAF's personnel system occurs after the recruitment stage, as competition for virtually all positions within the CAF occurs with a closed labour market. For example, trained soldiers are replaced with untrained recruits; promotions are based, to a large extent, on vacancies; and appointments into high-status roles (e.g., unit commanders) are often chosen from a relatively small pool of eligible military personnel (based on experience, rank, etc.). As such, recruiting and selecting the best possible candidates for a job based on rigorous selection criteria may not always be feasible for the CAF. These practical challenges limit the extent to which the CAF can effectively make use of selection techniques in order to establish a cross-culturally competent work force.

A second consideration with regards to selection comes from a legal perspective. Ultimately, the assessment of competencies for making selection and assignment decisions must be carried out

using methods that are fair, reliable, and valid (Catano et al., 2010). From a legal perspective, the CAF must be able to demonstrate that 3C is required of individuals in order for them to perform successfully in the military. One of the challenging considerations about assessing the various competencies associated with 3C, however, is that validity evidence can be difficult to establish in the case of international or intercultural work assignments given that the assignment is a job context, not a job description. Moreover, for the military, the types of assignments for missions can vary greatly, from peace keeping, to humanitarian assistance, to disaster relief, to stabilization and reconstruction missions, in addition to combat and counterinsurgency operations. Thus, it is often difficult to forecast (e.g., upon initial hiring or occupational placement) *who* will be required to demonstrate "JIMP-capability" and *when* this capability will be required. An important focus of future research, therefore, will be to properly define and operationalize the criterion domain of 3C; that is, what is the anticipated or predicted outcome of recruiting and retaining individuals in the CAF based on their 3C? Establishing sound criterion data will help enable the CAF to establish validity evidence for the assessment measures that are used as part of selection and training programs.

5.2 Developing Cross-Cultural Competence Through Education and Training

Although many aspects of 3C seem to reflect traits, attitudes, and motives that are difficult to change (particularly through conventional military training and education approaches), there are many other components of 3C that can presumably be shaped and improved through cross-cultural education and training. Even so, assessment of these competencies is still important in order to identify the extent to which military personnel require training as well as to establish training effectiveness. 3C assessment tools can also be used within a training framework in order to help individuals to develop an awareness of their own capabilities (and areas requiring improvement) prior to participating in cross-cultural training.

Of the various categories of competencies, it has been suggested that content knowledge and behavioural skills are easiest to teach (Spencer et al., 1994). This includes *culture-specific knowledge* and *conceptual knowledge of culture*, as well as a host of behavioural skills including interpersonal or social skills (e.g., *language, relationship building*, *communication*, *influence/persuasion), leadership skills*, and problem-solving skills (*negotiation* and *conflict resolution*). Although research on how to effectively and efficiently train these competencies in a military context is at a relatively early stage (Brown & Adams, 2011), the literature on civilian populations suggests that many of the skills noted above are responsive to training (e.g., Deshpande & Viswesvaran, 1992). Developing and implementing cross-cultural training programs designed to teach cultural knowledge and develop behavioural skills requires careful consideration of numerous factors that may impact the effectiveness of these programs. Although an extensive review and discussion of issues related to training design, development, and evaluation is beyond the scope of this report, three of these factors are briefly noted. These include considerations of: (a) the timing of training interventions; (b) the developmental needs of trainees; and (c) the types of training programs. Note that some of the issues related to training and education in the JIMP context have already been touched upon to various degrees through previous DND research; for example, see Holton et al. (2010), Scoppio et al., (2009), Scoppio (2011), Thomson et al. (2011), and Thomson, Hall, & Adams (2009). Where appropriate, the findings from some of these research pursuits will be mentioned briefly.

5.2.1 When Should Cross-Cultural Training Occur?

Intuitively, it may seem that a natural fit for the timing of cross-cultural training is during pre-deployment training, when military personnel who have been selected to participate in a mission complete a series of training exercises and courses designed to prepare them for the upcoming mission. Indeed, some of the cross-cultural training initiatives currently taking place within the CAF occurs during the pre-deployment phase. For instance, as of 2008, military personnel deploying to Afghanistan have been required to participate in cultural awareness training, which is implemented by the Canadian Army (in collaboration with DFAIT) in order to provide military personnel with cultural knowledge and skills necessary to operate effectively in Afghanistan (Lott, 2010). Moreover, personnel assigned to peacekeeping missions take part in operational training courses offered through the CAF's Peace Support Training Centre (PSTC)[23]. The PSTC offers individual pre-deployment training (which focuses on individual skills necessary to appropriately respond to the intercultural and potentially hostile nature of a Land-Based Operations environment), as well as mission-specific training for certain occupations (e.g., Civil Military Cooperation/CIMIC Operator; Information Operations Officer). There is also evidence that some of these training programs provide cultural awareness education, for example, by promoting "sensitivity to variances in cultural dimensions, such as customs, habits, norms, etc., of other national cultures" (Thomson et al., 2009, p. 49).

Abbe (2008) points out, however, that the development of cross-cultural knowledge and skills takes time and, therefore, should not be left solely to pre-deployment training. Whereas culture-specific knowledge and language skills (which tend to be mission-specific and only required to the extent that a person will be involved in a particular mission) might be well suited to pre-deployment training, there are other culture-general aspects of 3C that can be developed at various stages throughout a person's military career, and which can help prepare military personnel for *any* mission.

Given the CAF's heavy emphasis on training[24], there are many opportunities to incorporate more general cultural training into existing programs that occur as part of induction or ongoing training. For instance, all new recruits complete basic military training as part of their general introduction and indoctrination into the CAF. This training is designed to teach fundamental knowledge and skills that military personnel will need in their career, and covers multiple content domains including physical fitness training, first aid/CPR training, military knowledge and ethos, weapons handling, basic survival skills, and leadership theory (for officers).[25] Currently, there is no focus on culture or culture-general skills (such as those identified in the IMPPaCTS framework) in the CAF's basic military training course. Aside from basic training, there are many other regular training courses that military personnel must complete as part of their occupational training and/or to prepare for deployment. This includes both general training (e.g., general purpose combat training; generic peacekeeping training) as well as more specific or specialized training (e.g., mission-specific training; leadership training). Incorporating cultural knowledge and awareness into the regular training cycle may help to maximize learning and development

[23] Information on the PSTC and its training courses is available at http://armyapp.dnd.ca/pstc-CAFsp/default-eng.asp

[24] See Land Force Doctrine and Training System (LFDTS): http://armyapp.forces.gc.ca/lfdts-sdift/default-eng.asp

[25] See http://www.army.forces.gc.ca/land-terre/joining-enroler/training-entrainement-eng.asp

opportunities, and may also "help convey that cultural considerations are integral to full-spectrum operations and not an alternative to or a distraction from war fighting capabilities" (Abbe, 2008, p. 7).

To some extent, certain competencies associated with 3C appear to be incorporated into current CAF education and training initiatives. Thomson et al. (2009), for example, identified several courses being offered through CDA and LFDTS that provide training on communication skills. One example is the Joint Command and Staff Program at Canadian Forces College (CFC), which provides training on skills required to be effective in institutional, operational, and cross-cultural contexts of communication (in the course, students learn to write, read, listen and present effectively). Overall, however, the existing reviews that have been conducted with regards to the CAF's current training approaches point to the conclusion that cross-cultural training is currently insufficient and does not fully address the requirements of a Comprehensive Approach to military operations. For instance, Scoppio (2011) reports that current soft skills training is often "just in time, not always relevant or not long enough for transfer of knowledge" (p. 53).

5.2.2 Who Should Receive Cross-Cultural Training?

Despite the importance of establishing CAF-wide cultural training to maximize the potential for a cross-culturally competent or "JIMP capable" military, consideration of individual training needs should also be taken into consideration. To identify training needs, appropriate assessment of individuals' baseline levels of 3C (through one or more of the methodologies described in Section 4) is essential. This needs analysis will, in turn, enable the design, development, and implementation of appropriate learning objectives and training interventions. Ultimately, cross-cultural training efforts should focus on gaps between individuals' current competencies and the competency requirements of the mission assignment. Such training efforts will also require an understanding of the level of 3C or the "3C proficiency standards" that are required in order to be successful at certain ranks or in certain positions.

Some researchers (e.g., McCloskey et al., 2010; McDonald et al., 2008) have argued that 3C occurs and can be assessed on a continuum, and that individuals' ability to transition through the various stages of 3C is influenced by training, education, and experience, as well as individual differences (e.g., personal characteristics). For instance, McCloskey et al. present a developmental framework of 3C that includes four phases of competence in military personnel: pre-competent, foundation (novice/advanced beginner), task-oriented (competent), and mission-centric (proficient). The *pre-competent* level reflects deficits in the affect component of 3C (e.g., low levels of self-efficacy, open-mindedness, and willingness to engage). McCloskey at al. argue that individuals at this level are not ready to benefit from cultural training because their current affective state (i.e., attitudes and motives) impedes their ability to learn. They also argue, however, that many individuals never experience this state but, instead, start their development of 3C at the foundational level. Thus, similar to what other researchers have claimed about the stability of some 3C-related characteristics (e.g., Leiba-O'Sullivan, 1998), McCloskey et al. acknowledge that certain stable attributes are essential in order to acquire more dynamic ones.

5.2.3 What Training Approaches will be Most Effective?

A third consideration pertains to the different methodologies (in terms of training design and modality) that can be used to provide cross-cultural training. Depending on the competency or competencies being trained, different approaches may be differentially effective. Brown and Adams (2011), for instance, describe seven types of strategies that can be used for cross-cultural training: attribution training, cultural awareness training, cognitive-behaviour modification training, interaction training, language training, didactic training, and experiential training. Depending on the type of competency that is the focus of training (i.e., knowledge, skills, abilities, attitudes, motives), some training delivery strategies may work more effectively than others. For example, *attribution training* focuses on developing attitudes and skills necessary for understanding the behaviour of others from the perspective of the host nation. Thus, although it was suggested earlier that it is generally difficult to change attitudes, this type of training may work more effectively than other strategies at modifying attitudes that impede an individual's ability to be cross-cultural effective. Different strategies may also be effective depending on the type of knowledge that is being taught. As discussed in Section 3.2.1, explicit knowledge (i.e., factual knowledge such as knowledge about a country's history and politics) can be transmitted relatively easily through *didactic* training (e.g., lectures and/or readings). Tacit knowledge, on the other hand, is far more difficult to convey using a traditional classroom approach, and may be more effectively taught through *experiential* exercises involving observation, imitation, and practice.

Another approach to classifying cross-cultural training strategies is outlined by Manz (2003), who suggests that cultural training varies on two dimensions: didactic versus experiential and culture-general versus culture-specific. *Didactic culture-general training* includes academic-type lectures on the general influence of culture on behaviour, as well as cultural awareness training and culture-general assimilators. *Experiential culture-general training* includes communication workshops, self-assessments, and experiments on general cultural differences. *Didactic culture-specific training* focuses on area orientation briefings, analysis of case studies, and intercultural sensitizer training. Finally, *experiential culture-specific training* involves culture-specific simulations and role-plays, as well as bi-cultural communication workshops.

Given the multi-dimensional nature of 3C and the diverse range of KSAOs used to operationally define the construct, reliance on a single training method or modality will likely not be effective or sufficient. Rather, cross-cultural training initiatives – both culture-general and culture-specific – will likely require the integration of a variety of modalities, including classroom instruction, computer-based training, and simulation-based training (e.g., situational and experiential exercises). Scoppio's (2011) qualitative research provides some evidence to confirm this proposition. Based on consultations with 25 SMEs (both military personnel and civilians) regarding the most effective instructional strategies for providing soft-skills training, Scoppio reported that a variety of training methods can be effective (including videos, class room instruction, distance learning, e-learning, exchange programs, experiential learning, guest speakers, lessons learned case studies, mentoring, sharing experiences, and simulations), so long as they are tailored to the content, training audience, and learning context.

6 Conclusion

6.1 Summary

The objective of this report was to shed some light onto the construct of 3C, including what it comprises, how it differs from other concepts such as CQ, and how it can be measured. In this report, several types of assessment methodologies were described in terms of their utility for measuring 3C in the CAF; this discussion included self-report questionnaires, biodata inventories, situational judgment tests, behavioural interviews, behavioural observations, and assessment centres. The ultimate goal of this report was to provide a starting point for identifying how the CAF can effectively assess 3C in order to ensure that its selection practices and training programs are relevant for comprehensive operations. More specifically, knowledge of the different mechanisms that can be used to assess the KSAOs associated with intercultural effectiveness may improve the CAF's ability to (a) design and implement training programs aimed at developing 3C, (b) evaluate the effectiveness of these programs, and (c) select individuals who have high cross-cultural effectiveness potential for certain assignments. The intention is that this report will help "set the stage" for future research endeavours in terms of identifying and developing 3C in military personnel. Ultimately, such research will help to ensure that CAF personnel are JIMP capable, or are prepared to work effectively within a Comprehensive Approach to operations.

It is clear from the literature that 3C has emerged as an important concept that influences individuals' ability to perform effectively in contemporary military operations. At the same time, it is also clear that additional research efforts are required in order to more fully understand the requirements of 3C among military personnel and to further our understanding of how to assess and develop 3C in the CAF.

6.2 Recommendations for Future Research

Specific questions to be addressed through future empirical research include the following:

1. ***What are the performance criteria that result from 3C?*** Ultimately, being able to adequately assess and develop 3C in the CAF will only be useful to the extent that 3C actually relates to important individual and organizational outcomes such as intercultural effectiveness, operational effectiveness, and mission success. Thus, in order to appropriately evaluate the utility of existing measures of 3C for use in the CAF, or to validate new assessment tools that are developed specifically for the CAF, an understanding of the relevant criteria is essential. In fact, defining the performance effectiveness criteria is recommended as the first step in conducting competency research studies (Spencer et al., 1994). At this point, however, the notion of "JIMP effectiveness" remains elusive and poorly defined, and there are potentially many criterion variables that may be used to evaluate the effects or consequences of being cross-culturally competent. For example, outcomes of 3C may be operationally-focused (e.g., the ability of military personnel to successfully work with comrades, other services, allies, adversaries, and civilians in theatre), as well as institutionally-focused (e.g., the ability of military personnel to connect more effectively with politicians, civilians in Canada, diverse communities, etc.). Thus, additional research is

needed to identify important outcomes of 3C as well as to derive appropriate operational definitions for the various outcome criteria.

2. ***How trainable are the different KSAOs associated with 3C?*** It is suggested in this report that 3C is a multi-dimensional construct comprised of various KSAOs, some of which may be more stable than others and, therefore, more difficult to change. Additional research, however, is required in order to better understand the extent to which different competencies are in fact trainable, particularly with respect to affective characteristics such as attitudes and motivation. A more in-depth review of the empirical research on *affect* training (e.g., changing ethnocentric attitudes, improving cultural empathy) may help to provide evidence regarding the extent to which attitudes and motivation can be modified through training and education.

3. ***Do any aspects of 3C constitute core competencies that are required for all CAF personnel?*** Conversely, do some aspects of 3C constitute functional and job-specific competencies that are required only for specific occupations, positions, or assignments in the military? The research presented in this report suggests that 3C is increasingly important for all military personnel given the diverse cultural environments in which the CAF now operates as well as the diverse types of organizations, agencies, groups, and populations with whom the CAF must collaborate and cooperate. Gizewski and Rostek (2007) state that human capital is key to developing a JIMP-capable military. They also argue that, in order to ensure mission success in today's complex security environment, *every* soldier needs to be a JIMP contributor. Nonetheless, additional research is required to learn which components of 3C are essential across all ranks and types of occupations in the CAF. Identifying core cross-cultural competencies relevant to CAF operations can help inform policy changes and improvements to the CAF's recruitment and selection process and/or basic military training.

4. ***What types and forms of cross-cultural training does the CAF currently provide and how can it be improved?*** Another area in which future research should be focused pertains to examination of the CAF's current training initiatives – how they originated, which aspects of 3C they intend to develop or train, whether these initiatives differ depending on the trainee's rank/position, or existing capabilities, and the overall effectiveness of these training programs. While some aspects of 3C may already exist within the CAF's training system (see Scoppio et al., 2009 and Scoppio, 2011 for a review of the CAF's current "soft skills" education and training), given the rudimentary stage of our understanding of the concept of 3C and how it can be effectively assessed, it is reasonable to assume that current training and educational programs could benefit from increased knowledge and resources.

   According to Spencer (2007), the CAF has historically relied on short-term operationally focused approaches to cultural training as opposed to long-term institutional approaches to developing 3C. Spencer further reports that pre-deployment cultural training in the CAF, which consists of basic language training, a brief history lesson on the country and culture of the host nation population, and general lectures on social mores and values, fails to adequately prepare military personnel for the needs of the operational environment (as revealed through interviews with Afghanistan veterans). There is also some indication that current training approaches are *ad hoc* and based on the personal preference or intuition of individual instructors without a clear understanding of user requirements (i.e., CAF member needs and measures of effectiveness). As such, an important goal for future research will be

to focus on identifying training needs and gaps in current training initiatives, and then modifying existing or developing new educational and training programs. As a starting point, it may be useful to scope existing training programs, tools, and approaches that are used in other militaries as well as civilian populations (e.g., Peace Corps). For instance, in the US, special centers have been created for each branch of its military in order to provide intercultural effectiveness training and education (i.e., the Army's Training and Doctrine Command Culture Center, the Marine Corp's Center for Advanced Operational Culture Learning, and the Air Force's Culture and Language Center; Watson, 2010).

6.3 Next Steps

Some of the above-noted research questions will be investigated in a new multi-year (2012-2015) ARP being initiated at DRDC Toronto, entitled *Training Toolkit for the Comprehensive Approach*. The objective of this new ARP is to develop a series of training "tools" or methodologies that can be used to prepare the CAF to operate more efficiently and effectively within the "comprehensive approach" environment. Development of these tools will be based on a number of research initiatives including (a) identification of current 3C training methodologies being used by the CAF, other militaries, and other industries and (b) conducting a thorough needs assessment of CAF training audiences at the tactical level (i.e., tactical land force commanders who engage directly with the local population).

Immediately following the present report, a number of short-term research initiatives can be carried out in order to help fill in some of the gaps identified herein. Recommendations for "next steps" include (a) establishing a precise operational definition of 3C that is relevant and meaningful for the CAF; and (b) continuing to explore (i.e., through factor analytic methods) and validate the competencies associated with 3C (i.e., validating the set of KSAOs that comprise 3C against relevant performance criteria). These research pursuits will help lay the ground work for identifying the competencies that are required in the CAF in order for military personnel to work effectively within the *Public* context of the JIMP environment and, in general, within a Comprehensive Approach to operations. Moreover, these initiatives will help move this research forward so that it can ultimately be exploited by the CAF to help improve its ability to assess 3C for selection and training purposes.

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Annex A Self-Report Questionnaires/Inventories

A.1 Attitudinal & Behavioral Openness Scale (ABLE)

5-point scale (1 = *strongly disagree/never* to 5 = *strongly agree/frequently*)

Attitudes

1. A year long overseas assignment would be a fantastic opportunity for me and/or my family.
2. Traveling the world is a priority in my life.
3. I hope the company I work for, (or will work for), will send me on an overseas assignment.
4. Other cultures fascinate me.
5. I would host a foreign exchange student for one year.
6. Foreign language skills should be taught in (as early as) elementary school.
7. If you took a vacation to Europe, which would you prefer (anchors increase in cultural immersion)?

Past Experiences

8. I have spent time overseas.
9. I was overseas before the age of 18.
10. I am fluent in another language.
11. I have moved or been relocated substantial distances (e.g., state to state, overseas).
12. I have studied a foreign language.

Comfort with Differences

13. My friends' ethnic backgrounds are. . .
14. My friends' religious affiliations are. . .
15. My friends' first languages are. . .
16. My friends' career goals, interests and educations are. . .

Participation in Cultural Activities

17. I visit art galleries and museums.
18. I attend the theater, concerts, ballet, etc.
19. I attend foreign films.
20. I travel within the United States.
21. I eat at a variety of ethnic restaurants.
22. I attend ethnic festivals.
23. I read magazines which address world events.
24. I watch the major networks' world news.

A.2 Big Five Inventory (BFI)

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who likes to spend time with others? Please write a number next to each statement to indicate the extent to which you ag or disagree with that statement.

Disagree strongly 1	Disagree a little 2	Neither agree nor disagree 3	Agree a little 4	Agree strongly 5

I see Myself as Someone Who...

___1. Is talkative

___2. Tends to find fault with others

___3. Does a thorough job

___4. Is depressed, blue

___5. Is original, comes up with new ideas

___6. Is reserved

___7. Is helpful and unselfish with others

___8. Can be somewhat careless

___9. Is relaxed, handles stress well

___10. Is curious about many different things

___11. Is full of energy

___12. Starts quarrels with others

___13. Is a reliable worker

___14. Can be tense

___15. Is ingenious, a deep thinker

___16. Generates a lot of enthusiasm

___17. Has a forgiving nature

___18. Tends to be disorganized

___19. Worries a lot

___20. Has an active imagination

___21. Tends to be quiet

___22. Is generally trusting

___23. Tends to be lazy

___24. Is emotionally stable, not easily upset

___25. Is inventive

___26. Has an assertive personality

___27. Can be cold and aloof

___28. Perseveres until the task is finished

___29. Can be moody

___30. Values artistic, aesthetic experiences

___31. Is sometimes shy, inhibited

___32. Is considerate and kind to almost everyone

___33. Does things efficiently

___34. Remains calm in tense situations

___35. Prefers work that is routine

___36. Is outgoing, sociable

___37. Is sometimes rude to others

___38. Makes plans and follows through with them

___39. Gets nervous easily

___40. Likes to reflect, play with ideas

___41. Has few artistic interests

___42. Likes to cooperate with others

___43. Is easily distracted

___44. Is sophisticated in art, music, or literature

A.3 Cross-Cultural Adaptability Scale (CCAS)

1. I like to travel
2. I can operate where there are few rules.
3. I make friends easy.
4. I can do my job even when things are not clear.
5. I enjoy learning new things.
6. I am open-minded.
7. I can make myself understood in most situations.
8. I like being in unfamiliar situations.
9. I like taking risks.
10. I like working in situations with no clear solution.
11. I like to know what is expected of me in advance.
12. I like to try new things.
13. I consider the impact my actions have on others.
14. I have a set of personal guidelines I use to decide what is right and wrong.
15. I try to understand other peoples' thoughts and feelings when I talk to them.
16. I enjoy situations that require crisis management
17. I enjoy the detail of my job.
18. I have personal standards of behavior that I try to maintain.
19. I am a confident person.
20. I am an outgoing person.
21. I am tolerant of other peoples' attitudes and behaviours.
22. I like being around other people.
23. I have a good sense of humour.
24. I am sensitive to the needs of others.
25. I like to have clearly stated tasks to achieve.
26. I am quick to judge other peoples' character.
27. I deal well with stressful situations.
28. I am a good listener.
29. The role of the UN/NATO is important.
30. My country should continue to support peace operations.
31. I am a volunteer for overseas deployment.
32. My country should assist nations that need help.
33. My main motivation for deploying overseas is financial reward.
34. I feel comfortable with the objectives of this deployment.
35. Gaining cooperation of the unit is important on peace operations.
36. There should be greater recognition for those deployed.
37. I regularly keep abreast of world news.
38. I have clear goals I want to achieve on this deployment.
39. I can identify problems and develop innovative solutions.
40. When things are slow I look for work.
41. I can make critical decisions on the spur of the moment.
42. I am a practical person.
43. I enjoy adapting my skills to solve new problems.
44. I have a definite interest in learning about the local population.
45. I can learn a lot from working with people from different backgrounds than me.
46. I have friends who don't share my particular interests.

47. Behaviour should be considered in the context in which it is displayed.
48. I feel comfortable in new situations.
49. There is a lot to be learned from working with peacekeepers from other nations.
50. I enjoy talking to people who are different from me.
51. When I eat out I like to try new things.
52. It is important to learn as much of the local language as possible.

A.4 Cross-Cultural Competence Inventory (CCCI)

6-point scale (1 = *strongly disagree* to 6 = *strongly agree*)

Willingness to Engage

1. I would enjoy visiting other cultures that are unfamiliar to me.
2. If I see someone I know, I usually stop and talk to them.
3. Traveling to other countries is something I would enjoy.
4. I enjoy presenting to a group of friends.
5. I seek opportunities to speak with individuals from other cultural or ethnic backgrounds about their experiences.
6. I tend to start conversations with strangers like people in the check-out line at the store or beside me on an airplane.
7. I enjoy talking in a large meeting of friends and acquaintances.
8. I would enjoy interacting with people from different cultures.

Cognitive Flexibility & Openness

1. I know how to gain insight from another person to get a job done.
2. If my approach to a problem isn't working with someone, I can easily change my tactics.
3. I have different ways of working with different people.
4. People have different methods that can be equally successful in solving a problem.
5. When trying to solve a problem I often can foresee several long-term consequences of my actions.
6. I always see many possible solutions to problems I face.
7. When thinking about a problem, I consider as many different opinions on the issue as possible.
8. I enjoy coming up with new plans and new ideas.
9. Our society's ideas of right and wrong may not be right for all people in the world.
10. Even after I've made up my mind about something, I am always eager to consider a different opinion.
11. I believe variety is the spice of life.
12. When considering most conflict situations, I can usually see how both sides could be right.

Emotional Regulation

1. When I want to feel less negative emotions (anger, frustration, or sadness), I change the way I'm thinking about the situation.
2. I control my emotions by changing the way I think about the situation I'm in.
3. When I want to feel more positive emotions (happiness or amusement), I change what I'm thinking about.
4. When I want to feel less negative emotion (sadness, frustration, or anger), I change what I'm thinking about.

Tolerance of Uncertainty

1. I like to have a plan for everything and a place for everything. (R)
2. I prefer to socialize with familiar friends because I know what to expect from them. (R)
3. I don't like to go into a situation without knowing what I can expect from it. (R)
4. I find that establishing a consistent routine enables me to enjoy life more. (R)
5. I believe orderliness and organization are among the most important characteristics of a good student. (R)
6. I feel uncomfortable when I don't understand the reason why an event occurred in my life. (R)
7. I feel uncomfortable when someone's meaning or intention is unclear to me. (R)

Self-Efficacy

1. I can always manage to solve difficult problems if I try hard enough.
2. No matter what comes my way, I'm usually able to handle it.
3. I am confident that I could deal efficiently with unexpected events.
4. It is easy for me to stick to my aims and accomplish my goals.
5. I can remain calm when facing difficulties because I can rely on my coping abilities.
6. I am confident that I can get used to the unusual conditions of living in another culture.
7. I am sure I would be able to handle all of the stresses of adjusting to a culture that is new to me.
8. I am confident that I will be able to socialize with people from different cultures.

Ethnocultural Empathy

1. I feel irritated when people of different ethnic or cultural backgrounds speak their native language around me. (R)
2. It is difficult for me to put myself in the shoes of someone from another culture. (R)
3. It is easy for me to understand what it would feel like to be a person from a different culture.
4. When dealing with people of a different ethnicity or culture, understanding their viewpoint is a top priority for me.
5. I feel sorry for people of other ethnicities or cultures if I think they are being taken advantage of.
6. I feel offended when I hear people make jokes about or use slang words to describe people from other ethnic backgrounds or cultures.
7. I feel impatient when communicating with people of different ethnicities or cultures, regardless of how well they can communicate. (R)
8. I rarely think about the impact of an ethnic joke on people who are targeted. (R)

Note: (R) indicates item is reverse-scored

A.5 Cross-Cultural Sensitivity Scale (CCSS)

6-point scale (1 = *strongly disagree* to 6 = *strongly agree*)

1. The media focuses too much attention on the problems of different ethnic groups. (R)
2. I support the federal government's policy of multiculturalism which is to understand, preserve and share cultural differences.
3. I am getting sick of all the talk about Native rights. (R)
4. Native Indians have more to offer than they have been allowed to show.

5. I think that languages other than English and French should be taught during the regular school day for those students who wish to retain their ethnic language.
6. Anglo Canadians hold too many seats in the federal government.
7. Fewer non-white immigrants should be taken into Canada. (R)
8. If Sikhs insist on wearing turbans, they should *not* be hired by police forces. (R)
9. It is important to keep ethnic traditions alive.
10. It would be best for Canada if all immigrants forget their cultural background as soon as possible. (R)
11. If members of ethnic groups want to keep their own culture, they should keep it to themselves. (R)
12. There is a lot that we can gain from friendly relations with immigrants.
13. I think the government should do more to promote the retention of the native languages of ethnic groups in Canada.
14. I don't think they should have let the Vietnamese boat people into Canada.
15. I would like to travel to Asia.
16. It would be good to see all the ethnic groups in Canada retain their culture.
17. The media should pay more attention to the growing discrimination against various ethnic groups in Canada.
18. Canada should encourage as much immigration from developing countries as possible.
19. The Sikh community in Canada has too much influence on political decisions. (R)
20. I do *not* like the growing investment in Canada by Asian business interests. (R)
21. I think that it's silly with all the people starving in India that they won't eat their cows. (R)
22. Understanding the norms of a culturally different group *cannot* reduce racial prejudice. (R)
23. I think that encouraging ethnic groups to retain their own traditions has strengthened the Canadian identity.
24. In Canada, discrimination against minorities is a thing of the past. (R)

Note: (R) indicates item is reverse-scored

A.6 Cultural Intelligence Scale (CQS)

Read each statement and select the response that best describes your capabilities. Select the answer that BEST describes you AS YOU REALLY ARE (1 = *strongly disagree*; 7 = *strongly agree*)

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

Cognitive CQ
1. I know the legal and economic systems of other cultures.
2. I know the rules (e.g., vocabulary, grammar) of other languages.
3. I know the cultural values and religious beliefs of other cultures.

4. I know the marriage systems of other cultures.
5. I know the arts and crafts of other cultures.
6. I know the rules for expressing nonverbal behaviors in other cultures.

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

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

A.7 E-Model Scale for Intercultural Effectiveness

Part I– The following scale asks for your personal views. Please answer as honestly as possible. Circle the best answer.

Strongly Agree (SA)	Agree (A)	Neutral (N)	Disagree (D)	Strongly Disagree (SD)

1. I develop a quality level of understanding with most people I meet.
2. Being around foreign people makes me nervous.(R)
3. I normally develop relationships easily.
4. I would like to visit other countries.
5. I find it difficult to have meaningful conversations with others. (R)
6. When conflict arises between myself and a friend, I try to avoid the conflict. (R)
7. People tend to not trust me until they get to know me. (R)
8. I am very patient with other people.
9. There's no real need to ever learn a foreign language. (R)
10. I always initiate conversation first.
11. I normally empathize with other peoples' problems.
12. I usually resist change to my lifestyle. (R)
13. When I meet someone for the first time, my interpersonal effectiveness is usually good.
14. I don't usually experience frustration around new people in large groups.
15. Friendships with people from countries other than mine are important to me.
16. I really like to know someone's train of thought.
17. It is usually unwise to trust a foreign person. (R)
18. I usually handle transitions very well.
19. I don't feel comfortable around strangers. (R)
20. It disturbs me not to have things organized as well as they could be when I'm in a new place. (R)
21. I dislike it when someone doesn't provide straight answers or seems vague and unclear. (R)

22. I really don't care for all the stress and problems involved in Travelling; I am often better off right where I'm at. (R)

Note: (R) indicates item is reverse-scored

Scoring : Add the scores with SA = 5, A = 4, N = 3, D = 2, SD = 1. Reverse score for items marked with (R). Relationship potential is scored by adding items 1, 3, 5, 6, 7, 8, 10, 11, 13, 14, 15. Adaptability potential is scored by adding items 2, 4, 9, 12, 16-22. The index is an initial screening for potential intercultural desirability only.

A.8 Global Leadership Life Inventory (GlobeInvent)

Sample items

Dimension	Sample item
Envisioning	I inspire my people to look beyond existing boundaries.
Empowering	I always try to involve my employees in decision-making.
Energizing	I mobilize people to get things done.
Designing & controlling	I set clear performance standards and goals.
Rewarding & feedback	I make sure that achievements are recognized along the way.
Team-building	I make sure that all participants feel that they contribute to the decision-making process.
Outside orientation	I make sure that customer satisfaction stands central.
Global mindset	I am good at adapting to business practices in cultures other than my own.
Tenacity	I am prepared to stick to an unpopular decision if I feel that it is the right one.
Emotional intelligence	I work to generate trust among my people.
Life balance	I set priorities in both my private and my professional life.
Resilience to stress	I feel a lot of pressure at work.

A.9 Global Mindedness Scale

Interconnectedness of Humanity

1. What happens in other countries has little impact on what happens in this country.
2. In the long run, Americans will probably benefit from the fact that the world is becoming more interconnected.
3. I feel a strong kinship with the worldwide human family.
4. I have very little in common with people in underdeveloped nations. (R)
5. Social problems are rapidly becoming globalized.
6. I think of myself, not only as a citizen of my country, but also as a citizen of the world.
7. It is not really important to me to consider myself as a member of the global community.
8. My behaviour can impact people in other countries.

Cultural Pluralist

1. Americans can learn something of value from all different cultures.
2. The values of my culture are not necessarily the best.
3. I feel irritated with people from other countries because they don't understand how we do things here.
4. American people are probably the best in the world.
5. I am not interested in learning about other cultures. (R)
6. It is probably a good idea to use ethnicity as one of the criteria for deciding who should be allowed to immigrate to the United States. (R)
7. The thought of travelling to other countries doesn't appeal to me very much. (R)
8. I like to compare the values and customs of my country with those of other countries.
9. The United States is enriched by the fact that it is comprised of many people from different cultures and countries.
10. It is important that universities and colleges provide programs designed to promote understanding among students of different ethnic and cultural backgrounds.
11. I think some cultures value human life less than mine does. (R)
12. I generally find it stimulating to spend an evening talking with people from another culture.
13. I enjoy trying to understand people's behaviour in the context of their culture.
14. I would not want to live or study in another country. (R)
15. It's not a high priority for me to learn or be able to speak another language since English is an international language.

Ethic of Responsibility/Care

1. We must sometimes give up what we want as individuals for what is best for our community.
2. The needs of the United States must continue to be our highest priority in negotiating with our countries. (R)
3. I feel an obligation to speak out when I see our government doing something I consider wrong.
4. I feel very concerned about the difficult lives of people who live in politically regressive regimes.
5. The fact that a flood can kill 5,000 people in India is very depressing to me.
6. When I see the conditions some people in the world live under, I feel I must do something.
7. When I hear that thousands of people are starving in an African country, I feel very frustrated.
8. Americans have a moral obligation to share their wealth with the less fortunate peoples of the world.
9. My opinions about national policies are based on how those policies might affect the rest of the world as well as the United States.
10. I sometimes try to imagine how a person who is always hungry must feel.
11. I am considering joining the Peace Corps or some similar international service organization at some point in my life.

Futurist Orientation

1. I am able to affect what happens on a global level by what I do in my own community.
2. Generally an individual's actions are too small to have a significant effect on the world's ecosystem. (R)
3. Really, there is nothing I can do about the problems of the world. (R)

4. People should be permitted to pursue the standard of living they can afford, even if it has a negative impact on the environment. (R)
5. It is a waste of time to worry about the long term future since we can't control what will happen anyways. (R)
6. The present distribution of the world's wealth and resources should be maintained because it promotes survival of the fittest. (R)
7. I often think about the kind of world we are creating for future generations.
8. Technology will solve most of the problems we currently face in the world. (R)
9. It is important that we educate people to understand the impact that current policies might have on future generations.
10. Concessions on the part of my country to other countries are morally right if the concession will promote peace.
11. I plan to pursue a career in which I can have a positive effect on the quality of life of future generations.
12. The primary goal of American foreign policy should be to promote peaceful resolution of international conflict.

Behaviors
1. I participate in or contribute money to an organization which is combating world hunger.
2. I participate in an organization which has ecological concerns as a part of its agenda.
3. I participate in an organization which publicly expresses its concern on national or international issues.
4. I participate in or contribute money to an organization which supports universal human rights.
5. I seek out opportunities for meeting people who speak other languages.
6. I recycle paper, plastic, etc.
7. I vote in local, state and national elections.
8. I look for opportunities to meet people from backgrounds different from mine.
9. My friends and I discuss current events and world issues.
10. I read news articles about international events.
11. I participate in events with an international focus.
12. I contribute time or money to political causes.
13. I read books or magazine articles about other cultures.
14. I participate in political demonstrations.
15. I make a point to watch television specials about foreign countries and their cultures.
16. I participate in student programs and activities that broaden my understanding of ethnic groups other than my own.
17. I write to members of Congress and other political leaders to express my views.
18. I try to acquire information about international developments.

Note: (R) indicates item is reverse-scored

A.10 Intercultural Adjustment Potential Scale (ICAPS)

Sample items from LeRoux and Matasumoto (2006)

Emotional regulation
I do not worry very much.
I rarely feel anxious or fearful.

I often worry about things that might go wrong. (R)
I feel happy most of the time.
I get angry easily. (R)
Being in tense emotional situations scares me. (R)
I usually feel lower than others. (R)
If I have done something wrong I want to hide from other people. (R)
People should not care what other people do.

Openness
I have tried to write poetry.
Watching ballet or modern dance performances is boring. (R)
I like to wonder about the origins of the universe.
Smells remind me of old memories.
When I see someone being treated unfairly, I sometimes don't care much. (R)
I like haiku poems.

Flexibility
I think women should have as much sexual freedom as men.
Sex education is a good thing.
I would not object to my husband or wife having friends of the opposite sex.
I hardly ever get excited. (R)
I am a traditional person. (R)
I don't get much pleasure from talking with people. (R)

Creativity
Spanking a child is the best way to teach them. (R)
The trouble with children nowadays is their parents don't punish them enough. (R)
My parents were always strict with me. (R)
I am a traditional person. (R)
Sometimes I rearrange my room just to make it different.
I have tried to write poetry.
The average citizen can influence governmental decisions.

Note: (R) indicates item is reverse-scored

A.11 Intercultural Readiness Assessment (IRA)

Sample items from Dodd (2007)

Dimensions in the Scale	Concepts and Items
Relationship effectiveness motivation	Like meeting strangers; making friends
	Interpersonal effectiveness
Trust	Feeling trusted and trusting others
	Patience with international people
Initiating communication	Like to initiate conversations
	Empathy with problems
Openness	Relations with others open
	Relations formed quickly
	Considerate during negotiations
Comfort with strangers	Comfort with strangers from different social classes
	Interpersonal effectiveness across social classes
	Good conversation skills in meetings
Ethnic inclusion	Avoid ethnocentrism
	Non-judgmental about others' cultures
Communication control	Able to overcome luck or circumstances
	Belief in appropriate control of communication situation
Self-worth in a new culture	Value self in situations; self-accrual
	Not overly concerned about others' views of me
	Feel competent and confident in new situations
Flexibility	Need to learn foreign language
	Glad to embrace new lifestyle
Transition ease	Comfort around international people
	Handle anxiety and transition regarding change
Acculturation motivation	Eager to live internationally and make transitions easily
	Positive management of potential stresses in new culture
Adaptability	Can handle disorganization
	Manage indirectness and vagueness
Risk and innovation	Enjoy different thought patterns and ideas
	Willing to risk and trust with international people
Family adaptability	Family supportive of leaving home
	Spouse/children willing to adapt
Family openness	Comfortable with spousal self-disclosure
	Communication with spouse and family
Previous travel experience	Travel experience has taught me
	Like international travel

A.12 Intercultural Readiness Check (IRC)

Sample items from Van der Zee and Brinkmann (2004)

5-point scale (1 = *totally not applicable* to 5 = *totally applicable*)

Intercultural Sensitivity
Is aware of own cultural values
Likes to interact with people who hold different beliefs

Intercultural Communication
Picks the right moment for raising difficult topics
Is able to control expression of anger

Intercultural Relationship Building
Uses existing contacts to build new networks
Feels uncomfortable with initiative contacts with others (R)

Management of Uncertainty
Feels comfortable with having to change plans
Performs best when absolutely sure about the situation

Note: (R) indicates item is reverse-scored

A.13 Intercultural Sensitivity Inventory (ICSI)

7-point scale (1 = *very strongly disagree* to 7 = *very strongly agree*)

Individualism and Collectivism

1. When I disagree with a group, I would allow a conflict in the group to remain, rather than change my own stance on important issues. (I)
2. I would offer my seat in a bus to my supervisor. (C)
3. I prefer to be direct and forthright when dealing with people. (I)
4. I enjoy developing long-term relationships among the people with whom I work. (C)
5. I am very modest when talking about my own accomplishments.(C)
6. When I give gifts to people whose cooperation I need in my work, I feel I am indulging in questionable behavior. (I)
7. If I want my subordinate to perform a task, I tell the person that my superiors want me to get that task done. (C)
8. I prefer to give opinions that will help people save face rather than give a statement of the truth. (C)
9. I say "No" directly when I have to. (I)
10. I define the other person's status by paying attention to name, gender, age, and other demographic attributes. (C)
11. To increase sales, I would announce that the individual salesperson with the highest sales would be given the "Distinguished Salesperson" award. (I)
12. I enjoy being emotionally close to the people with whom I work. (C)

13. It is important to develop a network of people in my community who can help me out when I have tasks to accomplish. (I)
14. I enjoy feeling that I am looked upon as equal in worth to my superiors. (I)
15. I have respect for the authority figures with whom I interact. (C)
16. If I want a person to perform a certain task I try to show how the task will benefit others in the person's group. (C)

Note: For items 1-16, respondents are asked to imagine living and working in the United States. They are then asked to go over the items again (calling them 17-32) while imagining that they are living and working in Japan. Scoring is based on the assumption that the same person will answer "I" items with more agreement and "C" items with more disagreement when working in an individualistic society (i.e., United States); and will answer "C" items with more agreement and "I" items with more disagreement when working in a collectivistic society (i.e., Japan).

Flexibility and Open-mindedness

33. When I am living abroad, I assess situations as quickly as I do when I am living in my own country. (R)
34. I get upset if I do not get a letter or call from my close friend(s) for more than a month, when I am living abroad. (R)
35. Given acceptable hygienic conditions, I would not mind if my children ate local food at school, when I am living in another country.
36. I do not like to receive unannounced visitors at home. (R)
37. I do not like customs officers meddling with my baggage at the airport. (R)
38. We all have a right to hold different beliefs about God and religion.
39. I do not like to meet foreigners. (R)
40. It is unusual for people to eat dogs. (R)
41. I decorate my home or office with artifacts from other countries.
42. Culturally mixed marriages are wrong. (R)
43. A woman's place, truly, is at home. (R)
44. I would not allow my subordinate to promote his nephew if there is someone marginally better than him. The person who is better must be promoted at all costs. (R)
45. Soviet influence is threatening the national identity of many Asian countries. (R)
46. While living abroad, I spend most of my personal time with people from my own country. (R)

Note: (R) indicates item is reverse-scored

A.14 Intercultural Sensitivity Scale (ISS)

5-point scale (1 = *strongly disagree* to 5 = *strongly agree*)

1. I enjoy interacting with people from different cultures.
2. I think people from other cultures are narrow-minded. (R)
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. (R)
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. (R)
8. I respect the values of people from different cultures.

9. I get upset easily when interacting with people from different cultures. (R)
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. (R)
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. (R)
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. (R)
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. (R)
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. (R)
23. I often show my culturally-distinct counterparts my understanding through verbal or nonverbal cues.
24. I have a feeling of enjoyment towards differences between my culturally-distinct counterpart and me.

Note: (R) indicates item is reverse-scored

A.15 MUNROE Multicultural Attitude Scale (MASQUE)

6-point scale (1 = *strongly disagree* to 6 = *strongly agree*)

Know
1. I realize that racism exists.
2. I know that social barriers exist.
3. I understand religious beliefs differ.
4. I understand sexual preferences may differ.
5. I understand that gender-based inequities exist.
6. I accept the fact that languages other than English are spoken.
7. I do not understand why people of other cultures act differently.

Care
8. I am sensitive to respecting religious differences.
9. I am sensitive to differing expressions of ethnicity.
10. I am emotionally concerned about racial inequality.
11. I am sensitive toward people of every financial status.
12. I am not sensitive to language uses other than English.
13. A person's social status does not affect how I care about people.

Act
14. I do not act to stop racism.
15. I actively challenge gender inequities.
16. I do not actively respond to contest religious prejudice.
17. I respectfully help others to offset language barriers that prevent communication.
18. I do not take action when witnessing bias based on people's preferred sexual orientation.

A.16 Multicultural Personality Questionnaire (MPQ)

Sample items from Van der Zee, Zaal, and Piekstra (2003)

5-point scale (1 = *not at all applicable* to 5 = *totally applicable*)

Cultural Empathy
Notices when someone is in trouble
Understands other people's feelings

Open-mindedness
Gets involved in other cultures
Finds other religions interesting

Emotional Stability
Can put setbacks in perspective
Keeps calm at ill-luck

Social Initiative
Is inclined to speak out
Is often the driving force behind things

Flexibility
Avoids adventure
Starts a new life easily

A.17 Overseas Assignment Inventory (OAI)

Sample items from Tucker, Bonial, and Lahti (2004)

Dimension	**Sample Item**
Expectations	I expect my international assignment to be one of the most rewarding aspects of my life.
Open-mindedness	Most of the time other countries' ways of doing things do not make sense. (R)
Respect for Other Beliefs	I believe that everyone is entitled to their own religious beliefs, even if they differ significantly from mine.
Trust in People	I trust people to follow through with their promises.
Tolerance	Getting used to different surroundings is something that comes easily to me.
Locus of Control	When I make plans, I am almost certain that I can make them work.
Flexibility	I like dealing with situations that involve unclear or complex issues.
Patience	I am patient with people when communication with them is difficult.
Social Adaptability	I am usually at ease when meeting people for the first time.
Initiative	In a new situation, I am one of the first to act and make suggestions.

Risk Taking	I enjoy experiencing new and exciting activities, even if they are unconventional.
Sense of Humor	I can laugh at myself and take things in stride.
Interpersonal Interest	I take an active interest in the well being of the people I know.
Spouse or Partner Communication	Compared to others, my spouse or partner and I communicate especially well.

Note: (R) indicates item is reverse-scored

A.18 Personal Communication Worldview Scale

Read each item carefully to be sure you know what the item is stating. Then circle your response to the item. The responses range from strongly disagree (SD), to a less intense disagreement (D), to a position of being right in between agreeing and disagreeing (N), to a position of agreement with the item (A), to strongly agree (SA). You are being asked to indicate your attitude/belief about each item, honestly expressing your personal opinion.

1. No matter what you do or how hard you try, you really cannot do a lot to change your level of happiness.
2. Luck plays a major role in my life.
3. Getting a job is nearly always a matter of fate - being at the right place at the right time.
4. Being promoted on the job depends on who was lucky enough to be in the right place at the right time.
5. Many times a person's choices are the major cause of later misfortunes. (R)
6. In the long run, both the bad things and the good things that happen to me are beyond my control; what is going to happen will happen.
7. For good or for ill, most things in life are within my control with the right effort on my part. (R)
8. Many times I could be described as a victim of circumstances beyond my control.
9. Perhaps a good number of us do not realize the extent to which random events control our lives.
10. Many times I could describe myself as having minimal or little influence over the things that seem to happen to me.
11. Most of the time I feel that I have enough control over the direction my life is taking. (R)
12. No matter what they do, some people seem born to fail while others seem born to succeed.
13. Most of the important things that happen in life are predetermined to happen that way.
14. Rarely does anyone exist for some predetermined purpose.
15. I usually can determine and direct my own purpose. (R)
16. I myself, rather than any spiritual being, take charge of most of my life's plans. (R)
17. The future, as I see it, is already set in motion, so a good number of my choices are limited.
18. My future, by its very nature, is something that rarely can be planned.
19. The future lies before most people like a long ribbon which cannot be altered or shaped, just followed.
20. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.
21. My own actions do not cause me to attain my goals as much as other people affect my goals.
22. A person's destiny depends mostly on the plans of others, who alter many of my decisions.

23. No matter how hard you try, some people just don't like you.
24. There is not much use in trying too hard to please people: if they like you, they like you and if they don't like you, not much can be done to change the situation.
25. I feel predisposed to think and do things the way my family does things.
26. The feelings and actions of people can please or offend a spiritual being(s), depending on how we feel, act, and show respect toward them.
27. Earth's natural resources are meant to be used by mankind, not preserved and saved. (R)
28. Natural forces, such as storms, floods, and water shortages, pose a significant barrier to mankind's long term progress in using our natural resources.

Note: (R) indicates item is reverse-scored

A.19 Prospector

Sample items from Spreitzer, McCall, and Mahoney (1997)

7-point scale (1 = *very strongly disagree* to 7 = *very strongly agree*)

Dimension	Sample item
Sensitive to Cultural Differences	When working with people from other cultures, works hard to understand their perspectives
Business Knowledge	Has a solid understanding of our products and services
Courage To Take a Stand	Is willing to take a stand on issues
Brings Out the Best in People	Has a special talent for dealing with people
Acts With Integrity	Can be depended on to tell the truth regardless of circumstances
Is Insightful	Is good at identifying the most important part of a complex problem or issue
Is Committed to Success	Clearly demonstrates commitment to seeing the organization succeed
Takes Risks	Takes personal as well as business risks
Uses Feedback	Has changed as a result of feedback
Is Culturally Adventurous	Enjoys the challenge of working in countries other than his/her own
Seeks Opportunities To Learn	Takes advantages of opportunities to do new things
Is Open to Criticism	Appears brittle - as if criticism might cause him/her to break (R)
Seeks Feedback	Pursues feedback even when others are reluctant to give it
Is Flexible	Doesn't get so invested in things that he/she cannot change when something doesn't work

A.20 Scale of Ethnocultural Empathy (SEE)

6-point scale (1 = *strongly disagree that it describes me* to 6 = *strongly agree that it describes me)*

Empathic Feeling and Expression

1. When I hear people make racist jokes, I tell them I am offended even though they are not referring to my racial or ethnic group.
2. I don't care if people make racist statements against other racial or ethnic groups. (R)
3. I rarely think about the impact of a racist or ethnic joke on the feelings of people who are targeted. (R)
4. When other people struggle with racial or ethnic oppression, I share their frustration.
5. I feel supportive of people of other racial and ethnic groups, if I think they are being taken advantage of.
6. I share the anger of those who face injustice because of their racial and ethnic backgrounds.
7. I share the anger of people who are victims of hate crimes (e.g., intentional violence because of race or ethnicity).
8. When I know my friends are treated unfairly because of their racial or ethnic backgrounds, I speak up for them.
9. I get disturbed when other people experience misfortunes due to their racial or ethnic backgrounds.
10. I am touched by movies or books about discrimination issues faced by racial or ethnic groups other than my own.
11. When I see people who come from a different racial or ethnic background succeed in the public arena, I share their pride.
12. I am not likely to participate in events that promote equal rights for people of all racial and ethnic backgrounds. (R)
13. I seek opportunities to speak with individuals of other racial or ethnic backgrounds about their experiences.
14. When I interact with people from other racial or ethnic backgrounds, I show my appreciation of their cultural norms.
15. I express my concern about discrimination to people from other racial or ethnic groups.

Empathic Perspective Taking

1. It is easy for me to understand what it would feel like to be a person of another racial or ethnic background other than my own.
2. It is difficult for me to relate to stories in which people talk about racial or ethnic discrimination they experience in their day to day lives. (R)
3. It is difficult for me to put myself in the shoes of someone who is racially and/or ethnically different from me. (R)
4. I know what it feels like to be the only person of a certain race or ethnicity in a group of people.
5. I can relate to the frustration that some people feel about having fewer opportunities due to their racial or ethnic backgrounds.
6. I feel uncomfortable when I am around a significant number of people who are racially/ethnically different than me. (R)
7. I don't know a lot of information about important social and political events of racial and ethnic groups other than my own. (R)

Acceptance of Cultural Differences

1. I feel irritated when people of different racial or ethnic backgrounds speak their language around me. (R)
2. I feel annoyed when people do not speak standard English. (R)
3. I get impatient when communicating with people from other racial or ethnic backgrounds, regardless of how well they speak English.
4. I do not understand why people want to keep their indigenous racial or ethnic cultural traditions instead of trying to fit into the mainstream. (R)
5. I don't understand why people of different racial or ethnic backgrounds enjoy wearing traditional clothing. (R)

Empathic Awareness

1. I am aware of how society differentially treats racial or ethnic groups other than my own.
2. I recognize that the media often portrays people based on racial or ethnic stereotypes.
3. I can see how other racial or ethnic groups are systematically oppressed in our society.
4. I am aware of institutional barriers (e.g., restricted opportunities for job promotion) that discriminate against racial or ethnic groups other than my own.

Note: (R) indicates item is reverse-scored

A.21 Sociocultural Adaptation Scale (SCAS)

5-point scale (1 = *no difficulty* to 5 = *extreme difficulty)*

1. Making friends
2. Using the transport system
3. Making yourself understood
4. Getting used to the pace of life
5. Going shopping
6. Going to social events/gatherings/functions
7. Worshipping in your usual way
8. Talking about yourself with others
9. Understanding jokes and humor
10. Dealing with someone who is unpleasant/cross/aggressive
11. Getting used to the local food/finding food you enjoy
12. Following rules and regulations
13. Dealing with people in authority
14. Dealing with the bureaucracy
15. Making yourself understood
16. Adapting to local accommodation
17. Communicating with people of a different ethnic group
18. Relating to members of the opposite sex
19. Dealing with unsatisfactory service
20. Finding your way around
21. Dealing with the climate
22. Dealing with people staring at you
23. Going to coffee shops/ food stalls/restaurants/fast food outlets
24. Understanding the local accent/language

25. Living away from family members overseas/independently from your parents
26. Adapting to local etiquette
27. Getting used to the population density
28. Relating to older people
29. Dealing with people of higher status
30. Understanding what is required of you at university
31. Coping with academic work
32. Dealing with foreign staff at the university
33. Expressing your ideas in class
34. Living with your host family
35. Accepting/understanding the local political system
36. Understanding the locals' world view
37. Taking a local perspective on the culture
38. Understanding the local value system
39. Seeing things from the locals' point of view
40. Understanding cultural differences
41. Being able to see two sides of an intercultural issue

Annex B Cross-Cultural Social Intelligence (CCSI) Situational Judgement Test

Sample scenario from Ascalon, Schleicher, and Born (2008)

Instructions
This questionnaire contains a number of situations which include a scenario that ends in a problem and four alternatives to the problem. You are to imagine yourself as the person in the scenario who needs to provide the solution to the problem. You should think about how you would respond in this situation.

Rather than selecting one alternative as your solution, you will evaluate each alternative by evaluating the "likelihood that you would perform" each alternative using the following response scale: 1 = *not at all likely to perform*; 5 = *extremely likely to perform*.

Read each scenario carefully before providing your ratings. Please complete each situation before moving on to the next one.

Chinese-American Scenario

> Wang Mai, an employee who moved to the United States from China one month ago, is having a difficult time getting used to the American way of holding meetings. She has tried to speak to her American manager, Frank Johnson, a few times about the issue, but was always too intimidated. She is currently having a meeting with him to discuss an upcoming production meeting and has decided to bring up the issue so that he may provide her with some advice. They are just about to end the meeting after having discussed all the necessary details.
>
> Frank Johnson (speaking fast): "Well Mai, it looks as though everything is in order for tomorrow's meeting. I must say that I'm very happy with our progress. Everyone seems to contribute his or her ideas. I really like this way of participative involvement; after all it's more efficient and we are doing much better than our competitors. Well, if there's nothing else, I will see you tomorrow."
>
> Mai hesitates in her seat and looks as though she wants to say something but cannot.
>
> Frank Johnson (speaking fast and impatiently): "Is there something more you wanted to talk about?"
>
> Mai again hesitates, but finally says: "I don't think that you understand how difficult it is for me to talk in meetings. I often have to rehearse everything I am going to say several times. When I finally do say something, I feel as though I am yelling over you. I have to keep telling myself that no matter how wrong it seems, I'm not being rude. What frustrates me most is that the team is not getting my best ideas."
>
> What should Frank Johnson say or do now?

Response options

A He replies immediately, “Oh, you really feel that way?! I don’t understand why you have a problem speaking in our meetings. According to our latest business reports, participative meetings are a very direct and effective way to maintain our competitive advantage. You just need to learn how to speak up. It has only been a month since you have been here. Give it time and you will eventually get used to it.” (NE)*

B He replies very slowly, “Mai, I’m sorry that you feel that way.” Then more quickly, “I realize that you may not be used to this kind of meeting style and that you are used to getting direct orders rather than participating in the decision-making. Why don’t you just not talk during the meetings, and if you want to provide feedback – e-mail it to me.” (NN)

C He replies slowly, “Mai, I’m sorry that you feel that way. I sensed that you were not feeling very comfortable at the meetings. I understand that you may not be used to this kind of meeting style and your speaking to me about this now is a great indication that it is of particular concern to you. Can we develop some sort of method that will allow us to continue to have free discussions during the meetings and gain your feedback without making you feel uncomfortable? What if you e-mail me your feedback before the meeting? Would you like to think this over and we can discuss it again tomorrow?” (EN)

D He replies slowly, “Mai, I’m sorry that you feel that way. I sensed that you were not feeling very comfortable at the meetings. I realize that your culture is not used to this kind of meeting style, but the latest business reports say that it is the most efficient way to hold a meeting. I have confidence in you that you will eventually get used to it. Would it help if we enrolled you in a public speaking course such as Toastmasters International?” (EE)

* These notations indicate the CCSI style represented by each response alternative. They are not ordinarily included in the test itself. NE = nonempathetic–ethnocentric; NN = nonempathetic–non-ethnocentirc; EN = empathetic–nonethnocentric; EE = empathetic–ethnocentric.

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List of abbreviations and acronyms

3C – Cross-Cultural Competence

ABLE – Assessment of Background and Life Experiences

ABOS – Attitudinal and Behavioral Openness Scale

ARP – Applied Research Project

ASAP – Armed Services Applicant Profile

BASIC – Behavioral Assessment Scale for Intercultural Communication Effectiveness

BBI – Behavioural-Based Interview

BDI – Behaviour Description Interview

BEI – Behavioural Event Interview

BFI – Big Five Inventory

Biodata – Biographical Data or Information

BOTC – Basic Officer Training Course

CAF – Canadian Armed Forces

CCAI – Cross-Cultural Adaptability Inventory

CCAS – Cross-Cultural Adaptability Scale

CCCI – Cross-Cultural Competence Inventory

CCII – Cross-Cultural Interaction Inventory

CCSI – Cross-Cultural Social Intelligence test

CCSS – Cross-Cultural Sensitivity Scale

CCWM – Cross-Cultural World- Mindedness Scale

CDA – Canadian Defence Academy

CFC – Canadian Forces College

CFLI – Canadian Forces Leadership Institute

CIL – Centre for Intercultural Learning

CIMIC – Civil Military Cooperation

CQ – Cultural Intelligence

CQS – Cultural Intelligence Scale

CSI – Culture Shock Inventory

DFAIT – Department of Foreign Affairs and International Trade

DRDC – Defence Research and Development Canada

EBIS – Educational and Biographical Information Survey

E-Model – E-model Scale for Intercultural Effectiveness

GAP-test – Global Awareness Profile

GCA 360 – Global Candidate Assessment

GlobeInvent – Global Leadership Life Inventory

GMA – General Mental Ability

HOI – History Opinion Inventory

IAA – Intercultural Adaptation Assessment instrument

IAC – Intercultural Assessment Centre

ICAPS – Intercultural Adjustment Potential Scale

ICI – Intercultural Communication Inventory

ICSI – Intercultural Sensitivity Inventory

IDI – Intercultural Development Inventory

IEP – Interculturally Effective Person

IMPPaCTS – Individual Characteristics, Motivation, Professionalism, Problem-Solving, Culture-Specific Skills, Thinking Skills, Social Skills

IO – International Organizations

IRA – Intercultural Readiness Assessment

IRC – Intercultural Readiness Check

ISS – Intercultural Sensitivity Scale

JIMP – Joint, Interagency, Multinational, Public

KSAOs – Knowledge, Skills, Abilities, and Other Characteristics

LFDTS – Land Force Doctrine and Training System

MAP – Military Applicant Profile

MASQUE – Monroe Multicultural Attitude Scale

MPQ – Multicultural Personality Questionnaire

NCM – Non-Commissioned Member

NGO – Non-Governmental Organization

O*NET – Occupational Information Network

OAI – Overseas Assignment Inventory

OGA – Other Government Agency

OGD – Other Government Department

OJQ – Objective Job Quotient

PDF – Professional Development Framework

PSTC - Peace Support Training Centre

PVO – Public Volunteer Organizations

RBQ – Recruit Background Questionnaire

SCAS – Sociocultural Adaptation Scale

SEE – Scale of Ethnocultural Empathy

SJT – Situational Judgment Test

SME – Subject Matter Expert

TSD-PI – Trait Self Descriptive Personality Inventory

UN – United Nations

US – United States

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This report focuses on the construct of cross-cultural competence (3C) in terms of (a) what it comprises, (b) the methodologies that can be used to assess 3C, and (c) the utility of these methods for selection and training within the Canadian Armed Forces (CAF). Section 1 provides background information on parallel research pursuits within the CAF that were the impetus for this report. In Section 2, conceptual and operational definitions of 3C are discussed. In Section 3, two considerations for assessing 3C are presented: (1) differences in the need for 3C between military and civilian populations (the latter is where the bulk of 3C research has been generated and validated); and (2) the extent to which 3C can be influenced through training, education, or experience. In Section 4, six methodologies for assessing 3C are described: self-report questionnaires/inventories; biodata instruments; situational judgment tests; behaviourally-based interviews; behavioural observations; and assessment centres. For each method, relevant examples of current 3C measures are presented. Section 5 presents practical implications of the available research on 3C with regards to how the CAF can make effective use of both selection and training to acquire a cross-culturally competent workforce. Finally, in Section 6, recommendations for future research are provided.

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Cross-cultural competence; conceptual and operational definitions; assessment methods