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Analysis of Cross-Cultural Training Provided to United States Air Force Civil Engineer Officers, and How Engineering Efforts are Affected on Overseas Air Force Installations: A Delphi Study

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ANALYSIS OF CROSS-CULTURAL TRAINING PROVIDED TO UNITED STATES AIR FORCE CIVIL ENGINEER OFFICERS, AND HOW ENGINEERING EFFORTS ARE AFFECTED ON OVERSEAS AIR FORCE INSTALLATIONS: A DELPHI STUDY

THESIS

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**DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY**

AIR FORCE INSTITUTE OF TECHNOLOGY

Wright-Patterson Air Force Base, Ohio

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THESIS

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Air Education and Training Command

In Fulfillment of the Requirements for the

Degree of Master of Science in Engineering Management

Bianca E. Boney
Captain, USAF

February 2018

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Bianca E. Boney

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Chair

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Member

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Member

Abstract

U.S. military personnel perform a wide array of roles and missions at locations all over the world.   As such, this research investigates and describes the current process of cultural training, its adequacy, and examines how cultural differences and collaboration efforts may impede or enhance project management and engineering efforts. This qualitative analysis is conducted through a Delphi study of U.S. Air Force officers consisting of 15 subject matter experts (SMEs) with experiences from 13 different countries. All reported to have daily to weekly interactions with locals and foreign partners due to job requirements; however, no set standard of cultural training was found. Approximately one quarter of the panel received no cultural training. With exception of one, the remaining SMEs gave negative feedback as to the adequacy, applicability, and usefulness of their training they did receive. The research recommends implementing in-person training that covers the local culture; this will give the inbound military member an understanding of Host Nation work customs and accepted behaviors, basic phrases and mannerisms, and how to interact with foreign partners to achieve work goals. Furthermore, this research explores current project management practices in overseas military construction. No standardized practices were found; however, the research established a list of obstacles and challenges. The highest ranked issues reported were: differences in construction and safety practices, problems with the Host Nation customs office, and difficulties with security badging processes. The research found that these obstacles and challenges have caused delays and schedule changes; however, no standardized methods to track such data were identified.

Acknowledgments

I would like to express my sincere appreciation to my research advisor, Dr. Diedrich Prigge, for his guidance and support throughout the course of this thesis effort. I would also like to thank my sponsor, Dr. Patricia Fogarty, the Assistant Professor of Cross-Cultural Relations at the Air Force Culture and Language Center, for the support provided to me in this endeavor. I am also extremely thankful to Colonel Chris Stoppel, for his keen interest in my research, his engineering insight, and his own military experience.

Bianca E. Boney

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I. INTRODUCTION

General Issue and Background

The military performs a wide array of roles and missions at locations all over the world. In fact, 161 Air Force Installations are spread globally (BUILDER SMS, 2017). Consequently, military personnel must work with a wide array of different people encompassing a vast diversity of cultural backgrounds to include allies, neutral nations, personnel from non-governmental associations, and civilians. Communication and military partnerships are more important than they've ever been.

Military professionals can use cultural understanding to advance military effectiveness. Lt Col Speegle, a former Director of Leadership Studies at the Air Command and Staff College, stated that "intercultural competency can improve military effectiveness by reducing unintended consequences, improving planning, and by strengthening communication" (Speegle, n.d.). To be effective in our mission, the Air Force considers the understanding of language, region, and culture, foundational to cross-cultural competence. Cross-cultural competence, or "3C", is "the ability to quickly and accurately comprehend, then effectively act in a culturally complex environment to achieve the desired effect—without necessarily having prior exposure to a particular group, region, or language" (Air University, 2009).

Expatriates are people who live outside of their native country. Civilian organizations tend to use expatriate type of assignments for transfer of organizational

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knowledge, management of international subsidiaries, and career development (Financial Times, 2017; Dowling, Festing, & Engle, 2017; Bonache, Brewster & Suutari, 2001). Likewise, military personnel stationed overseas can be defined as a type of expatriate as they live abroad for a defined time period, with or without family. Research has consistently shown that cross-cultural and family adjustment are factors that contribute to the effectiveness of the expatriate's presence abroad (Menguc & Bhuian, 2015; Li, 2016; Zhang, Harzing & Fan, 2018).

Besides adjusting to a foreign culture, a different language, and a new job, Air Force Civil Engineers are tasked with maintaining, repairing, and improving existing facilities and infrastructure. This includes managing new construction projects, while upholding unfamiliar national regulations from the host country. When it comes to any mission, the relationship between the Department of Defense (DoD) personnel and the host nation parties can impact the end state for success, or for failure. Specifically to engineering, dependent on collaboration and integration efforts, a solid partnership toward common goals can make or break the engineering efforts. Previous research has proven that "managing a multicultural construction project team presents new challenges and opportunities to harness new skills, in particular language and cultural knowledge" (Ochieng, Price, Ruan, Egbu, & Moore, 2013). Further research has examined the interaction between multinational and multicultural teams. Stacey Connaughton and Marissa Shuffler (2007) studied the ways previous scholars conceptualized culture. In their own research, they found that organizations working with multicultural teams face a threefold multicultural challenge:

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- enabling a mixed group to work towards a common goal;

- maximizing contribution of each project team member; and

- ensuring fair treatment for all irrespective of background.

This research explores and attempts to quantify the effect of collaboration efforts on Air Force engineering projects and how cross-cultural competencies may impact progress. Identifying best practices in cross-cultural collaboration efforts will add value to the understanding of how interactions may positively or negatively affect the Air Force Civil Engineer Squadron's mission. The research is generalized, and can be adapted towards similar units with comparable missions and equivalent foreign partner interaction.

Problem Statement and Scope

Ethnocentrism is the judgment of other groups solely by the values and standards of one's own culture (Brewer, 2005). Personality differences and ethnocentrism may have an effect on military members stationed overseas. With this in mind, the problem this research effort seeks to answer is to determine how cross-cultural personality factors and cultural differences might affect military efforts. The research will identify ways to influence cross-cultural situations in ways that improve mission success. Additionally, past experiences and best practices will identify how military members can better communicate, negotiate, and build relationships in cross-cultural contexts.

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Research Objectives and Assumptions

The focus of this research is to determine best practices in cross-cultural collaboration efforts. By analyzing current practices in cultural training, the 3C, and their implications, this research attempts to add value to the existing interactions on installations overseas.

A primary assumption of this research is that besides Special Operations, existing programs do not provide adequate language and culture training for specific Air Force career fields and specific countries. At Maxwell Air Force Base, the Air Force Culture and Language Center (AFCLC) manages the Language Enabled Airman Program (LEAP). A career-spanning program, LEAP identifies, develops, and sustains Airmen's foreign language and cultural capabilities (Jordan, 2014). The program is designed to develop cross-culturally competent leaders across all Air Force specialties with a working-level foreign language proficiency (Air University, 2017). Another program provided by the military is the Olmsted Scholar Program. It provides the opportunity for officers to study abroad in a foreign language at an international university. The purpose of these programs is to provide the military member an in-depth understanding of foreign languages and cultures. A select few Air Force personnel take advantage of these programs each year, but many more get deployed or assigned overseas without receiving adequate culture general or culture specific training. This leads to the following question: how else can we enhance mission execution and effectiveness, and bolster commitment to the host nation?

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Investigative Questions

The following are the questions the researcher seeks to answer:

1. What are the current practices of cultural training?

2. Are the current practices of cultural training adequate?

3. What are the standard project management practices with foreign partners?

4. How do cultural differences play into schedule delays and increase in costs?

Methodology & Materials Overview

The primary focus of this research was conducted through a Delphi Study. Developed by the Rand Corporation in 1950, the technique comprises a series of structured questions developed by the researcher and feedback reports synthesized from the interview responses (Nicholas & Steyn, 2012). This technique will combine the opinions of several people to develop a single judgment. The criteria for selecting subject matter experts (SME) was centered on cross-cultural and military civil engineering experience.

Due to the human involvement for the Delphi Study, an Institutional Review Board (IRB) exemption application was submitted and approved. The purpose of the IRB is to provide ethical and regulatory oversight of research that involves human subjects (National Institute of Environmental Health Sciences, 2015). The approval process requires submittal of an IRB exemption package. The package must include an exemption letter containing a short description of the research topic, a résumé for each researcher, and a copy of the survey instrument to be used. Additionally, each researcher must complete extensive training through the Collaborative Institutional Training

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Initiative (CITI) Program. The training is comprised of 21 modules ranging in various topics from the history and ethical principles of the IRB to requirements of privacy and confidentiality throughout the research process (Collaborative Insititutional Training Inititative , 2017).

The AFCLC was the sponsor for this research and provided basic course material to assist in the research effort. Besides managing LEAP, the AFCLC also offers two courses to military enlisted members as part of the Community College of the Air Force (CCAF) program: Introduction to Culture, and Cross-Cultural Communication. Through these courses, members learn the concept of culture, how to recognize its influence, and how to analyze cross-cultural situations (Air University, 2017). The AFCLC strives to hone in on the importance of building cross-culturally competent Airmen in the Air Force, in both personal and professional settings. However, these courses are only offered as an elective, specifically to enlisted members, as part of their associates degree requirements for the CCAF. These courses would be of great value, not only to the enlisted, but to all members of the military and civil service partners.   This research offers areas of improvement to the training provided to Air Force personnel in preparation for their deployment or overseas permanent change of station.

The research was conducted in a two phase sequentially exploratory mixed methods design. The first phase was an extensive literature review of psychology, international human resource management, business management, construction management and military policy. The second phase was the Delphi study with multiple iterations of surveys.

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II. LITERATURE REVIEW

...in the 21ˢᵗ century, military strength will be measured not only by the weapons our troops carry, but by the languages they speak and the cultures that they understand (Obama, 2009).

Topic Statement and Brief Explanation of Key Terms

The importance of communication and negotiation, and the significance of building relationships in cross-cultural contexts is the central matter of this research. At the Veterans of Foreign Wars (VFW) National Convention, President Obama explicitly stated the above quote, further proving the importance of cross-cultural competence and investing in new skills and specialties to broaden military capabilities. Exploring ways to influence cross-cultural situations and understanding best practices currently in use will improve mission and engineering success. How do we currently process new construction and maintenance requirements? Do our foreign partners delay approval or impede progress? Cultivating a strong relationship and understanding how our interactions with foreign partners affect the engineering mission will enhance the accomplishment of civil engineering tasks. Consequently, this will potentially mitigate future mission delays.

A combination of one's own values, beliefs, norms, standards, customs, rituals, language, behaviors and habits – culture is fundamental to everyone's perceived identity that are shared by group members and passed on over time (Agramonte, 2010; McAuliffe, 2013). As defined earlier, people who live outside of their native country are

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labeled as expatriates, and military personnel deploying or permanently moving to overseas locations can similarly be identified as such. A problem arises as soon as personnel make false assumptions and begin to judge the locals of the foreign country solely by the values and standards of one's own culture; this is called ethnocentrism (Barger, 2017; AllAboutPhilosophy.org, 2017; Brewer, 2005). In an article titled *Culture Influences Perception*, Dr. Rick Nauert claims that the challenge for Americans in understanding someone else's point of view is due to the fact that the American culture encourages individualism (Nauert, 2015). Research considers the dimension of individualism and collectivism as the single most fruitful dimension in cross-cultural psychology (Heine, 2010; Oyserman, Coon & Kemmelmeier, 2002). Individualism is an independent view of oneself. It emphasizes personal freedom, and awards social status to personal accomplishments and actions that make someone standout. (Gorodnichenko & Roland, 2012; Hopper, 2015; Triandis et al., 1988). In contrast, collectivists are closely linked individuals who view themselves as part of a larger group; standing out and nonconforming actions are discouraged (Gorodnichenko & Roland, 2012; Triandis, 1995; Markus & Kitayama, 1991).

The U.S. Air Force (USAF) defines cross-cultural competence as the ability to understand and effectively act in a culturally complex environment (Air University, 2009). Trust, respect for diversity, equity, fairness, and social justice are the underlying principles to cultural competence (Livingstone & Milani, 2014). Collaboration efforts may aid in building a relationship of trust with our foreign partners. The idea is to work together as two individual entities towards a single common goal.

Justification for Research and Scope of the Review Method

It is important to understand the current processes of how engineering efforts are accomplished in overseas locations. Installations can improve their cross-cultural collaboration efforts in hopes to expedite construction procedures. This includes host country approval, design and construction techniques, and other potential delays and disagreements that could otherwise be avoided. The literature review identifies a gap in research between the civilian and military setting in the matter of cross-cultural construction.

The review of literature is comprised of peer reviewed journal articles primarily from the *International Journal of Project Management*, the *International Journal of Managing Projects in Business,* the *International Journal of Human Resource Management,* and the *International Journal of Psychology.* Additionally, military policy and directives provided further background information for the subject matter.

The research was conducted with a concentration on cross-cultural competencies, cross-cultural communication, and cross-cultural engineering teams. The Air Force Culture and Language Center (AFCLC) provided insight on cross-cultural and communication training provided to military personnel. The remaining literature review identifies multiple cultural and personality frameworks to understand the different models and cultural scales that currently exist. These measure personality differences, performance and commitment in an organization, and cultural intelligence. By understanding the USAF definition of culture, and identifying the foundation of its importance to the military, the pertinent frameworks bolstered the need to understand cross-cultural competence in a military engineering setting.

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Importance of Culture to the USAF

Operating in unfamiliar cultures in an effective manner is of utmost importance to the USAF and the Airmen conducting missions overseas. This has been highlighted in several changes to policy and organizational structure initiated by the U.S. Department of Defense and documents published by the Department of the Air Force. In early 2005, the Office of the Secretary of Defense approved the "Defense Language Transformation Roadmap" which sparked the effort to grow language, regional expertise, and culture (LREC) capabilities in the force (Department of Defense, 2005).

As the Chairman of the Joint Chiefs of Staff Instruction *LREC Capability Identification, Planning, and Sourcing* explains, foreign language skills and regional expertise are "enduring warfighter competencies critical to global mission readiness and integral to joint operations" and states that "services and commanders in particular must weigh and stress the importance of LREC skills as critical competencies that are an integral part of the warfighter's skill set" (CJCSI 3126.01A, 2013). Subsequently, the Air Force Chief of Staff, General Michael Moseley, directed language training and regional studies to become part of the curriculum for various professional military education programs (Moseley, 2006). In a letter to individual Airmen, Air Force Secretary Michael Wynne, called every Airman an "ambassador" and noted to help build lasting long-term relationships with allies and coalition partners, he was committed to boosting regional, cultural, and language skills to make each member a more capable ambassador (Wynne, 2007). Through this leadership focus, cultural guidance had been included in the 2006 Quadrennial Defense Review Report (QDR) (Department of Defense, 2006).

The AFCLC was established in order to improve Airmen's cross-cultural competence. It founded the Language Enabled Airman Program on the principle that LREC were critical competencies (Air University, 2017). Most recently, the Secretary of the Air Force, Heather Wilson, and the Air Force Chief of Staff, General David Goldfein, reemphasized the Air Force priorities, which included a focus to "strengthen our alliances" (Wilson & Goldfein, 2017). These policy changes and efforts have emphasized the importance of developing culturally competent Airmen and further stress the need for a more culturally adaptive force.

The USAF defines culture as the "creation, maintenance and transformation across generations of shared patterns of meaning, affiliation, action and organization by groups" (AFCLC, 2016, slide 4). Patterns of meaning refer to the systems of language or ways of writing that people use to communicate significance. People affiliate themselves into different groups based on specific motives and shared interests, such as political affiliations, hobby groups, friendships and family (Chapman & Schwartz, 2010). Shared cultural patterns of action refer to regular or repeated behaviors and activities. Patterns of organization are very similar to patterns of affiliation; however, an organization is created specifically to solve problems in society (AFCLC, 2016, slide 5). Hospitals, schools, and military forces are a few examples of organizations.

The "Introduction to Culture" course at the AFCLC uses the "Iceberg Analogy" to explain that there are more visible and less visible aspects of culture. Figure 1 illustrates how behaviors are at the top of the iceberg. Actions and symbols convey meaning through visible behaviors, and are the easiest parts of culture to observe. Below the

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surface, affiliations, organizations, values and beliefs are not necessarily invisible;

however, they are harder to see and understand at first (AFCLC, 2016).
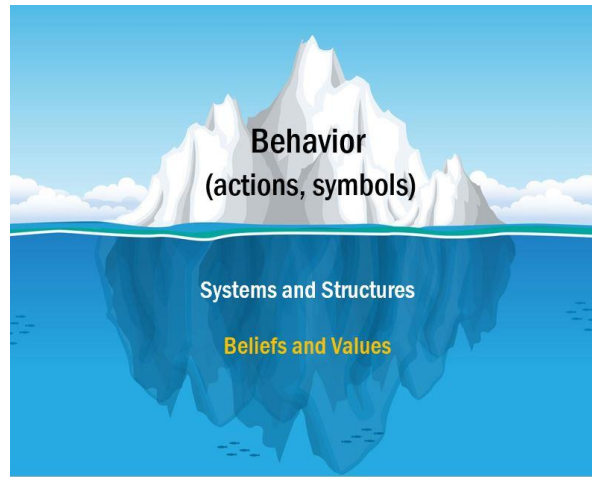
Figure 1: Iceberg Analogy of More vs Less Visible Aspects of Culture
Courtesy of AFCLC, 2016

Many commercial language and communication training programs use a similar

iceberg concept of culture to introduce the idea that beyond the visible surface exists a

whole spectrum of cultural dimensions (Prime Performance, 2018; Streeval, 2016;

Livingstone & Milani, 2014). One such example used by the Amercian Field Service

(AFS) is depicted in Figure 2. The AFS Intercultural Program is an international youth

exchange, study abroad, and volunteer program that provides intercultural knowledge to

students, families, and volunteers, with a mission to bridge gaps between cultures (AFS

Intercultural Programs Inc., 2018). Is eye contact a sign of honesty or defiance? Is it

polite to arrive early or late? What are the unspoken rules for personal space and tone of

voice? The awareness of the attitudes, habits, norms, and both spoken and unspoken

rules is just the beginning of understanding the cultural iceberg of others.

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Figure 2: The Iceberg Concept of Culture
Courtesy of AFS Intercultural Programs Inc., 2010

Beliefs are the ideas and assumptions of what people think as being "true" in the world while values are the beliefs shared by a cultural group (AFCLC, 2016; Triandis, 1989). People are all born and raised into a specific culture. Dr. Allison Abbe and Melissa Gouge researched cultural training programs provided to military personnel and state that a military member can use their understanding of his or her own culture and use past experiences to broaden their knowledge and skills to engage with other cultures (Abbe & Gouge, 2012). Former Director of Leadership Studies at the Air Command and

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Staff College, Lt Col Speegle rationalizes that by first recognizing our own cultural preferences, we can then begin to develop our 3C (Speegle, n.d.).

As illustrated in Figure 3, the Air Force considers language, region, and culture as the three foundational areas to cross-cultural competence (AFCLC, 2016, slide 13). Understanding general concepts that can help you relate to all people of all cultural backgrounds is what the AFCLC calls culture-general knowledge.   This form of general knowledge is broad, and prepares you for interaction with people from any culture. Conversely, language and regional information fall under culture-specific knowledge. The AFCLC clarifies that simply knowing a language is not sufficient on its own to operate effectively in a foreign culture – this is why the language portion of the figure is the smallest.
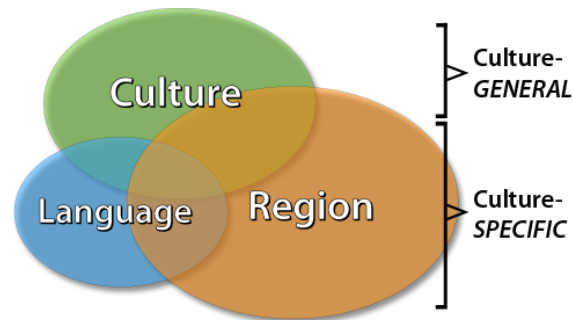
Figure 3: Foundational Areas to 3C
Courtesy of AFCLC, 2016

While it is important to understand culture-general concepts to relate to all people of different backgrounds, General Petraeus noted the importance of knowing specific information related to the culture of the host country. In an article written by General Petraeus, he described the lessons he learned from Iraq:

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Working in another culture is enormously difficult if one doesn't understand the

ethnic groups, tribes, religious elements, political parties, and other social

groupings – and their respective viewpoints; the relationships among the various

groups; governmental structures and processes; local and regional history; and, of

course, local and national leaders. (Petraeus, 2006)

The 3C model the USAF uses is shown in Figure 4. In the center, the model

focuses on influence. It demonstrates that in order to have influence over cross-cultural

situations we must learn how to relate, communicate, and negotiate. Through this model,

the USAF imparts that mission success will be improved by building knowledge in

culture-general and culture-specific areas and by becoming more conscious of the ways

we learn about other cultures and the ways we interpret cultural information (AFCLC,

2016).

Figure 4: USAF Cross-Cultural Competence Model
Courtesy of AFCLC, 2016

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Cultural Scales and Models

       After researching the USAF definition of culture and understanding the foundation of its importance to the military, we can now focus on the different models and cultural scales that currently exist. These measure personality differences, performance and commitment in an organization, and cultural intelligence.

Personality Differences

       To comprehend the differences in culture, a person's personality may explain their patterns of thought, emotion, and behavior. American psychologist, Lewis Goldberg developed the markers for the "Big Five" factor structure. Within this framework, five main factors summarize human personalities: conscientiousness, agreeableness, neuroticism, openness to experience, and extraversion (Goldberg, 1981). Each factor is comprised of different characteristics as listed in Table 1.

Table 1: Characteristics associated with the Big Five
Source: Adapted from Colquitt, Lepine & Wesson, 2011, p. 296

Conscientiousness	Agreeableness	Neuroticism	Openness	Extraversion
Dependable	Sympathetic	Moody	Imaginative	Sociable
Organized	Cooperative	Emotional	Curious	Passionate
Ambitious	Helpful	Jealous	Sophisticated	Assertive
Hardworking	Courteous	Unstable	Refined	Talkative

       These characteristics can be used to evaluate a person's personality traits and cultural values. By describing what people are like, organizations can identify significant

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influences on job performance and therefore identify how personnel will deal with stress, interact with others, and adjust to new assignments.

Further research has identified five personality dimensions that maximize performance and commitment specifically of expatriates (Van der Zee & Van Oudenhoven, 2001). Expatriates may show signs of ethnocentrism. Ethnocentric expatriates may be less likely to adjust to a new culture and therefore less likely to fulfill their duties in the international environment and consequently leads them to withdraw from their assignment (Colquitt, Lepine & Wesson, 2011, 314). The five personality dimensions that are assessed through a multicultural personality questionnaire are cultural empathy, open-mindedness, emotional stability, social initiative, and flexibility (Van der Zee & Van Oudenhoven, 2001). Cultural empathy is the ability to empathize with the thoughts and feelings of others with different cultural backgrounds. By being open and unprejudiced towards cultural values and norms of others, a person shows strength in open-mindedness. Emotional stability is the capability to remain calm during stressful situations that tend to arise in unknown environments. Being able to easily approach others is a characteristic of the social initiative dimension. This will aid in building connections and encourages strength of relationships. Similar to the USAF phrase "flexibility is the key to airpower," the ability to adjust behaviors in regards to new situations is the final personality dimension that can maximize the performance and commitment of expatriates.

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Cultural Intelligence

The second principle to comprehending cultural differences is cultural intelligence (CQ). CQ is defined to be a dynamic competency, which can be acquired through training. It represents an individual's competence to successfully adapt to new and unfamiliar surroundings, and still be equally productive at work (Earley & Ang, 2003; Ang et al., 2007; Ang & Van Dyne, 2008). Van Dyne's cultural intelligence model is composed of four qualitatively different capabilities. The framework consists of the following factors: cognitive, meta-cognitive, motivational, and behavioral (Van Dyne, Ang, & Livermore, 2010). Understanding cross-cultural differences, and having knowledge of cross-cultural issues, is the basis of the cognitive CQ factor. It refers to the recognition of cultural systems, norms, and values. The meta-cognitive CQ factor is the ability to strategize and comprehend unfamiliar situations. Awareness, planning, and checking are characteristics of the meta-cognitive dimension. Showing interest, confidence, and drive to adapt cross-culturally are the elements of the motivational CQ factor. Behavioral CQ refers to the verbal and nonverbal actions. Knowing when to adapt to another culture when interacting with foreign personnel can enhance mission effectiveness.

Understanding, comprehending, and adapting to cross-cultural differences are the key points of the cultural intelligence model described above. Research has shown that many actions and words have multiple meanings (Nauert, 2015; Wojciszke, 1994; Donnellon, Gray, & Bougon, 1986). By gaining some perspective on what a person may be thinking, we can sort out what they really mean. If this skill is not well developed,

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then we will tend to make more errors in understanding what another person means (Nauert, 2015).

Dr. Brooks Peterson developed a framework which explores five basic dimensions for understanding people. It provides insight as to how your cultural style might affect professional relationships, decision making, and management style (Speegle, n.d.). The Peterson Cultural Style Indicator allows professionals to take a 25 question survey and compares their cultural style to the typical style of people in 95 countries around the world (Peterson, 2004). Figure 5 depicts an example comparison graph that would be included in the resulting report along with personalized suggestions based on your score.
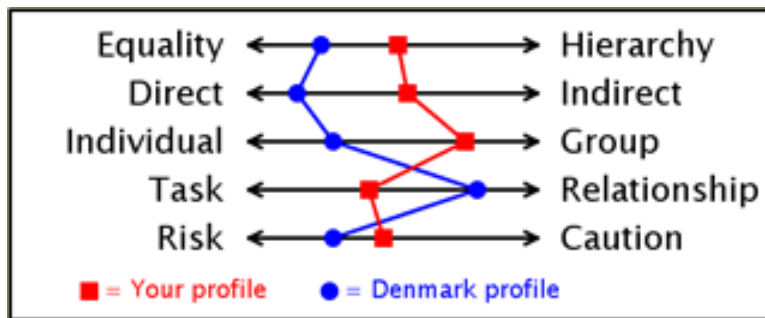
Figure 5: Peterson's 5 Basic Cultural Scales
Courtesy of Dr. Peterson & acrosscultures.com

Cultural Awareness

Cultural awareness is the final concept for cross-cultural competence in understanding cultural differences. Dr. Allison Abbe and Melissa Gouge compared cultural training programs that had been funded through defense research that were partly implemented into training programs. Their comparison was between the cultural training

military members received back in the Vietnam era to the current training provided to military personnel in preparation for operations abroad. The research emphasized that cultural understanding and related skills was essential for military personnel.

Cultural self-awareness is important. The impact of one's own culture is often unrecognized and automatic (Abbe & Gouge, 2012); however, ethnocentrism is defined as the judgement of other groups solely by the values and standards of one's own culture (Brewer, 2005). Understanding our existing knowledge can assist in acquiring new knowledge. As Dr. Abbe and Gouge (2012) have explained, "instruction can make cultural self-awareness explicit" and by doing so, we can "use it to structure new learning" (p. 11).

One of the methods the researchers studied was the contrast-American exercise. This was a role-playing style exercise where live actors played the role of someone from another culture. It was developed to identify American cultural patterns, mirror images of those patterns, and advisory overseas scenarios (Weaver, 2011). Another method developed through the Navy was Bafa Bafa. A cultural simulations game, Bafa Bafa was created to learn not just specific cultural norms and facts for specific countries, but also the general principles of underlying intercultural dynamics as military personnel were likely to work in several different countries (Shirts, 1992).

Research has shown that problems associated with cross-cultural adjustment to the host country are one of the most frequently cited reasons for expatriates' premature return and failure (Hechanova, Beehr & Christiansen, 2003; Arman & Aycan, 2013).

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Conclusion

Cross-cultural competencies can strengthen military effectiveness. The reduction of unintended consequences, the improvement of planning, and the strengthening of communications will magnify foreign partner relationships (Speegle, n.d.). International construction projects are characterized by differences in cultural norms, language barriers, regulations, institutional work practices, routines, work cultures, safety standards, etc. (Chua et al., 2003; Miller & Lessard, 2001; Orr, 2005). The methodology described in the next chapter applies the different frameworks established in the civilian sector to the construction efforts in the purview of the USAF. The end goals are to encourage a positive regard for host nationals, to bolster social objectivity, to enhance the ability to deal with culture shock, and to cultivate the maintenance of effective relationships.

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III. METHODOLOGY

Purpose of Investigation and Theory

The overall purpose of this research is to identify better ways to communicate, negotiate, and build relationships in cross-cultural contexts. Specifically, the intent is to identify ways to influence cross-cultural situations in ways to improve engineering and mission success. Understanding how cultural differences and collaboration efforts may impede or enhance engineering projects is the central focal point to this research effort.

The research was conducted in a two phase sequentially exploratory mixed methods design. The first phase was the extensive literature review. The literature review identified relevant factors from psychology, international human resource management, business management, and construction management. The second phase of the sequentially exploratory mixed methods design is the Delphi study. This technique combines the opinions of several people to develop a single judgment. It provides a method of consensus among the experts.

Accountability and Approvals

Subject matter experts were selected by cross-cultural and military civil engineering experience in overseas locations. A suggested minimum size of the panel consists of 7 participants (Linstone, 1985). Due to the human involvement for the Delphi Study, an Institutional Review Board (IRB) application was submitted. As the impact to personnel was measured to be minimal, the request was approved with no issues. The purpose of the IRB is to provide ethical and regulatory oversight of research that involves human subjects (National Institute of Environmental Health Sciences, 2015). The

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approval process requires submittal of an IRB exemption package. The package must include an exemption letter containing a short description of the research topic, a résumé for each researcher, and a copy of the survey instrument to be used. Additionally, each researcher must complete extensive training through the Collaborative Institutional Training Initiative (CITI) Program. The training is comprised of 21 modules ranging in various topics from the history and ethical principles of the IRB to requirements of privacy and confidentiality throughout the research process (Collaborative Insititutional Training Inititative, 2017).

Initial Procedures and Processes

Developed in 1950 by the Rand Corporation, a Delphi study is typically comprised of a series of structured questions developed by the researcher (Nicholas & Steyn, 2012). Responses from the subject matter experts are analyzed to identify major and minor themes expressed by the participants. These themes are compiled into feedback reports, which are then forwarded to the experts for another follow-up iteration of structured questions. This answer/feedback style methodology is repeated until consensus among the experts is established. The Delphi methodology was selected as the proper means to collect data for this study as it has been proven to be a popular research tool for program planning, needs assessment, identifying and prioritizing issues for managerial decision-making, and policy determination (Okoli & Pawlowski, 2004; Hsu & Sandford, 2007). The technique combines the opinions of several people to develop a single judgement.

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Quantitative researchers typically prefer to select a random sample in which all participants have an equal chance of being selected. However, this qualitative research utilized a purposive sample of individuals. For a purposive sample, the researcher selects individuals that are key informants in the subject matter (Patten, 2009). For this research, panelists were subjectively selected based on recommendations by the Civil Engineer Assignments Officer at the Air Force Personnel Center (AFPC). Qualification criteria for selection were centered on recent cross-cultural and military civil engineering experience abroad via deployment, short tour, or permanent overseas assignment. The panel participants covered a broad range of officer ranks from Captain to Colonel that were spread across the globe to gain a general understanding of foreign partner interaction. To build the final research panel, each qualified SME was contacted in advance to receive agreement for participation.

Phase 2 Delphi Study Questions

In an effort to answer the primary research questions discussed in Chapter 1, the Delphi study questions were created based off of the literature review and the Air Force cross-cultural training directives. Research has shown that, on average, the more questions a survey has, the less time respondents spend answering each question (Chudoba, 2018). The U.S. Census Bureau has also conducted similar research on questionnaire length versus response rate and found that as questionnaire length increases, total response rate decreases (Treat, 1996). Therefore, besides demographic and general questions about previous overseas experiences, cultural training, and cross-

cultural competence, the researcher limited the qualitative exploration of the Delphi study to the following questions:

Adapting/Training

Question 1: Cultural intelligence is defined to be a dynamic competency which can be acquired through training. It represents an individual's competence to successfully adapt to new and unfamiliar surroundings and still be equally productive at work (Earley & Ang, 2003; Ang et al., 2007). For a military member that is newly stationed overseas, how does the members' capability to adapt to a new/unfamiliar location affect productivity at work?

Question 2: Previous research revealed that some knowledge about the host country culture prior to arrival is essential to speed up the adjustment process (Kivrak et al., 2010). What was your process on gaining familiarity on OCONUS locations prior to arrival? How can we improve this?

Question 3: Expatriate adjustment has 3 facets: work adjustment, interaction adjustment, and general adjustment. Work adjustment involves adapting to new job tasks, roles, supervision, and performance expectations. Interaction adjustment occurs when dealing or interacting with host nation country nationals in work and non-work situations. General adjustment deals with an overall adjustment of living in a foreign land and adjusting to its cultural environment. Adjustment facilitates exchange of knowledge, competence acquisition in the new role and develops a sense of comfort in the new role. How can we develop military personnel so that they proactively seek support and acquire culturally acceptable skills and behaviors?

Communication

Question 4: How do verbal and non-verbal aspects of social interactions differ? What is the importance of understanding these traits?

Question 5: How does miscommunication due to differences in languages and meanings affect collaboration efforts?

Project Management

Question 6: How are projects in overseas locations different than projects at CONUS bases?

Question 7: What is the process for approval in overseas locations? Besides receiving US approval, is there host nation approval required? What are the MOU's and agreements that may affect/delay progress?

Question 8: International construction projects are characterized by differences in cultural norms, regulations, routines, work cultures, institutional work practices, safety standards, language barriers, etc. (Chua et al., 2003; Miller & Lessard, 2001; Orr, 2005). How do these differences affect military projects in OCONUS locations? Are there other cultural aspects that add to the challenges and risks faced by the engineers/projects?

Final Procedures and Processes

Once these questions were reviewed and approved by the IRB, they were uploaded onto SurveyMonkey. Founded in 1999, SurveyMonkey is a free online survey tool which claims 3 million people around the world use their platform every day (SurveyMonkey, 2018). It offers various formats for asking questions such as multiple

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choice, true or false, open-ended, etc. The research utilized a Likert Scale format for several questions which allowed the individuals to express how much they agreed or disagreed with a particular statement. Response anchors can be varied dependent on the type of statement (Vagias, 2006). Examples of the ones used in this research include: level of agreement, level of importance, and level of problem. After several dry runs and system checks, the official link to the survey was then distributed to the SME panelists. As military personnel tend to be more responsive when given due dates, panelists received a deadline for survey response completion. Due to the nature of the busy military life style, a follow up email was sent out to remind each individual of pending survey completion.

Analysis began once the responses were collected and the final data was pulled from SurveyMonkey. For the first round of the Delphi study, the researcher conducted several iterations of review. The first run was to gain an overall understanding of the responses. The second run incorporated the categorization process for major themes. An example of this process is visible in Figure 6. A third and final review took an even closer look at the major themes found in the second run and synthesized them further into key roots. These major themes and key roots were used to create the second round of questions for the Delphi study to gain a sense of further understanding and reach a form of consensus.

1	Knowing and being empathetic to the fact that a collection of people from another culture, or background, not my own, may have a largely different perspective or interpretation on e things, histories, or events.
2	Being able to adjust to and apply learned aspects of a foreign culture in social and profess environments.
3	The understanding of various cultures a person interacts with
4	Ability to interact with, incorporate, and lead cross-cultural teams.
5	Ability to understand and operate within another cultural while executing the mission to you cultural standards
6	Ability to understand another culture and then act appropriately and effectively in that envir

Green - Understanding cultural norms, customs & courtesies
Yellow - Communicating and interacting
Red - Identifying and relating to similarities and differences
Blue - Incorporating and leading cross-cultural teams
Purple - Adjusting and applying learned aspects
Purple Underlined - Empathizing on people's different perspectives/views

Figure 6: Review and Categorization Example

Conclusion

Typically, the results of a Delphi study consist of qualitative responses. The expected results of this qualitative exploration was a list of actionable skills and methods that the Department of Defense can use to better facilitate 3C efforts. Additional results include the identification of cross-cultural competencies that contribute to adjustment from the military personnel's perspective and actionable items that can be used to improve training of Airmen upon getting deployed or stationed overseas.

IV. ANALYSIS AND RESULTS

Introduction of First and Second Iteration

The Delphi study consisted of a group of participants specially selected for their particular expertise. Participants must have either been currently stationed or deployed overseas or have had recent exposure to an overseas assignment. The AF Civil Engineer Assignments Officer assisted in the process of recommending participants for the panel. A total of 20 USAF Civil Engineers spread across the globe were contacted to participate on the panel of subject matter experts. The first round of questions received responses from 15 panelists while the second round received responses from 13 panelists. The panel covered a total of 13 different countries, ranging from six to twelve month deployments, one year short tours, and permanent overseas assignments lasting over a few years. The panelists were asked to include information from their two most recent overseas experiences. Through the comparison of the most recent overseas experience and the second most recent experience, the research could identify further similarities or

Figure 7: Location of Panelists' Experience

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potential fluctuations. **Error! Reference source not found.** illustrates the locations the panelists represented.

Understanding the amount of contact the panelists had with host nation personnel and locals was the first step of the study. Figure 8 shows that over 90% of the panelists interacted with foreigners on a daily to weekly rate due to their job requirements. Similarly, over 60% of the panelists reported to interact with host nation personnel and locals outside of their work responsibilities on a daily to weekly basis.
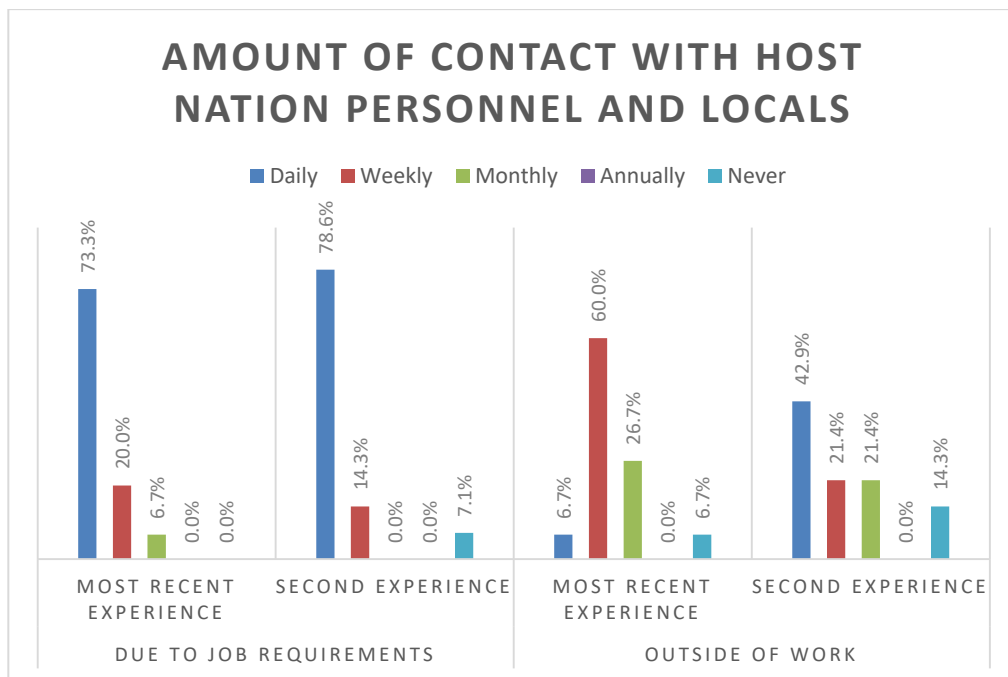
Figure 8: Amount of Contact with Host Nation Personnel and Locals

The next step was to determine the types of training the panelists received either prior to or upon arrival of their overseas assignment or deployment. Training on the host nation could include anything from basic language introduction, to cultural background or local information. It is noteworthy to point out in Figure 9, that at least a quarter of the

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panelists did not receive any type of training. Two individuals reported "other" and commented in their response to have received a combination of the options given.

TYPE OF CULTURAL TRAINING RECEIVED

■ Most Recent Experience ■ Second Experience

Category	Most Recent Experience	Second Experience
N/A (Received No Training)	26.7%	28.6%
Computer Based Training (CBT)	26.7%	21.4%
In Person (One On One)	0.0%	0.0%
In Person (Classroom Style With Others Present)	33.3%	50.0%
Other	13.3%	0.0%
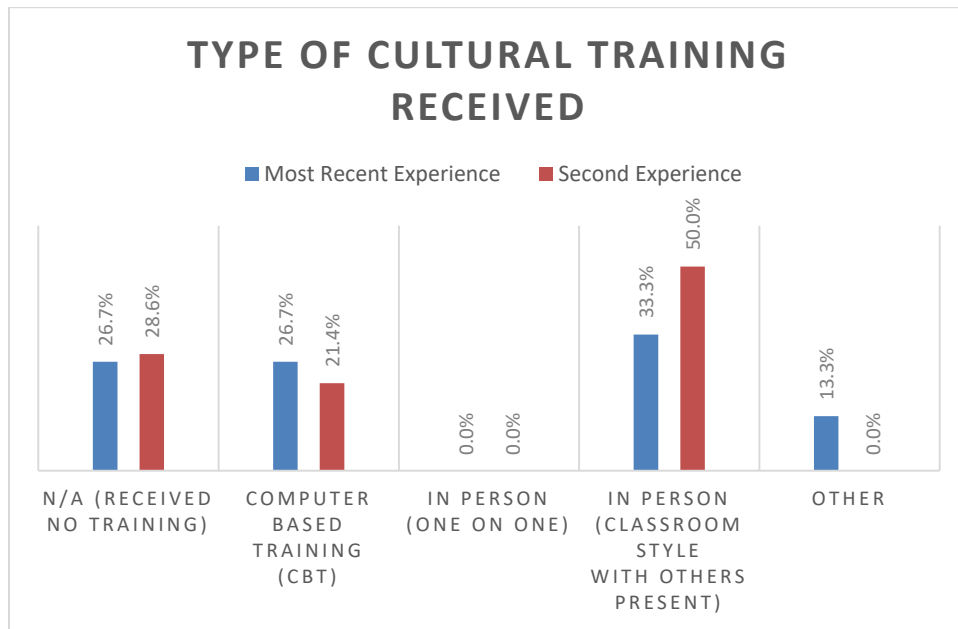
Figure 9: Type of Cultural Training Received

Through written feedback, panelists were asked of the length of the training they received and if the knowledge they had gained was applicable to their daily job duties. Training ranged anywhere from 30-minute Computer Based Training (CBT) lessons to in-depth formal instruction lasting over several weeks. Most responses on the applicability and usefulness of the training were negative. Of those who did receive some sort of cultural training, about half reported they received training prior to arrival whereas the other half received training upon or after arrival (Figure 10). These feedback points show that there is a lack of standard for timing and length of training.

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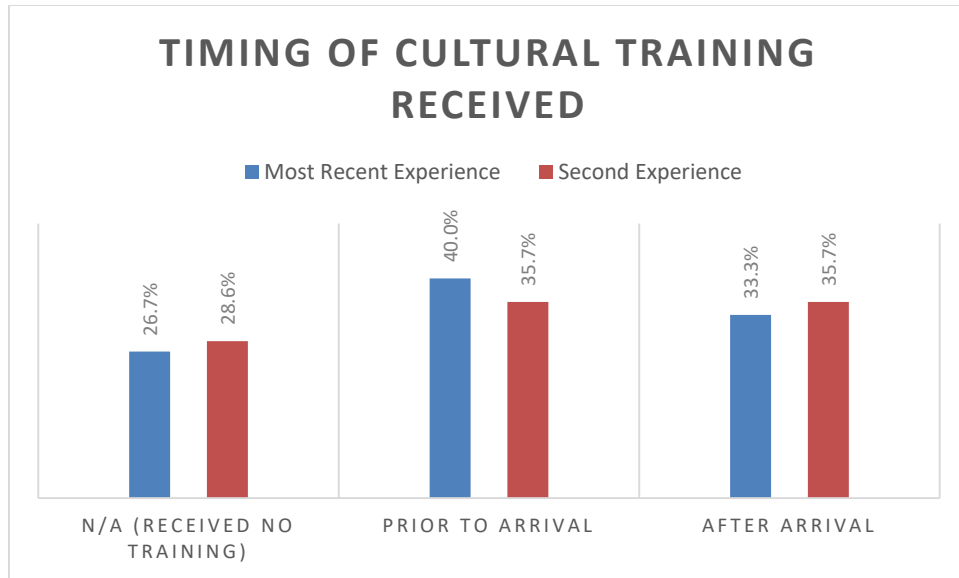
Figure 10: Timing of Cultural Training Received

The second round of the Delphi study provided further opportunity to dig deeper into this part of the research to fully understand the cultural training aspect and to identify areas for improvement. The primary recommended improvement area was to implement training that covers the local culture, to include: Host Nation work customs, accepted behaviors, basic phrases, mannerisms, cultural contextualisms (i.e. never discuss business on the first encounter), and how to interact with foreign partners to achieve work goals. Furthermore, all panel members recommended: in-person instruction, classroom style, face-to-face, and hands-on, as the optimal ways to learn cultural concepts and basic language skills. As to the timing, every panel member suggested to receive cultural training within a couple of months prior to arrival.

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Open-ended Question & Response Segment

The final portion of the Delphi study was the open-ended question and response

segment. The responses from the first round were analyzed and synthesized into major

themes. Using the second round of the study, panelists were able to review these major

themes and provide further input as necessary. The themes identified during the first

round of the Delphi study are listed below each question.

3C - What does cross-cultural competence mean to you?

- ability to understand cultural norms, customs & courtesies

- ability to communicate and interact with foreign partners and locals

- ability to identify and relate to cultural similarities and differences

- ability to incorporate and lead cross-cultural teams

- ability to adjust and apply learned aspects of a foreign culture

- ability to be empathetic to the fact that a collection of people from another
  culture, country or background, may have a largely different perspective or
  interpretation on everyday things, histories, or events

For round two, the panelists were requested to rank these themes identified in

order of importance. Figure 11 illustrates the trends observed. Although these

competencies were all identified as important by the SMEs, ranking these competencies

in order of importance can identify which abilities are more essential to the military

member assigned or deployed overseas.

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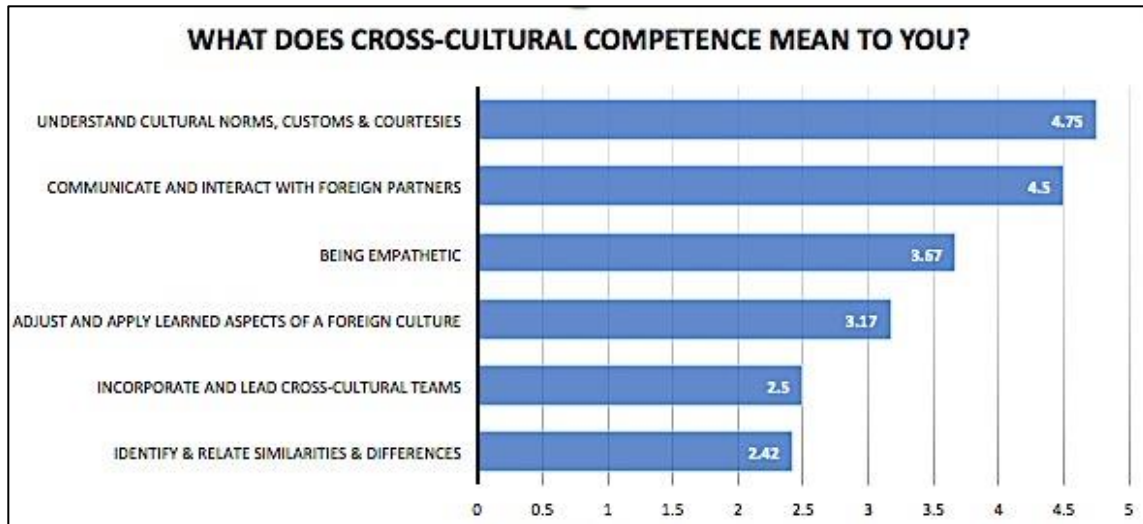
Figure 11: Cross-Cultural Competence Meaning

The top three results are: the ability to understand cultural norms, customs and courtesies, the ability to communicate and interact with foreign partners, and the ability to be empathetic are fundamental to cross-cultural competence. One panelist further added, "understanding and applying culturally specific knowledge is first and foremost in building relationships and being able to lead teams."

3C - What are the key factors that make up cross-cultural competence, and culturally acceptable skills and behaviors?

Responses for this question varied between personal attributes/qualities and general knowledge of cultural aspects. The following are the personal attributes and qualities identified by the panelists:

- Being willing to ask questions/showing interest with a positive attitude

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- Being patient

- Being respectful

- Being open to different perspectives

- Being self-aware of personal characteristics and actions/words as well as the effects and perceptions of them

- Being flexible

- Being honest

- Being empathetic – i.e. understanding not only the facts, but the emotions, whether shared by a larger group or an individual, associated with the facts

As these personal attributes and qualities were all identified as important by the SMEs, the second round allowed the panelists to rank these themes identified in order of importance. By ranking these in order of importance, we can identify which qualities are more essential for a military member to exhibit when interacting with foreign partners. Figure 12 shows the ranking attributes and qualities with being respectful, being self-aware of personal characteristics and actions, and having an open mind to different perspectives at the top.
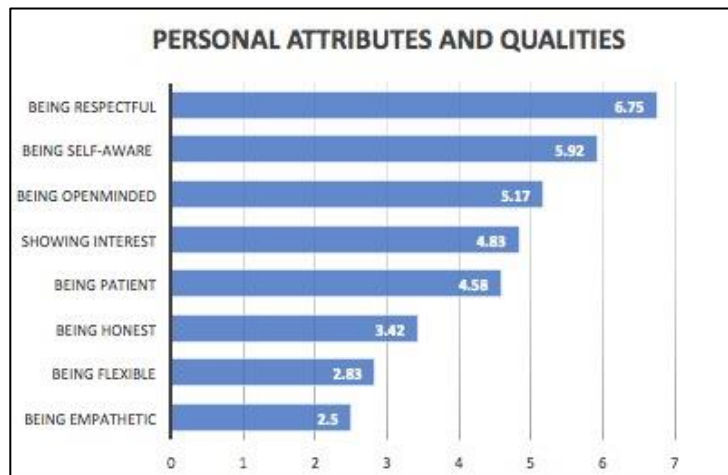
Figure 12: Personal Attributes and Qualities

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Additional comments by one of the panel members included the qualities of humility and judgment to know when strength and inflexibility is a necessity. An example they gave was when dealing with a "strongman" culture, which values the powerful and assertive.

The general cultural aspects the panelists identified are as follows:

- Language & Basic Phrases

- Social Norms

- Customs & Courtesies

- Cultural Taboo

- Religion

Again, these were all identified as important by the panel members. By ranking these in order of importance in the second round of the study, the top fundamental aspects for general cultural knowledge were identified. Figure 13 depicts the results which indicate the areas cultural training should focus on when preparing military members for deployment or assignment overseas.

GENERAL CULTURAL KNOWLEDGE

CUSTOMS & COURTESIES	4.33
SOCIAL NORMS	3.67
CULTURAL TABOO	2.83
LANGUAGE & BASIC PHRASES	2.42
RELIGION	1.75
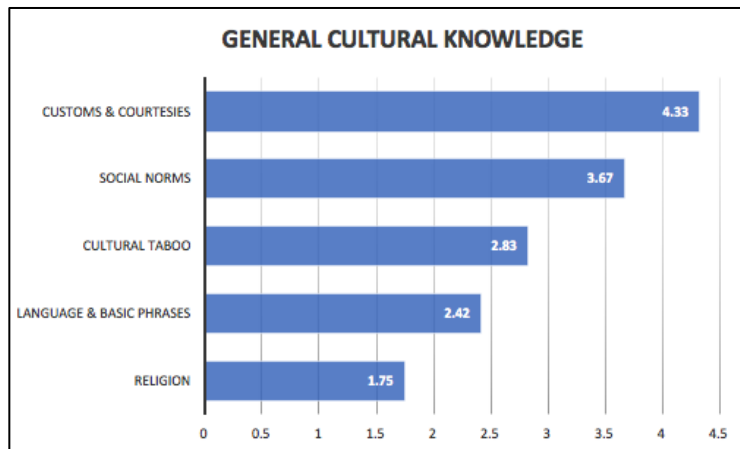
Figure 13: General Cultural Knowledge

When asked if there were any further general cultural aspects a military member should understand, two panel members added history as an important factor. One of them suggested to learn about the motivations of the people you will be working with (i.e. what do they want from you, what do they want from the U.S.) as well as knowing any good or bad history with Americans, which may affect how they interact with you.

Adapting/Training - For a military member that is newly stationed overseas, how does the members' capability to adapt to a new/unfamiliar location affect productivity at work?

- Dependent on the type of work and level of interaction
- Requires an extra layer of understanding
- Lack of sensitivity and patience yields frustrations and challenges
- Direct correlation to learning their new environment with productivity

The themes identified by the panelists describe a members' productivity at work as it relates to their ability to adapt to a new location. Primary consensus by the panel established that the military members' productivity is dependent on the type of work and level of interaction with foreign partner counterparts. Productivity is also dependent on an extra layer of understanding of technical aspects related to their career field, host nation, or situational context. Furthermore, productivity is dependent on a members' sensitivity and patience. A lack thereof could yield to frustration and challenges, which could decrease productivity. Finally, their productivity has a direct correlation to learning their new environment. A panel member added, "It is hugely important and

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should be the primary focus at the beginning of an assignment…this is more important than understanding primary duties as it will aid in mission accomplishment to a great extent." No further comments were added by any other panelists.

> *Adapting/Training - What was your process on gaining familiarity on*
> *OCONUS locations prior to arrival? How can we improve this?*

During the first iteration of the Delphi study, nine of the respondents specifically stated that they had conducted their own individual research. However, the military can improve the process of familiarizing its members to the location of assignment by providing resources. In turn, this will enhance the members' ability to deal with culture shock. The responses yielded many different recommendations for improvement. These are listed below and have been shortened for display purposes in Figure 14:

- CBT on ADLS for each overseas country in which we have a US military installation

- Providing a list of resources for people to read in order to gain further information on the overseas location

- Video of country specific information (cultural background, norms, religion, etc.)

- Question/answer forum with local nationals and those stationed in the destined country.

- Standard presentation or literature (brief info) that gives an overview of what to expect prior to PCSing, with major do's/don'ts of the culture. This could be part of in/out processing requirements or held on the AF Portal documents library.

- Sponsorship program that provides a welcome package with reading material and other important up-to-date facts.

- Post arrival immersion – i.e. Introductory trips/tours to take members downtown and discuss (and put into action) (examples – how to ride a train, going to a restaurant, etc.)

- In-country immersion through Right Start that provides facts, basic phrases, and cultural background information.

- Proper turnover from your predecessor that includes background on a variety of issues and cultural information.

For the second iteration of the study, panel members were requested to prioritize these recommendations from most beneficial to least beneficial. Results are shown in Figure 14. It is important to note that the higher ranked recommendations are focused on interactions between people, which ranges from on-location introductory trips/tours, to a developed sponsorship program through a representative already located at the host nation. On the contrary, the lower ranking recommendations are more of an intrinsic nature and require self-motivation to complete computer based training or to read through a list of provided resources.
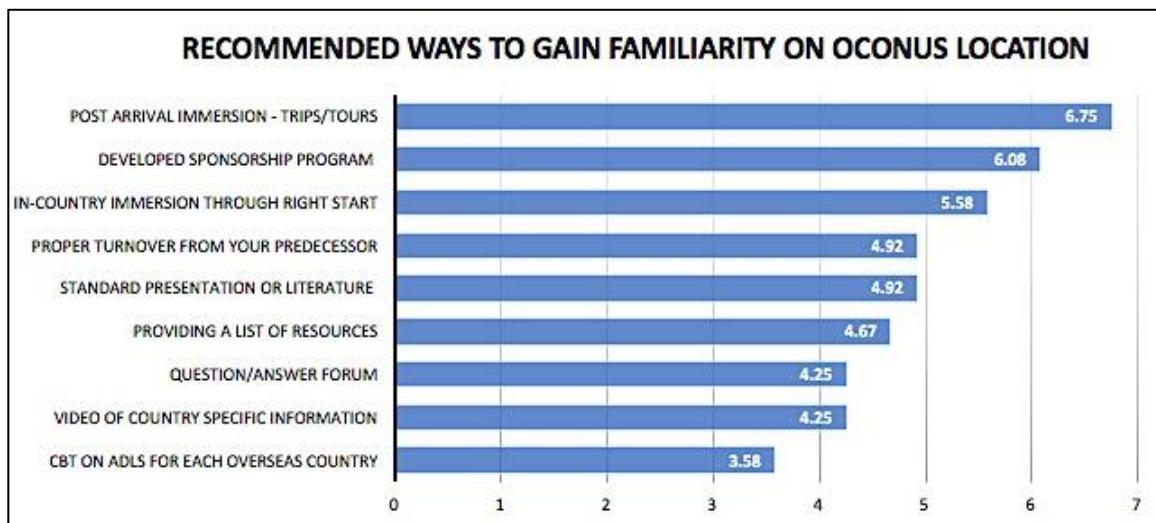
Figure 14: Gaining Familiarity on OCONUS Location

Adapting/Training - How can we develop military personnel so that they

proactively seek support and acquire culturally acceptable skills and behaviors?

- Proactive communication by your supervisor and/or predecessor in regards to easing your transition, enhancing your job capability, and expectation management through initial counseling and performance reviews.

- It is an individual's choice whether they care enough to pursue info/education to help them learn about a new culture.

- Provide resources and ensure they are easily available.

- Do not "non-volunteer" military members to locations they do not want to go to.

Panel members were asked to prioritize these recommendations by order of most beneficial to least beneficial. Figure 15 illustrates the recommended ways to develop proactive military personnel to seek support and acquire culturally acceptable skills and behaviors. A tie between easily accessible resources and communication by the supervisor and/or the predecessor were both ranked as the most beneficial by the panel members.
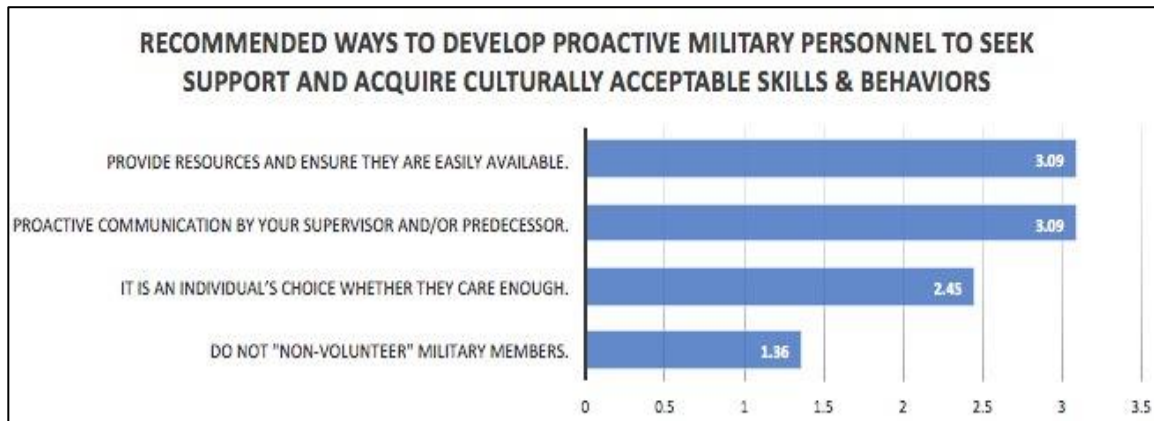
Figure 15: Developing Proactive Military Personnel to Seek Support and Acquire Culturally Acceptable Skills & Behaviors

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Communication - How do verbal and non-verbal aspects of social interactions differ? What is the importance of understanding these traits?

The responses to this question indicated that the importance of understanding verbal and non-verbal aspects of social interactions is absolutely critical. The second round of the Delphi study allowed participants to provide any additional comments if they desired to do so. One of the panel members noted that it is important for military personnel to learn to pick up on indirect communication and non-verbal behaviors as many different cultures use these cues to communicate more than Americans are used to.

Communication - How does miscommunication due to differences in languages and meanings affect collaboration efforts?

Below are the major themes identified in the responses of the first iteration.

- Leads to exasperation and frustration.

- Common phrases and colloquial terms in English can lead to mistranslation.

- Lack of clear performance standards.

- Inefficient national agreements governing our level of interaction with the host nation.

- Higher barriers due to minimal agreed-to purpose for the collaboration.

- Host Nation unfamiliarity with US equipment and processes requires further explanation and therefore delays approval.

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The second iteration of the Delphi study allowed the panelists to review these themes and provide any further comments. One panel member stated that if members do not take time to form a relationship and ask guiding/clarifying questions, it can have an extremely negative impact. This could leave the host nation partner feeling as though they are not appreciated if they are unaware of the reasons for certain actions. Another panel member provided an example of how translating modern-day terms could turn into significant issues. One example given was the translational challenges experienced for seemingly simple terms. Based on how the language was formulated, there could have been several ways to spell/interoperate what was being translated and could therefore have led to disastrous follow up events.

Project Management - How are projects in overseas locations different than projects at CONUS bases?

- It varies depending on the location
- It is at the discretion and scrutiny of the Host Nation

These major themes were identified in the responses of the first round of the study. Performance criteria, construction standards, standards of safety, material availability, work schedules, local codes, and customer expectation management are all examples of how projects can vary depending on the location. The second round requested the SMEs to review these themes and provide any further comments. Several reiterated the fact that differences depended on the location. One of the panel members

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added the importance of taking the capabilities of the host nation into account. If the host

nation is unable to maintain the systems being installed this can lead to wasted resources.

Project Management - What is the process for approval in overseas locations?
Besides receiving US approval, is there host nation approval required? What
are the MOU's and agreements that may affect/delay progress?

Through the responses to this question, the following obstacles were identified

that had to be overcome by U.S. Air Force Civil Engineers deployed or stationed

overseas.

- Loss of trust from Host Nation due to US predecessors

- Host Nation approval boards only met once a quarter, year, etc. and therefore delayed project submittal timelines for funding.

- Projects had to re-compete for funding due to delay of Host Nation approval.

- Badging for base projects caused issues.

- Multiple overarching entities and many sub-entities to coordinate through for approval and buy-off.

- Procurement of land issues.

- Relying on Host Nation counterparts to process requests although it was not their highest priority.

- Designs were altered or refined to meet the Host Nation vision.

- Host Nation's equivalent of NEPA (National Environmental Policy Act) caused significant problems and delayed progress.

During the second round of the study, the panel members were asked to rate how much of each obstacle they had come across during their military civil engineer experience while overseas. They were instructed to rate each obstacle higher - the more of a problem it was, and lower - the less of a problem it was. Figure 16 illustrates the range of how problematic each obstacle was. The schematic ranges from green, on the far left, to indicate "not at all a problem" to red, on the far right, to indicate a "serious problem." Host Nation has been shortened to HN in the descriptors of the vertical axis.
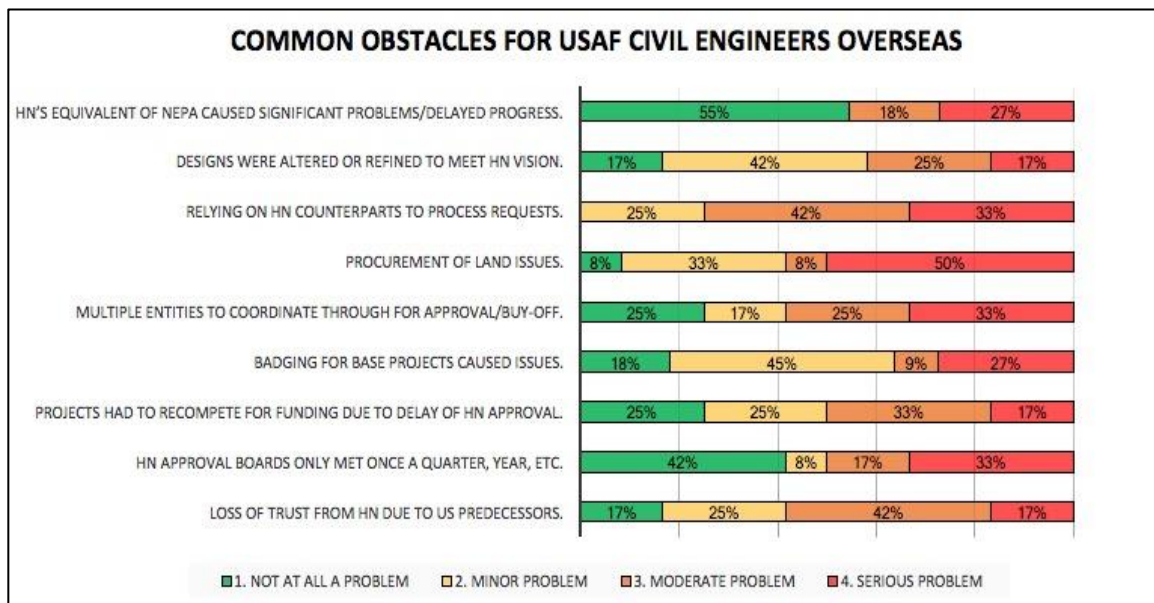
Figure 16: Obstacles for US Air Force Civil Engineers Overseas

The highest and most "serious" reported obstacle was procurement of land issues. One of the panelists explained that the difficulty of land acquisition impeded construction, which inhibited and delayed overarching strategies and mission focuses. It is also imported to point out that every single panel member reported to have experienced a problem with relying on Host Nation counterparts to process requests. One panel

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member added that most of these issues were the major causes for projects not started or completed.

A follow up question to these responses asked if the Civil Engineers tracked any data on delays or increase in project or maintenance costs caused by the Host Nation. Most SMEs reported negatively in collecting any type of data. One panelist reported they tracked dates for when Host Nation requests were submitted, which showed delays of up to 3 years in some cases. Another panel member added that they tracked the number of days between submitting a Host Nation request and receiving a response (whether digging permit or site approval). They explained that it provided justification to U.S. leadership that "we did our part and are waiting on the Host Nation." The same panel member added that, in their opinion, having a cost associated with delays would not be valuable, as they believed there is no recourse with Host Nation, nor would anybody pursue reimbursement.

Project Management - International construction projects are characterized by differences in cultural norms, regulations, routines, work cultures, institutional work practices, safety standards, language barriers, etc. How do these differences affect military projects in OCONUS locations? Are there other cultural aspects that add to the challenges and risks faced by the engineers/projects?

The responses to this question identified several challenges that installations overseas have faced and the U.S. Air Force Civil Engineers had to overcome; they are:

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- Always in competition with Host Nation for laborers and craftsmen.

- Presence of poor work ethic and apathy.

- Clearances, background checks, security (badging process) for base access.

- Host Nation customs office refusal to release equipment/material

- Host Nation created their own standards making mx and operations all the more challenging

- Differences in architectural standards

- Differences in building materials

- Differences in safety practices

- Differences in construction practices

- Differences in statutory requirements

- Issues with local council approvals

- Informal processes & some disregard for written contracts

- Language barrier without a proper translator present

During the second round of the study, the panel members were asked to rate how much of each challenge they had come across during their military civil engineer experience while overseas. They were instructed to rate each challenge higher - the more of a problem it was, and lower - the less of a problem it was. Figure 17 illustrates the range of how problematic each challenge was. Again, the schematic ranges from green, on the far left, to indicate "not at all a problem" to red, on the far right, to indicate a "serious problem." Host Nation has been shortened to HN in the descriptors of the vertical axis.

COMMON CHALLENGES FOR USAF MILITARY PROJECTS OVERSEAS

Challenge	1. Not at all a problem	2. Minor problem	3. Moderate problem	4. Serious problem
LANGUAGE BARRIER WITHOUT A PROPER TRANSLATOR PRESENT.	25%	50%		25%
INFORMAL PROCESSES & SOME DISREGARD FOR WRITTEN CONTRACTS.	25%	42%	25%	8%
ISSUES WITH LOCAL COUNCIL APPROVALS.	42%	17%	25%	17%
DIFFERENCES IN STATUTORY REQUIREMENTS.	8%	58%	25%	8%
DIFFERENCES IN CONSTRUCTION PRACTICES.		58%	33%	8%
DIFFERENCES IN SAFETY PRACTICES.		50%	33%	17%
DIFFERENCES IN BUILDING MATERIALS.	8%	42%	33%	17%
DIFFERENCES IN ARCHITECTURAL STANDARDS.	25%	67%		8%
HN CREATED OWN STANDARDS MAKING MX/OPS MORE CHALLENGING.	33%	25%	25%	17%
HN CUSTOMS OFFICE REFUSAL TO RELEASE EQUIPMENT, MATERIAL, ETC.	25%	25%	17%	33%
CLEARANCES/BACKGROUND CHECKS/BADGING PROCESS FOR BASE ACCESS.	8%	25%	33%	33%
PRESENCE OF POOR WORK ETHIC/APATHY.	17%	17%	50%	17%
ALWAYS IN COMPETITION WITH HN FOR LABORERS/CRAFTSMEN.	50%	8%	17%	25%

Figure 17: Challenges for US Air Force Military Projects Overseas

Every panel member reported to have experienced challenges due to differences in construction and safety practices. The most "serious" problems identified by 33% of the panel members were refusal to release equipment and material by the Host Nation customs office, and issues due to security badging processes. One of the panelists mentioned corruption and bribery as an unspoken issue. It is not uncommon in overseas construction where contractors that were hired by the U.S. must pay off the Host Nation military in order to get passes to access the base, get their equipment on base, etc. Another panel member commented about restrictive policies and their associated

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hindrances to particular projects. Secure infrastructure, for example, cannot be accomplished through locally available labor.

The researcher asked the following question based off of the analysis of the first round of responses received for the identified obstacles and challenges:

- How can we counter these obstacles and challenges to minimize their impacts and are there any best practices you've come across in your CE experience?

The following recommendations were provided.

- Ensure proper communication through in-person planning, design, and construction charrettes

- Improvement of records management and use of after action reports

- In-person communication with Host Nation counterparts – requires building a relationship and putting in the time to explain the issues and asking for help

- Translators

- Update outdated MOUs (Memorandum of Understanding)

- Treat Host Nation delays as facts of life, particularly if State and OSD policy engagement has tried and failed to resolve. Modify expectation to those with oversight of execution (AFCEC, HAF, OSD, and Defense subcommittees in the House and Senate) so they do not rescind funding for efforts actively in work but on a non-traditional timeline.

- Prohibit leaders from "leaving their mark" and planning with a long-term mindset as to what can be accomplished in 10 to 20 years in the future versus during the tenure of the next commander.

Although majority of the panel members had not come across any official best practices for this particular topic, many keyed in on the importance of communication. This leads back to well-known author and former presidential speechwriter, James C.

Humes. His coined phrase, "*The art of communication is the language of leadership,*"

draws the attention back to the importance of effective communication. We must

practice techniques and make processes more efficient to hone our communication skills.

Improving communication, whether overseas or stateside, is the first stepping stone to

guaranteeing mission success.

V. CONCLUSIONS AND RECOMMENDATIONS

Conclusions of Research

This research was conducted to answer the following questions:

1. What are the current practices of cultural training?

2. Are the current practices of cultural training adequate?

3. What are the standard project management practices with foreign partners?

4. How do cultural differences play into schedule delays and increase in costs?

The results of the Delphi study strongly indicated a lack in cultural training. With panel members representing 13 different countries, no set standard to cultural training was found. A quarter of the panel members reported to receive no training. For those who did receive training, it lasted anywhere from a 30-minute Computer Based Training (CBT) to in-depth formal instruction lasting over several weeks. With the exception of one panel member who received extensive cultural training, the remaining gave negative feedback as to the applicability and usefulness of their training they received. As for timing, training was either conducted prior to or upon arrival – again, no standard was found. This is an area of concern as over 90% of the panelists reported to interact with the locals and foreign partners on a daily to weekly basis due to their job requirements.

The primary recommended improvement area was to implement training that covers the local culture, to include: Host Nation work customs, accepted behaviors, basic phrases, mannerisms, cultural contextualisms (i.e. never discuss business on the first encounter), and how to interact with foreign partners to achieve work goals. Furthermore, all panel members recommended: in-person instruction, classroom style,

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face-to-face, and hands-on, as the optimal ways to learn cultural concepts and basic language skills. The panel suggested that military members, preparing for deployment or overseas assignment, should receive cultural training within a couple of months prior to departure.

Through the Delphi study, the panel also provided a list of obstacles and challenges specific to military construction efforts and U.S. Air Force Civil Engineers deployed or stationed overseas. Challenges due to differences in construction and safety practices were reported by every panel member. Processing requests, refusal to release equipment and material by the customs office, and issues due to security badging processes were the highest reported problems. No standard project management practices were found as each installation has different agreements with their Host Nation partner. Similarly, each foreign partner was reported to have different sets of construction standards and requirements, making it difficult to standardize overseas project management efforts.

No standardized method to track data on delays, schedule changes, or cost increases caused by the Host Nation was identified. Although costs incurred may never be reimbursed by the Host Nation, tracking such data could be of great value in any future deliberations, long-term planning purposes, and validation of effective pre-departure cultural training. After-action reports could also be a useful learning tool to help mitigate future issues to include: cultural mistakes, causes of delay due to the foreign partner, issues due to miscommunication, and any other roadblocks that hinder progress. In the end, better records management and documentation will improve project processes.

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Significance of Research

U.S. military personnel engage in regions all over the world and are sent to many different countries. Although some installations may be in the same regional area, each country will have its own cultural and sub-cultural characteristics. Therefore, we must train and equip our personnel to be culturally aware in understanding how cultural preferences are not universal. The differences between American preferences and the preferences of our foreign partners can lead to friction. Understanding culture-general concepts can help a military member relate to people of all cultural backgrounds. This is step one - general knowledge that is broad, and prepares the military member for interaction with people from any culture.

Trends observed in the research concluded that an individual's performance will largely depend on their ability to relate and interact with Host Nation counterparts on an individual basis. Furthermore, having a culture in the military that places value on these relationships – building them, cultivating them, and spending time investing in them – is important.

Recommendations for Future Research

This research is just the beginning and has opened up the opportunity to explore a vast amount of aspects of cross cultural competence, not only impacting the U.S. Air Force Civil Engineers, but for all services in the Department of Defense. There is likely a common theme among other career fields where interaction with foreign partners is present, yet cultural training is insufficient. Future research may include a similar study which concentrates on a specific region, country, or type of tour (6-month deployment, 1-

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year short tour, long tour PCS, etc.). It would also be of great value to research the host

nation perspective where the foreign counterparts can contribute their point of view on

collaboration efforts and areas of concern.

Appendix A – Survey Instrument Round 1

INFORMATION PROTECTED BY THE PRIVACY ACT OF 1974

The purpose of this research is to identify how cultural differences and collaboration efforts may impede or enhance engineering efforts. Specifically, the intent is to identify ways to influence cross-cultural situations in ways to improve engineering and mission success.

1. What is your gender?

○ Female

○ Male

○ Other (specify)

2. What is your age?

○ 18 to 24   ○ 45 to 54

○ 25 to 34   ○ 55 or older

○ 35 to 44

3. What is your current rank?

○ O-1   ○ O-4

○ O-2   ○ O-5

○ O-3   ○ O-6

○ Other (please specify)

1

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Cross-Cultural Competence & Impact on CE Mission

4. From your MOST RECENT overseas/deployed experience, please provide the following information:

Overseas or Deployed
Location (example:
Lakenheath AB)

Duty Title (example:
Engineering Flight
Commander)

Timeframe (example:
2015 - present)

Deployment, Short Tour,
or Permanent Overseas
Assignment?

5. From this overseas/deployed experience, how much contact did you have with host nation personnel/locals - due to your job?

○ Daily   ○ Annually

○ Weekly   ○ Never

○ Monthly

○ Other (please specify)

6. From this overseas/deployed experience, how much contact did you have with host nation personnel/locals - outside of work?

○ Daily   ○ Annually

○ Weekly   ○ Never

○ Monthly

○ Other (please specify)

2

55

7. From this overseas/deployed experience, what type of training on the host nation did you receive? (this can include but is not limited to language, cultural, or local information)

○ N/A (received no training)

○ Computer Based Training (CBT)

○ In person (one on one)

○ In person (classroom style with others present)

○ Other (please specify)

[   ]

8. Did you receive this training prior to or after arrival to the foreign country?

○ Prior to Arrival

○ After Arrival

○ N/A (received no training)

○ Other (please specify)

[   ]

9. What was the length of the training provided and do you feel you gained much knowledge applicable to your daily job duties? (please explain)
Please write N/A if you did not receive any training

[   ]

10. Time it took to adjust to the country of assignment

○ 0-3 months   ○ 1-2 years

○ 4-7 months   ○ never adjusted

○ 8-12 months

○ Other (please specify)

[   ]

3

11. From your SECOND MOST RECENT overseas/deployed experience, please provide the following information:

Overseas or Deployed Location (example: Al Udeid AB)

Duty Title (example: Project Manager)

Timeframe (example: Jan - Jul 2014)

Deployment, Short Tour, or Permanent Overseas Assignment?

12. From this overseas/deployed experience, how much contact did you have with host nation personnel/locals - due to your job?

◯ Daily   ◯ Annually

◯ Weekly   ◯ Never

◯ Monthly

◯ Other (please specify)

13. From this overseas/deployed experience, how much contact did you have with host nation personnel/locals - outside of work?

◯ Daily   ◯ Annually

◯ Weekly   ◯ Never

◯ Monthly

◯ Other (please specify)

14. From this overseas/deployed experience, what type of training on the host nation did you receive? (this can include but is not limited to language, cultural, or local information)

○ N/A (received no training)

○ Computer Based Training (CBT)

○ In person (one on one)

○ In person (classroom style with others present)

○ Other (please specify)

> [   ]

15. Did you receive this training prior to or after arrival to the foreign country?

○ Prior to Arrival

○ After Arrival

○ N/A (received no training)

○ Other (please specify)

> [   ]

16. What was the length of the training provided and do you feel you gained much knowledge applicable to your daily job duties? (please explain)
Please write N/A if you did not receive any training

> [   ]

17. Time it took to adjust to the country of assignment

○ 0-3 months   ○ 1-2 years

○ 4-7 months   ○ never adjusted

○ 8-12 months

○ Other (please specify)

> [   ]

5

18. What does cross-cultural competence mean to you?

19. What are the key factors that make up cross-cultural competence, and culturally acceptable skills and behaviors?

20. Cultural intelligence is defined to be a dynamic competency which can be acquired through training. It represents an individual's competence to successfully adapt to new and unfamiliar surroundings and still be equally productive at work (Earley and Ang, 2003; Ang et al., 2007). For a military member that is newly stationed overseas, how does the members' capability to adapt to a new/unfamiliar location affect productivity at work?

21. Previous research revealed that some knowledge about the host country culture prior to arrival is essential to speed up the adjustment process (Kivrak et al., 2010). What was your process on gaining familiarity on OCONUS locations prior to arrival? How can we improve this?

22. Expatriate adjustment has 3 facets: work adjustment, interaction adjustment, and general adjustment. Work adjustment involves adapting to new job tasks, roles, supervision, and performance expectations. Interaction adjustment occurs when dealing or interacting with host nation country nationals in work and non-work situations. General adjustment deals with an overall adjustment of living in a foreign land and adjusting to its cultural environment. Adjustment facilitates exchange of knowledge, competence acquisition in the new role and develops a sense of comfort in the new role. How can we develop military personnel so that they proactively seek support and acquire culturally acceptable skills and behaviors?

6

23. How do verbal and non-verbal aspects of social interactions differ? What is the importance of understanding these traits?

24. How does miscommunication due to differences in languages and meanings affect collaboration efforts? Please expand on any personal experience.

25. How are projects/maintenance efforts in overseas locations different than projects/maintenance efforts at CONUS bases?

26. What is the process for approval in overseas locations? Besides receiving US approval, is there host nation approval required? What are the MOU's and agreements that may affect/delay progress?

27. International construction projects are characterized by differences in cultural norms, regulations, routines, work cultures, institutional work practices, safety standards, language barriers, etc. (Chua et al., 2003; Miller and Lessard, 2001; Orr, 2005). How do these differences affect military projects in OCONUS locations? Are there other cultural aspects that add to the challenges and risks faced by the engineers/projects?

Appendix B – Survey Instrument Round 2

Cross Cultural Competencies, Training, and Collaboration Efforts
Training

INFORMATION PROTECTED BY THE PRIVACY ACT OF 1974

The purpose of this research is to identify how cultural differences and collaboration efforts may impede or enhance engineering efforts. Specifically, the intent is to identify ways to influence cross-cultural situations to improve engineering and mission success.

1. Location of most recent deployment or overseas assignment

1

2. On a scale from 1 (Strongly Disagree) to 7 (Strongly Agree), please rate how much you agree or disagree with the following statements based on the cultural training you received for your **most recent** deployed or overseas assignment. If you did not receive cultural training, select 0 (Did Not Receive Training).

Agreement means the training was beneficial to you and/or prepared you for your daily responsibilities. Please feel free to justify your responses in the comment box provided below.

	0-Did Not Receive Training	1-Strongly Disagree	2-Disagree	3-Somewhat Disagree	4-Neither Agree nor Disagree	5-Somewhat Agree	6-Agree	7-Strongly Agree
The cultural training I received was very thorough and helped me understand local customs, courtesies, and traditions.	◯	◯	◯	◯	◯	◯	◯	◯
The cultural training I received provided basic language skills.	◯	◯	◯	◯	◯	◯	◯	◯
The cultural training I received was NOT adequate.	◯	◯	◯	◯	◯	◯	◯	◯
The cultural training I received was relevant and applied to my job duties.	◯	◯	◯	◯	◯	◯	◯	◯
The cultural training I received prepared me on how to interact with Host Nation (HN) personnel.	◯	◯	◯	◯	◯	◯	◯	◯
The cultural training I received enhanced my performance and the execution of my daily responsibilities.	◯	◯	◯	◯	◯	◯	◯	◯

Please feel free to justify your responses.

3. How would you improve the training you received?

2

4. In your opinion, what is the optimal way to teach cultural concepts and basic language skills?

5. In your opinion, when is the optimal time to receive cultural training?

3

Cross Cultural Factors

6. The following question was asked in the previous round of the study,
"What does cross-cultural competence mean to you?"

Below are the major themes identified in the responses. Please rank each in order of importance with 1 (top) being the **most important** down to 6 (bottom) being the **least important**.

SurveyMonkey allows you to drag and drop each choice to make it easier to prioritize. Please feel free to justify your responses or provide further points in the comment box provided.

	ability to understand cultural norms, customs & courtesies
	ability to communicate and interact with foreign partners and locals
	ability to identify and relate to cultural similarities and differences
	ability to incorporate and lead cross-cultural teams
	ability to adjust and apply learned aspects of a foreign culture
	ability to be empathetic to the fact that a collection of people from another culture, country or background, may have a largely different perspective or interpretation on everyday things, histories, or events

7. Please feel free to justify your responses or provide further points in the comment box provided.

4

8. The following question was asked in the previous round of the study:

"What are the key factors that make up cross-cultural competence, and culturally acceptable skills and behaviors?"
Responses varied between personal attributes/qualities and general knowledge of cultural aspects.

Please prioritize the personal attributes and qualities a military member should possess in order of importance with 1 (top) being the **most important** down to 8 (bottom) being the **least important**.

SurveyMonkey allows you to drag and drop each choice to make it easier to prioritize.

	- Being willing to ask questions/showing interest with a positive attitude
	- Being patient
	- Being respectful
	- Being open to different perspectives
	- Being self-aware of personal characteristics and actions/words as well as the effects and perceptions of them
	- Being flexible
	- Being honest
	- Being empathetic – ie. understanding not only the facts, but the emotions, whether shared by a larger group or an individual, associated with the facts

9. Are there any further personal attributes and qualities a military member should possess?

5

10. Please prioritize the general knowledge of cultural aspects a military member should understand in order of importance with 1 (top) being the **most important** down to 5 (bottom) being the **least important**.

SurveyMonkey allows you to drag and drop each choice to make it easier to prioritize.

	- Language & Basic Phrases
	- Social Norms
	- Customs & Courtesies
	- Cultural Taboo
	- Religion

11. Are there any further general cultural aspects a military member should understand?

6

Adaptability and Familiarity

12. The following question was asked in the previous round of the study:

"For a military member that is newly stationed overseas, how does the members' capability to adapt to a new/unfamiliar location affect productivity at work?"

Below are the major themes identified in the responses. Please review them and provide any further points or contentions. If you have no further comments, please select "no further comments" and move on to the next question.

- Dependent on the type of work and level of interaction
- Requires an extra layer of understanding
- Lack of sensitivity and patience yields frustrations and challenges
- Direct correlation to learning their new environment with productivity

☐ No further comments

Please provide further comments here.

7

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13. The following question was asked in the previous round of the study:

"What was your process on gaining familiarity on OCONUS locations prior to arrival? How can we improve this?"

Below are the major themes identified in the responses. Many respondents stated that they conducted their own individual research. However, the military can improve the process of familiarizing its members to the location of assignment by providing resources to enhance the members' ability to deal with culture shock. Please prioritize these recommendations from 1 (top) being the **most beneficial** down to 9 (bottom) the **least beneficial**.

SurveyMonkey allows you to drag and drop each choice to make it easier to prioritize. Feel free to justify your responses or provide further points in the comment box provided.

	- CBT on ADLS for each overseas country in which we have a US military installation
	- Providing a list of resources for people to read in order to gain further information on the overseas location
	- Video of country specific information (cultural background, norms, religion etc)
	- Question/answer forum with local nationals and those stationed in the destined country.
	- Standard presentation or literature (brief info) that gives an overview of what to expect prior to PCSing, with major do's/don'ts of the culture. This could be part of in/out processing requirements or held on the AF Portal documents library.
	- Sponsorship program that provides a welcome package with reading material and other important up-to-date facts.
	- Post arrival immersion – ie Introductory trips/tours to take members downtown and discuss (and put into action) (examples – how to ride a train, going to a restaurant, etc)
	- In-country immersion through Right Start that provides facts, basic phrases, and cultural background information.
	- Proper turnover from your predecessor that includes background on a variety of issues and cultural information.

14. Feel free to justify your responses or provide further points in the comment box provided.

15. The following question was asked in the previous round of the study:

"How can we develop military personnel so that they proactively seek support and acquire culturally acceptable skills and behaviors?"

Below are the major themes identified in the responses. Please prioritize these recommendations from 1 (top) being the **most beneficial** down to 4 (bottom) the **least beneficial**.

SurveyMonkey allows you to drag and drop each choice to make it easier to prioritize. Feel free to justify your responses or provide further points in the comment box provided.

	- Proactive communication by your supervisor and/or predecessor in regards to easing your transition, enhancing your job capability, and expectation management through initial counseling and performance reviews.
	- It is an individual's choice whether they care enough to pursue info/education to help them learn about a new culture.
	- Provide resources and ensure they are easily available.
	- Do not "non-volunteer" military members to locations they do not want to go to.

16. Feel free to justify your responses or provide further points in the comment box provided.

Cross Cultural Competencies, Training, and Collaboration Efforts

Communication

17. The following finding was determined as a result of the previous round of the study:

"The importance of understanding verbal and non-verbal aspects of social interactions is absolutely critical."

On a scale from 1 (Strongly Disagree) to 7 (Strongly Agree), please rate how much you agree or disagree with this statement. Please feel free to provide any additional comments in the box below.

1. Strongly Disagree	2. Disagree	3. Somewhat Disagree	4. Neither Agree nor Disagree	5. Somewhat Agree	6. Agree	7. Strongly Agree
○	○	○	○	○	○	○

Please feel free to justify your response.

18. The following question was asked in the previous round of the study:

 "How does miscommunication due to differences in languages and meanings affect collaboration efforts?"

Below are the major themes identified in the responses. Please review them and provide any further points or contentions. If you have no further comments, please select "No further comments" and move on to the next question.

-        Leads to exasperation and frustration.
-        Common phrases and colloquial terms in English can lead to mistranslation.
-        Lack of clear performance standards.
-        Inefficient national agreements governing our level of interaction with the host nation.
-        Higher barriers due to minimal agreed-to purpose for the collaboration
-        Host Nation unfamiliarity with US equipment and processes requires further explanation and therefore delays approval.

☐ No further comments

Please provide further comments here.

Projects & Maintenance Efforts

19. The following question was asked in the previous round of the study:

 "How are projects/maintenance efforts in overseas locations different than projects/maintenance efforts at CONUS bases?"

Below are the major themes identified in the responses. Please review them and provide any further points or contentions. If you have no further comments, please select "No further comments" and move on to the next question.

-      Varies depending on the location.
-      At the discretion and scrutiny of the Host Nation.

☐ No further comments

Please provide further comments here.

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20. The following questions were asked in the previous round of the study:

 "What is the process for approval in overseas locations? Besides receiving US approval, is there host nation approval required? What are the MOU's and agreements that may affect/delay progress?"

Several obstacles were identified that had to be overcome by the USAF Civil Engineers. On a scale from 1 (Not At All A Problem) to 4 (Serious Problem), please rate how much of each obstacle you came across during your military civil engineer experience while overseas. The more of a problem it was, the higher you would rate it. The less of a problem it was, the lower you would rate it.

Please feel free to justify your responses in the comment box provided or add any obstacles that may have been missed.

	1. Not at all a problem	2. Minor problem	3. Moderate problem	4. Serious problem
- Loss of trust from Host Nation due to US predecessors.	○	○	○	○

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	1. Not at all a problem	2. Minor problem	3. Moderate problem	4. Serious problem
- Host Nation approval boards only met once a quarter, year, etc and therefore delayed project submittal timelines for funding.	○	○	○	○
- Projects had to recompete for funding due to delay of Host Nation approval.	○	○	○	○
- Badging for base projects caused issues.	○	○	○	○
- Multiple overarching entities and many sub-entities to coordinate through for approval and buy-off.	○	○	○	○
- Procurement of land issues.	○	○	○	○
- Relying on Host Nation counterparts to process requests although it was not their highest priority.	○	○	○	○
- Designs were altered or refined to meet the Host Nation vision.	○	○	○	○
- Host Nation's equivalent of NEPA (National Environmental Policy Act) caused significant problems and delayed progress.	○	○	○	○

Please feel free to justify your responses or add any obstacles that weren't included with the level of problem (1-4) you encountered.

21. The following question was asked in the previous round of the study:

"International construction projects are characterized by differences in cultural norms, regulations, routines, work cultures, institutional work practices, safety standards, language barriers, etc. How do these differences affect military projects in OCONUS locations? Are there other cultural aspects that add to the challenges and risks faced by the engineers/projects?"

Several challenges were identified and are listed below.

On a scale from 1 (Not At All A Problem) to 4 (Serious Problem), please rate how much of each challenge you came across during your military civil engineer experience while overseas. The more of a challenge it was, the higher you would rate it. The less of a challenge it was, the lower you would rate it.

Please feel free to justify your responses in the comment box provided or add any further challenges that may have been missed.

	1. Not at all a problem	2. Minor problem	3. Moderate problem	4. Serious problem
- Always in competition with Host Nation for laborers and craftsmen.	○	○	○	○
- Presence of poor work ethic and apathy.	○	○	○	○
- Clearances, background checks, security (badging process) for base access.	○	○	○	○
- Host Nation customs office refusal to release equipment, material, etc.	○	○	○	○
- Host Nation created their own standards making maintenance and operations all the more challenging.	○	○	○	○
- Differences in architectural standards.	○	○	○	○
- Differences in building materials.	○	○	○	○
- Differences in safety practices.	○	○	○	○
- Differences in construction practices.	○	○	○	○
- Differences in statutory requirements.	○	○	○	○
- Issues with local council approvals.	○	○	○	○
- Informal processes & some disregard for written contracts.	○	○	○	○
- Language barrier without a proper translator present.	○	○	○	○

Please feel free to justify your responses or add any further challenges with the level of problem (1-4) that you have encountered.

22. In regards to the challenges and obstacles listed above, does your base track any data on delays or increase in project or maintenance costs caused by the Host Nation?

23. How can we mitigate these obstacles and challenges to minimize their impacts and are there any best practices you've come across in your CE experience?

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14. ABSTRACT
U.S. military personnel perform a wide array of roles and missions at locations all over the world. As such, this research investigates and describes the current process of cultural training, its adequacy, and examines how cultural differences and collaboration efforts may impede or enhance project management and engineering efforts. This qualitative analysis is conducted through a Delphi study of U.S. Air Force officers consisting of 15 subject matter experts (SMEs) with experiences from 13 different countries. All reported to have daily to weekly interactions with locals and foreign partners due to job requirements; however, no set standard of cultural training was found. Approximately one quarter of the panel received no cultural training. With exception of one, the remaining SMEs gave negative feedback as to the adequacy, applicability, and usefulness of their training they did receive. The research recommends implementing in-person training that covers the local culture; this will give the inbound military member an understanding of Host Nation work customs and accepted behaviors, basic phrases and mannerisms, and how to interact with foreign partners to achieve work goals. Furthermore, this research explores current project management practices in overseas military construction. No standardized practices were found; however, the research established a list of obstacles and challenges. The highest ranked issues reported were: differences in construction and safety practices, problems with the Host Nation customs office, and difficulties with security badging processes. The research found that these obstacles and challenges have caused delays and schedule changes; however, no standardized methods to track such data were identified.

15. SUBJECT TERMS
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