

Author: Arikan, Rahmi Anil

Title: *An Examination of the Relationship between Cultural Competence, Self-Efficacy, and Cultural Knowledge*

The accompanying research report is submitted to the **University of Wisconsin-Stout,**

Graduate School in partial completion of the requirements for the

Graduate Degree/ Major: MS Degree in Applied Psychology

Research Advisor: Michael Mensink, Ph.D.

Submission Term/Year: Summer 2019

Number of Pages: 59

Style Manual Used: American Psychological Association, 6th edition

- I have adhered to the Graduate School Research Guide and have proofread my work.
- I understand that this research report must be officially approved by the Graduate School. **Additionally, by signing and submitting this form, I (the author(s) or copyright owner) grant the University of Wisconsin-Stout the non-exclusive right to reproduce, translate, and/or distribute this submission (including abstract) worldwide in print and electronic format and in any medium, including but not limited to audio or video. If my research includes proprietary information, an agreement has been made between myself, the company, and the University to submit a thesis that meets course-specific learning outcomes and CAN be published. There will be no exceptions to this permission.**
- I attest that the research report is my original work (that any copyrightable materials have been used with the permission of the original authors), and as such, it is automatically protected by the laws, rules, and regulations of the U.S. Copyright Office.
- My research advisor has approved the content and quality of this paper.

STUDENT:

NAME: Rahmi A. Arikan **DATE: 7/31/2019**

ADVISOR: (Committee Chair if MS Plan A or EdS Thesis or Field Project/Problem):

NAME: Michael Mensink, Ph.D. **DATE: 7/31/2019**

This section for MS Plan a Thesis or EdS Thesis/Field Project papers only

Committee members (other than your advisor who is listed in the section above)

1. **CMTE MEMBER'S NAME:** Libby Smith **DATE: 7/31/2019**
2. **CMTE MEMBER'S NAME:** Brian Bergquist **DATE: 7/31/2019**

This section to be completed by the Graduate School

This final research report has been approved by the Graduate School.

Director, Office of Graduate Studies:

DATE:

Arikan, Rahmi Anil

Arikan, Rahmi Anil *An Examination of the Relationship between Cultural Competence, Self-Efficacy, and Cultural Knowledge*

Abstract

This study examined the relationship between self-efficacy, cultural competence and cultural knowledge and confidence. Participants ($N = 398$) completed a survey that included items focused on self-efficacy, cultural competence, and cultural knowledge and confidence in that knowledge. The results indicated that self-efficacy did not predict a significant amount of variance in terms of cultural knowledge, knowledge confidence or overall cultural competence. However, a significant relationship was observed between cultural competence and confidence in cultural knowledge, as participants' average cultural competence scores predicted 19% of the variance in participants' confidence ratings in their performance on a cultural knowledge inventory. It was predicted that participants in this study would potentially demonstrate a Dunning-Kruger effect, and this prediction was supported by a significant interaction between performance in general cultural knowledge and confidence in that knowledge. Specifically, participants were assigned to quartiles based on their mean cultural knowledge percentage score, and confidence percentages were compared to knowledge percentages for the four quartiles. Specifically, participants in the 2nd and 3rd quartiles demonstrated accurate alignment in their answer and confidence responses, while participants in the bottom quartile reported significant overconfidence in their knowledge and participants in the top quartile demonstrated significant under-confidence in their answer accuracy.

Acknowledgements

I would like to thank my dad, mom, sister, my aunt and her husband for their limitless support. I would like to express my deepest appreciation, respect and love for Xai Yang and her family- my second family. Anything is possible when family is there for you.

I would also like to thank my thesis advisor Dr. Mike Mensink for helping me with the thesis process and picking me up where I needed help. I will always be grateful for all your help through the completion of my thesis. I would like to give my undying gratitude to Libby Smith for trusting and helping me with every step of the way throughout the MSAP program and being on my committee along with Dr. Brian Bergquist who is one of the few professors that had a big influence on my educational decision of staying at UW-Stout. I would like to acknowledge the individuals, whether they are still here or not, who have been there for me when I needed help. In addition, I am thankful for my lifelong friends from the MSAP program... Thank you!

As a closing statement of the acknowledgement, I would like to state that:

As humans, we all make assumptions, which is a natural part of life. Assumptions are okay to make, but it is important to not let your assumptions become solidified, set in stone judgments.

Table of Contents

Abstract	2
List of Tables	6
Chapter I: Literature Review	7
Workplace Culture and Diversity	8
Cultural Competence in the Workplace	11
Self-Efficacy Effects in the Workplace	13
Cultural Knowledge, Knowledge Accuracy, and the Dunning-Kruger Effect	15
The Current Study	18
Hypotheses	18
Chapter II: Methodology	20
Participants	20
Participant Demographics	20
Materials and Instrumentation	21
New General Self-Efficacy Scale	21
Cultural Competence of Program Evaluators Scale (CCPE)	21
General Cultural Knowledge Inventory (GCKI)	23
Demographics and Additional Items	23
Procedure	23
Data Preparation	24
Data Analysis	25
Summary	25
Chapter III: Results	26

Descriptive Statistics, Data Cleaning.....	26
New General Self-Efficacy Scale (NGSE)	26
Cultural Competence of Program Evaluators (CCPE) Self-Report Scale	27
General Cultural Knowledge Inventory	28
Inferential Statistics	29
Figure 1: Correct Cultural Knowledge Items and Confidence Mean Percentages by Quartile	32
Chapter IV: Discussion.....	33
Self-Efficacy and Cultural Knowledge.....	33
Cultural Competence and Cultural Knowledge	34
Cultural Knowledge and Confidence and the Dunning-Kruger Effect.....	35
Implications and Future Directions.....	36
Limitations	40
Conclusion	41
References.....	43
Appendix A: New General Self-Efficacy Scale (NGSE)	49
Appendix B: Cultural Competence of Program Evaluators (CCPE) Self-Report Scale.....	50
Appendix C: Cultural Awareness Quiz--Quick-Fire True or False?	55
Appendix D: Demographics	56
Appendix E: Qualitative Responses.....	57
Appendix F: Scoring the CCPE Self-Report Scale.....	59

List of Tables

Table 1: Means and Standard Deviations for the New General Self-Efficacy Scale (NGSE)	27
Table 2: Means and Standard Deviations for Cultural Competence (CCPE).....	27
Table 3: Means and Standard Deviations for the General Cultural Knowledge Inventory (GCKI) by Quartile	28
Table 4: Linear Regression Results of Cultural Competence and General Cultural Knowledge Confidence	30

Chapter I: Literature Review

According to the United States Census Bureau (2017), worker diversity continues to increase at a rapid pace for American employers. In order to stay current with this trend, employers must strive to understand their employees' understanding and knowledge of the many different cultures they may interact with. Psychological researchers refer to this type of knowledge as cultural competence (CC). As workforce diversity continues growing, employers find themselves searching for more effective cultural competence trainings to create a work environment that promotes collaboration with everyone, regardless of individual differences (Bussema, Nemece, Anthony, William, & Gill, 2006).

Cultural Competence and the environmental contexts of organizations have a complex relationship. This relationship requires employers to pay close attention to the important cultural differences between all individual workers within their work environment (Johansson, & Stohl, 2012). The intended benefit of CC for businesses and other organizations is the ability to deliver equal opportunities to all employees, regardless of their potential differences (Betancourt, Green, Carrillo, & Park, 2005).

While cultural competence is beneficial for organizations, it generally represents a high level of cultural knowledge that arises from within individual workers. Of importance for this type of knowledge within individual employees is the trait of Self-Efficacy (SE). Self-Efficacy is one's perceptions of their own abilities and competence regarding specific topics and tasks (Bandura, 1977). This relates to cultural competence in an important way, in that self-efficacy potentially influences a larger desire to learn and engage with cultures about which one may not have much knowledge (Bandura, 1986). Therefore, self-efficacy, or an individual's confidence in their learning ability, may be an important factor to consider when measuring cultural

competence and knowledge, as differences in confidence can also provide additional insight related to personal knowledge and achievement (Jeffreys, 2016).

The main purpose of the current research was to investigate the relationship between cultural knowledge, competence, and self-efficacy as they relate to diversity in the workplace. First, the psychological aspects related to culture and diversity will be briefly explored as it relates to the workplace. The following sections will then examine the larger constructs of cultural competence, self-efficacy, and their effects on the ways in which people judge their own knowledge and competence as it relates to different cultures. Specifically, the current study sought to examine the relationships between self-reported cultural knowledge, cultural competence, and self-efficacy to better understand the potential relationships among these factors in higher-education employees.

Workplace Culture and Diversity

Culture refers to the values, attitudes, and beliefs similar groups of people share with one another (Kagawa Singer, Dressler, & George, 2016). While cultures may differ across countries and around the world, there are also cultures that are not necessarily defined by geographical boundaries. Culture and sub-cultures are unique qualities that are different than any population of society (Heise, 2007). Therefore, cultures and sub-cultures can also be present within countries, states, cities, towns, and rural settings. Workplaces themselves could even be inclusive of unique cultures. Almost every profession includes sub-cultures within an occupation (Heise, 2007).

Within modern workplaces, it is extremely common for geographically and culturally diverse employees to collaboratively assemble and work together in an organization, creating a culture at work that is the sum of many culturally diverse individuals naturally present within a modern organization. Essentially, this creates organizational culture, which is the culture shaped

by the organizations' own employees. Importantly, organizations benefit in a variety of ways from the establishment of a diverse organizational culture (Cheung, Wong, & Wu, 2011).

Research has demonstrated that organizations that contain many diverse individuals in their workplace produce an enhanced creative environment for all employees (Martin, 2014). Unique perspectives and ideas are likely to be maximized when individuals from different cultures are brought together in the workplace. In addition to enhancing creativity, individuals who are exposed to more diverse cultural perspectives are likely to have better coping strategies when encountering unique cultures for the first time (Martin, 2014). Diversity in the workplace can significantly improve tolerance and positive work behaviors amongst employees, ensuring that every person feels equal and has a sense of belonging (O'Neill, 2016).

For example, Chen, Liu, and Portnoy (2012) studied the interaction between both individual (i.e. personality, characteristics, ethnicity, languages spoken etc.) and firm level (i.e. firm size, age, gender, and ethnic diversity) factors, and how the combined factors could be used to improve the interactions of those in the workplace. This research found that companies and organizations who recruited diverse employees allowed those companies to see higher financial gains and lower losses from their recruiting efforts (Chen, Liu, & Portnoy, 2012). In addition to company benefits, employees within the workplace tend to be more productive if their work climate allows them to operate in a more open-minded and supportive environment (Keller, Julian, & Kedia, 1996).

Diversity also tends to enhance the generation of solutions during decision-making processes, although communication can be slowed or impaired due to significant cultural differences that may exist between team members (Shachaf, 2008). Thankfully, by providing the proper cultural training to employees, communication impairments can be averted. Culturally

diverse employees can help organizations that wish to engage in global expansion of their operations (Martin, 2014). Utilizing the skills of culturally diverse employees can assist organizations, as the employees who are knowledgeable about the culture in areas served by that business will be able to provide insights about the laws, regulations, and cultural values held by the organizations with which they are working (Martin, 2014).

Ely and Thomas (2001) argued that cultural diversity also provides significant effects to workplace engagements. In their study, they found that increased diversity within the workplace positively impacted employee relations, and therefore, team efficiency (Ely & Thomas, 2001). Having diverse perspectives of many cultures in the workplace allows group members to identify individual differences within the group and still work cohesively (Ely & Thomas, 2001). This perspective not only allows employees to collaborate, but also allows them to actively participate in the group, increases an employee's sense of belonging, perceptions of value within the organization, and mutual respect. In addition, increased diversity in the workplace can foster a better understanding of one's own culture and how it contributes to their work (Ely & Thomas, 2001).

The effects of cultural diversity within an organization can also influence the larger organizational structure and culture. Fine (1996) conducted a meta-analysis to investigate studies that evaluated cultural diversity in the workplace. From this meta-analysis, Fine (1996) determined that diversity initiatives in the workplace have both positive short-term and long-term implications. Specifically, employees who go through a cultural competency training can make a difference in the development of the culturally diverse organization and the general organizational culture and climate (Fine, 1996). Furthermore, these positive implications enhance workplace policies, behavior in the workplace, and organizational structures to foster an

increased culturally diverse organization (Fine, 1996). The benefits of having culturally diverse personnel can also provide significant improvements to workplace dynamics, ultimately benefitting the overall climate and positive behaviors of the workplace.

However, workplace behaviors are also representative of employees' cultures of origin, in that individuals are more likely to follow the norms of the culture they were raised knowing. Culture is a part of life and it influences individuals' interactions with one another (Belzen, J. A., 2010). Understanding and possessing the ability to work with others who are from different cultures and hold different values reinforces the notion that it is important to be culturally competent (Dana & Allen, 2008). The idea of cultural competence, what it is, and how it can be an asset for organizations will be explored during the next section.

Cultural Competence in the Workplace

In this section, the literature on Cultural Competence will be defined and explored, and the benefits competence with other cultures can have on both individuals and organizations. The concept of culture has many definitions and components depending on the field of study and methods of investigation (Tot, 2011). Cultural competence can refer to a person's familiarity with different cultural groups, as well as their ability to competently work with individuals from other cultures (Sue, 1998).

Cultural Competence (CC), as DeAngelis (2015) gives a general definition, is the capability to recognize, appreciate, and relate to others who come from a variety of different cultures and hold beliefs that are different from your own. On an organizational level, CC is defined by O'Neill (2016) as the acknowledgement, understanding, and possession of resources necessary to grasp the idea of diversity, so that one might successfully work with a variety of

individuals. Obviously, such competence has important ramifications for global companies, who likely have both customers and employees with wide cultural differences.

These cultural differences can be vital for a company's success, as customers value and demand different things, and these values may be both culturally determined while also providing an influence on customer behavior (Joutsenvirta & Uusitalo, 2010). Employees and employers who are aware of this can use this to their benefit to transform this knowledge into more effective business practices. Thus, an organization that is culturally competent is sensitive to social or cultural values that can beneficially influence business practices. In turn, successful global organizations can and should adjust their actions and employee training in response to ongoing cultural shifts (Joutsenvirta & Uusitalo, 2010).

Employees tend to be more successful overall within dynamic and multi-cultured environments (Reichard et al., 2015). In their research, Reichard and colleagues (2015) identified that individuals who have effective communication skills could successfully negotiate and connect with individuals from different cultures to obtain necessary goods or information for organizational growth. There were two studies conducted within this investigation—In the first study, there were 85 undergraduate students who had studied abroad or had experience with other cultures. These participants were asked to share their experiences and perceptions of different cultures (Reichard et al., 2015). In the second study, the qualitative information gathered from the first study was used to train 130 employees on CC (Reichard et al., 2015).

Results of this study revealed that CC training increased participants' cultural knowledge, awareness, and intelligence; thus, increasing levels of CC (Reichard et al., 2015). From this study, it can be inferred that experience with different cultures can be collectively used as a learning tool to increase the CC of other employees in the workplace (Reichard et al., 2015), and

that these experiences have direct benefits for both employers and employees. Some additional examples of benefits for cultural competence include improvements in workplace climate and overall business success (Taylor et al., 2008), enhanced competitive edge (O'Neill, 2016), and employee efficiency in dealing with culturally related conflicts at work (Chrobot-Mason, 2012).

Increased work performance is, most of the time, related to effective teamwork. An effective team can allow employees to be more creative and productive. Individuals' communication, language, and personality differences influence the effectiveness and cohesion of the team (Shachaf, 2008). These differences appear regarding an individual's culture, which is what enhances the diversity in the workplace. It is easy to fail to recognize cultural differences, but individuals might give clues (e.g. being uncomfortable about certain situations, which could be due to different personality interactions; Sample, 2013).

To summarize, previous research provides strong evidence that cultural competence is an important concept, useful for both employees and employers, and is becoming a necessary skill for today's employees (Chrobot-Mason, 2012). Yet, an important but overlooked aspect of cultural competence is its relation to one's own knowledge of their cultural competence. This may be a vital factor to consider when examining cultural competence, as one's actual competence may vary greatly from one's perceptions of it. Psychologists have traditionally viewed this aspect as one factor related to self-efficacy, which is explored in the next section.

Self-Efficacy Effects in the Workplace

Self-efficacy (SE) is one of the most widely studied concepts in psychology (Hardy, 2014), and was first defined by Bandura (1977) as one's perceptions of their abilities and competence regarding specific topics and tasks. This concept is directly related to workplace effectiveness because self-efficacy permeates an individual's thoughts, abilities and behaviors

while on the job (Bandura, 1977). For example, high self-efficacy is positively related to high performance in the workplace (Beauregard, 2012). In circumstances where an individual's level of self-efficacy is increased, they are more likely to accept challenging tasks, are more internally motivated, and are generally more productive compared to those with lower self-efficacy (Beauregard, 2012).

Research suggests that self-efficacy is one of the key components for employee success in the workplace (Loeb, Stempel, & Isaksson, 2016). High levels of social self-efficacy improve cooperative team climates, while low levels of emotional self-efficacy correlated with higher levels of emotional stress and annoyance (Loeb, Stempel, & Isaksson, 2016). Of importance for organizations that rely on effective teams to drive productivity, self-efficacy was found to be one of the essential components of team climate in order to reduce emotional frustration and fatigue.

Environmental demands, such as work climate and employees' individual differences, come with their own challenges and can be directly related to culture and one's cultural competence. For individuals to face those challenges, one should exhibit SE. For example, if an individual exhibits high levels of SE, Bandura (1997) claims that employees are more effective when handling those workplace challenges, in that individuals who have higher levels of SE will likely have more positive interactions than individuals who have low levels of SE.

Self-efficacy can also be a useful predictor of job performance. In a meta-analysis study, it was found that high levels of SE can indicate high performance in the workplace (Stajkovic, Luthans, & Eisenberg, 1998). Personality characteristics are also related to SE and job performance. This means that employers can screen for certain personality types to identify individuals who will be high in SE as well as identify individuals who will likely be high performers in the workplace (Stajkovic, Luthans, & Eisenberg, 1998).

Self-Efficacy is also directly related to many job outcome variables, such as productivity, job satisfaction, and group cohesion; thus, it is beneficial for organizations to utilize interview and selection techniques that consider self-efficacy during their hiring process (Elias et al., 2013). For example, organizational culture and self-efficacy were examined together by Simosi (2012) to explore the overall effect on individuals' transfer of knowledge, skills, and abilities (KSAs) to complete required training in the workplace. Through this study, achievement culture-training transfer and humanistic culture training transfer was found to be influenced by individuals' SE (Simosi, 2012). Put simply, employees with higher self-efficacy retained more knowledge from their trainings, which has significant benefits for companies who regularly need to leverage new understandings about other cultures.

Self-efficacy levels also provide useful predictions regarding how employees will likely interact with customers and other employees from diverse backgrounds (Jeffreys & Dogan, 2012). As an example, if an employee has had interactions with individuals from different backgrounds, then they will have a higher level of cultural knowledge than someone who did not have those unique experiences (Stahl et al., 2010). Having those experiences will directly relate to the employee behaviors and how they interact with others (Jeffreys & Dogan, 2012). The increased knowledge from interacting with diverse individuals results in increased resourcefulness (Stahl et al., 2010) and an increase in cultural competence (Bussema et al., 2006).

Cultural Knowledge, Knowledge Accuracy, and the Dunning-Kruger Effect

Broad or specific knowledge about cultures, their values and behaviors is generally referred to as cultural knowledge (Pilhofer, 2011). The cultural knowledge employees hold can influence their self-efficacy about culture. For example, if a person has higher cultural

knowledge, they are likely to be more confident in the skills and knowledge required by a diverse workplace (Oettingen, 1995). Chua and Ng (2017) found that increased cultural knowledge help with individuals' creativity and has a positive effect on the teamwork in a diverse setting. Thus, in addition to self-efficacy, it may be important to consider how employees might actually evaluate their own cultural knowledge and behaviors.

As this research has summarized, individuals may vary greatly in terms of their cultural competence, cultural knowledge, and their self-efficacy of that knowledge. From the perspective of employers, it may be useful to fully understand the extent of the knowledge their employees have about different cultures they may serve; to better design employee training initiatives (Coget, 2011). In some cases, individuals may accurately recognize the limits of their knowledge about culture, but in other cases their estimations may be significantly misaligned. A large body of research into metacognition has examined the ways in which individuals evaluate the accuracy of their knowledge of a given subject (Kruger & Dunning, 1999); although to date this research area has not examined cultural knowledge as a variable of interest. Depending on one's level of knowledge (in this case, cultural knowledge), individuals may be significantly inaccurate regarding of how much or little they know about a given topic; an observation commonly referred to as the Dunning-Kruger Effect (1999).

In a meta-analysis study on the Dunning-Kruger Effect, it was found that low performing individuals did not accurately self-evaluate the shortcomings of their performance (Schlosser, Dunning, Johnson, & Kruger, 2013). Alternatively, high performers self-reported their abilities as lower than they were in reality (Schlosser et al., 2013). Schlosser and colleagues (2013) found that with not enough knowledge about a specific topic, people tend to over or under estimate their abilities and it affects their actions in interactive situations with others – therefore; people

might over or under estimate their abilities in regard to their knowledge of CC. Dunning (2011) claims that the inaccuracy individuals show on their knowledge can be improved by giving them the resources they need on a specific topic. For example, if the individual rates their confidence high or low on a given test, they are likely to be more accurate after learning more about the given topic (Dunning, 2011).

The Dunning-Kruger effect has been applied to multiple knowledge constructs such as humor, historical knowledge, information literacy and creative thinking based on cultural knowledge (Chua & NG, 2017). For example, Pennycook and colleagues (2017) examined the Dunning-Kruger Effect in critical thinking and specifically considered a cognitive reflection test; an intellectual assessment that examines people's ability to critically think and self-identify their shortcomings. The results revealed that one of the reasons people may hold biases is because they are not aware of their predispositions or are inattentive to their own biases (Pennycook, Ross, Koehler, & Fugelsang, 2017). If individuals believe that they are more capable than their own cultural abilities and competence, it could certainly create major interpersonal conflicts with other employees. Chua and Ng (2017) found that individuals increased cultural knowledge has a positive effect on employees' creativity in the workplace. In order to increase productivity in a multicultural setting, individuals should learn as much knowledge as possible about the other cultures so that the right knowledge can be applied in given situations in contrast with making wrong assumptions about other cultures than one's own culture (Chua & Ng, 2017)

In the literature review, the concepts of culture, diversity, cultural competence, self-efficacy, and the Dunning-Kruger Effect have been examined as they relate to a workplace environment focused on cultural understanding. Cultural competence is a necessary skill in the modern workforce, regardless of the industry. However, an individuals' cultural knowledge and

confidence, as well as their general level of self-efficacy may all provide some useful contributions to the larger concept of cultural competence. The current study sought to examine the ways in which these important factors contributed to overall cultural competence in a sample of faculty and staff from two institutions of higher education in Wisconsin.

The Current Study

The current study sought to investigate the relationship between participants' self-efficacy, general cultural knowledge and confidence in that knowledge, and their overall contribution to participants' cultural competence. Participants were recruited for this study from lists of faculty and staff obtained from two Midwestern institutions of higher education: A large regional university and a regional technical college. Participants were invited to complete a 4-part online survey that contained: 1) a researcher-adapted measure of overall cultural knowledge and confidence in that knowledge (General Cultural Knowledge Inventory, GCKI), 2) a standardized measure of self-efficacy (New General Self-Efficacy Scale, NGSE), 3) a standardized measure of cultural competence (Cultural Competence of Program Evaluators Scale, CCPE), and 4) relevant demographic information.

Hypotheses

The hypotheses for the current study were as follows:

- *H1*: Self-efficacy scores on the NGSE would predict a significant amount of variance of cultural knowledge and confidence scores on the GCKI in a linear-regression model.
- *H2*: Cultural competence scores on the CCPE would predict a significant amount of variance of cultural knowledge and confidence scores on the GCKI in a linear regression model.

- *H3*: Knowledge and confidence scores on the GCKI would misalign for high and low-knowledge participants (i.e., a Dunning-Kruger effect), specifically: a) Participants with knowledge scores in the lowest performance quartile would demonstrate over-confidence regarding their performance on the GCKI and b) Participants with knowledge scores in the top performance quartile would demonstrate under-confidence regarding their performance on the GCKI.

Chapter II: Methodology

The current study sought to examine cultural knowledge and confidence in that knowledge, general self-efficacy, and overall cultural competence in staff and faculty from two institutions of higher education in Wisconsin via online survey. This chapter will overview participants, research design, materials, procedures, and lastly explain the data analysis process, along with a summary of methodology.

Participants

A total of 448 participants initiated the survey from a larger email distribution of 1000 invitations, however, only 398 participants fully completed all aspects of the current study. Participants consisted of staff and faculty from Institution 1 (I1) ($n = 256$) and Institution 2 (I2) ($n = 125$), with an additional 17 participants electing not to answer their institutional affiliation. Institution 1 is a four-year regional public university and grants B.S. and M.S. degrees and as of 2016 there were 9,619 enrolled students. Alternatively, Institution 2 is a two-year technical college and grants Associate degrees, diplomas, and certificates. Institution 2's class of 2017 had 3,098-degree, diploma and certificate graduates. A total of 1000 survey invitations were extended to faculty and staff members at both institutions, with an expected response rate of 33%.

Participant Demographics

Most participants identified as female, $n = 249$ (65.18%), followed by male, $n = 133$ (34.82%), and the mean age for the participants was 46 years old ($SD = 11.38$). In terms of education, 235 participants held post-graduate degrees, followed by college graduates (4 Year Degrees) ($n = 72$), some post graduate work ($n = 32$), and trade/technical/vocational training ($n = 22$). Regarding cultural knowledge and education, 198 participants reported some experience

with cultural competence training, while 189 participants reported no experience with cultural competence training.

Materials and Instrumentation

Three survey instruments were used in this research study: The New General Self-Efficacy Scale (NGSE), the Cultural Competence of Program Evaluators (CCPE) Self-Report Scale, and a researcher created inventory, adapted from other sources, titled the General Cultural Knowledge Inventory (GCKI). A demographic form was also provided at the end of the survey.

New General Self-Efficacy Scale. To assess participants' self-efficacy, the New General Self-Efficacy Scale (NGSE) was utilized (Chen, Gully, & Eden, 2001), which measures participants' perceptions of their abilities and competence regarding specific topics and tasks (e.g., self-efficacy; Bandura, 1977). Specifically, the NGSE examines one's own confidence and assessment of their performance efficiency for different responsibilities and circumstances (Chen, Gully, & Eden, 2001). Each item was ranked on a five-point Likert scale ranging from (1) Strongly Disagree to (5) Strongly Agree. Some of the examples from the scale included "I will be able to achieve most of the goals that I have set for myself." and "I am confident that I can perform effectively on many different tasks" (see Appendix A). Generally, higher scores indicate higher Self-Efficacy and lower scores indicate lower Self-Efficacy and the NGSE scale has been found to be reliable, with an average Cronbach's Alpha level of .88 based on previous validation studies (Chen, Gully, & Eden, 2001). In the current study, participant responses to this scale were also found to be reliable, with a Cronbach's Alpha level of .94.

Cultural Competence of Program Evaluators Scale (CCPE). To assess participants' cultural competence, the Cultural Competence of Program Evaluators (CCPE) self-report scale was utilized (Dunaway, Morrow, & Porter, 2012). Cultural competence is the capability to

recognize, appreciate, and relate to others who come from a variety of different cultures (DeAngelis, 2015). The CCPE evaluates dissimilarities in three different levels of cultural competence among participants. There were total of 26 items in the CCPE scale, specifically the scale consists of three subscales: “Cultural Skills (14 Items), Cultural Knowledge (7 Items), and Cultural Awareness (5 Items)” (Dunaway, Morrow, & Porter, 2012, p. 507). Each item is ranked on one of three five-point Likert scales: [1] (1) Very Limited to (5) Very Good, [2] (1) Very Limited to (5) Very Aware, and [3] (1) Strongly Disagree to (5) Strongly Agree. Some of the examples from the scale include “Culture is not external but is within the person” and “Ambiguity and stress often result from multicultural situations because people are not sure what to expect from each other” (Appendix B). The CCPE has confirmed to high reliability, as the subscales have shown internal consistency of at least .70 (Dunaway, Morrow, & Porter, 2012). Also, the overall self-report measure has shown an internal consistency of .88.

The CCPE was originally developed to assess program evaluators, thus there are some items refer specifically to program evaluators. To make the scale more generally appropriate, the terms “evaluator” or “program evaluator” were removed from items ($n = 6$) to make the questions more generally appropriate for other fields. For example, the original item, “I believe individuals’ own cultural beliefs influence their evaluation work-related decisions.” was changed to “I believe individuals’ own cultural beliefs influence their work-related decisions.” (See Appendix B).

In this study, the cultural skills sub-scale was found to be reliable, with a Cronbach’s Alpha level of .92; the cultural knowledge sub-scale demonstrated a Cronbach’s Alpha level of .81 and the cultural awareness sub-scale demonstrated a Cronbach’s Alpha level was .75. For the

purposes of data analysis, all sub-scales were summed into a total cultural competence score (CC).

General Cultural Knowledge Inventory (GCKI). To assess participants' knowledge regarding general cultural awareness, participants were given an adapted inventory retrieved from Commisceo Global Consultancy (Payne, 2013), referred to here as the General Cultural Knowledge Inventory (GCKI). The Cultural Awareness Quiz included 26 true ($n = 14$) and false ($n = 12$) statement questions about different countries' cultural preferences and behaviors. Some of the examples from the inventory include, "The thumbs up sign means OK in Argentina" and "American businessmen dislike detailed written contracts". Participants were asked to respond to each of the 26 statements and were also asked to provide a confidence rating to their answers. For confidence judgments, a percentage scale was provided, and participants were asked to rate their confidence on a scale of 0%-100% in 10% increments. A 0% rating indicated that the participant was not at all confident in their response, and 100% indicated that the participant was completely confident in the correctness of their answer to the GCKI item. This scale can be found in Appendix C.

Demographics and additional items. Participants were asked to provide their age, gender, race, ethnicity, relationship status, hometown, ethnicity, education level, position within the institution, and the amount of time they had worked for their institutions. Participants were also asked whether they had ever received cultural competence training. See Appendix D for these items.

Procedure

Approximately 1000 participants received the survey link, and participation was voluntary. The researcher sent 750 emails to I1's faculty and staff, which were drawn from a

randomized sample email list provided by the I1's Planning, Assessment, Research & Quality (PARQ) office. Participants who were I2 faculty and staff were recruited via a survey linked to an internet news page that only I2 faculty and staff had access to, which was created by an institutional researcher from I2 at the request of the author. The survey was created using the Qualtrics software and the link was provided to participants via email link. The researcher obtained Institutional Review Board (IRB) approval prior to the study and ethical guidelines were followed.

Participants who elected to participate in the study were directed by the email link to the Qualtrics survey and first completed an implied consent form. Once the participants consented, they were then directed to the survey materials that included, in order: The Self-Efficacy scale (NGSE), Cultural Competence Scale (CCPE), the general Cultural Knowledge inventory (GCKI) and demographics questions. Once the participants completed the survey, they were thanked for their time and provided a debriefing form on the study, which also included contact information for primary investigator. The survey was open for 29 days (May 9th – June 6th, 2017).

Data Preparation

After the data collection period closed, the raw dataset was imported from Qualtrics to Microsoft Excel to prepare a cleaned data file for statistical analysis in the Statistical Package for the Social Sciences version 24 (SPSS). First, participants who skipped any of the questions related to NGSE, CCPE and GCKI were eliminated from the larger dataset, resulting in a loss of 11.12% of the data ($N = 50$). Scores for the NGSE, CCPE and GCKI scales were computed based on item responses and standardized scoring procedures for each inventory as described in Chapter 3.

Data Analysis

The final cleaned data file was imported into SPSS version 24 for statistical analysis. First, descriptive statistics were computed to explore demographic means for age, gender, relationship status, highest level of education completed, participant's current workplace, time that has been employed by the institution, race, and ethnicity. Inferential statistics were then carried out on the dataset based on the study hypotheses (further described in Chapter 3).

Summary

In this study, a survey on NGSE, CCPE, and GCKI was implemented, and participants from UW-Stout and NWTC were invited to complete the survey. The goal of this thesis study was to examine the relationship between Self-Efficacy and Cultural Competence, and whether general Cultural Knowledge and confidence about this knowledge mediated that relationship. The hypotheses were tested by administering an online survey including two measurements, a knowledge test and demographics-additional questions: Self-Efficacy was measured via NGSE, Cultural Competence was measured via CCPE and lastly confidence ratings of participants were measured via a true/false quiz to see if there is a Dunning Kruger Effect present in the findings (See Appendix C). After data collection, the data was cleaned and analyzed.

Chapter III: Results

The purpose of this chapter is to present the results of the survey that was administrated to I1, and I2 staff and faculty. The next section details the analyses of the data, including descriptive statistics, and hypotheses testing.

Descriptive Statistics, Data Cleaning

A total of 448 participants initiated the survey in Qualtrics, however 398 participants fully completed all items. As demographics information was collected at the end of the survey and participants had the option to skip demographic items, demographic descriptive statistics and percentages fluctuate throughout this analysis.

New General Self-Efficacy Scale (NGSE)

For the NGSE scale, averages were first calculated for all participants; who reported a mean self-efficacy score of 4.32 ($SD = .64$). A median-split procedure was also conducted to assign participants into High (HSE) or Low Self-efficacy (LSE) groups. The median for all participants was calculated at 4.50, and participants were assigned to the LSE group if they scored below the median of 4.50, and the HSE group if they scored at or above the median value (see Table 1). After the median-split procedure, participants in the LSE group ($N = 190$) demonstrated a mean self-efficacy score of 3.87 ($SD = .63$) while participants in the HSE group ($N = 193$) demonstrated a mean self-efficacy score of 4.77 ($SD = .18$). A one-way ANOVA between the LSE and HSE groups after the median-split procedure revealed a significant difference between mean self-efficacy scores, $F(1,382) = 368.09$ $p < .001$, $\eta^2 = .49$.

Table 1

Means and Standard Deviations for the New General Self-Efficacy Scale (NGSE)

	Self-Efficacy Groups			
	Low Self-efficacy		High Self-efficacy	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
New General Self-Efficacy Scale Scores	3.87	.63	4.77	.18

Cultural Competence of Program Evaluators (CCPE) Self-Report Scale

The Cultural Competence scale (CCPE) had three sub-scales, cultural skills, cultural knowledge, and cultural awareness. For each scale the higher the score, higher the level of self-efficacy reported across the three subscales. Specifically, Cultural Skills had 14 items and scores could range between 14 to 70, with scores above 54 indicating higher cultural skills. Cultural Knowledge had seven items and scores could range 7 to 35, with scores above 27 indicating higher cultural knowledge. Lastly, Cultural Awareness, had five items and scores could range from 5 to 25, with scores above 19 indicating higher cultural awareness (see Table 2). A total Cultural Competence score was calculated for all participants by summing each of the component scores together.

Table 2

Means and Standard Deviations for Cultural Competence (CCPE)

	Cultural Competence Sub-scales							
	Total		Cultural Skills		Cultural Knowledge		Cultural Awareness	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Cultural Competence	95.48	12.93	51.36	9.01	25.45	3.92	18.67	3.39

General Cultural Knowledge Inventory

Mean percentage scores on the General Cultural Knowledge Inventory (GCKI) were calculated for each participant based on the total number of correct answers provided on the inventory. Similarly, mean percentage confidence scores were also calculated for each participant (see Table 3). Participants were then coded into quartiles (Bottom, 2nd, 3rd, and Top) based on their total number of correct responses, to examine for potential interactions between knowledge and confidence in terms of cultural knowledge (i.e., the Dunning-Kruger effect; Kruger and Dunning, 1999). To establish the effectiveness of the quartile coding, a one-way Analysis of Variance was conducted using Percentage Correct as the dependent variable and Quartile as the independent variable. An omnibus effect of Quartile was observed, $F(3,382) = 551.54, p < .001, \eta^2 = .81$. Post-hoc analyses using a Bonferroni correction for multiple comparisons demonstrated that Percentage Correct mean scores significantly differed between all Quartile groups (all $ps < .001$).

Table 3

Means and Standard Deviations for the General Cultural Knowledge Inventory (GCKI) by Quartile

Quartile	<i>n</i>	General Cultural Knowledge Inventory Score			
		Percentage Correct		Percentage Confidence	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Bottom	69.00	26.81	9.76	46.36	20.99
2nd	96.00	40.83	1.88	43.40	23.25
3rd	106.00	47.90	1.92	47.40	23.47
Top	112.00	59.55	6.00	47.30	21.22

Inferential Statistics

This section reports the results of inferential statistics, based on the hypothesis and statistical tests described below.

Hypothesis 1 (H1) stated: That self-efficacy scores on the NGSE would predict a significant amount of variance of cultural knowledge and confidence scores on the GCKI in a linear-regression model.

To examine H1, two separate linear-regression models were conducted. First, a regression analysis was performed for mean cultural knowledge score on the GCKI as the dependent variable with self-efficacy score on the NGSE as the predictor variable. A second regression analysis was performed for mean cultural confidence score on the GCKI as the dependent variable and self-efficacy scores serving as the predictor variable. For both regression models, no significant variance was predicted (all $ps > .3$). Regarding that self-efficacy scores on the NGSE would predict a significant amount of variance of cultural knowledge and confidence scores on the GCKI was not supported.

Hypothesis 2 (H2) stated: That cultural competence scores on the CCPE would predict a significant amount of variance of cultural knowledge and confidence scores on the GCKI in a linear regression model.

To examine H2, two separate linear-regression models were conducted. First, a regression analysis was performed for mean cultural knowledge score on the GCKI as the dependent variable with mean cultural competence score on the CCPE as the predictor variable. This regression model did not predict a significant amount of variance ($p > .75$).

A second regression analysis was performed for mean cultural confidence score on the GCKI as the dependent variable and with mean cultural competence score on the CCPE as the

predictor variable. This regression model was significant ($\beta = .43$; see Table 4), demonstrating that mean cultural competence scores on the CCPE significantly predicted confidence ratings on the GCKI, $R^2 = .19$, $F(1,382) = 88.29$, $p < .001$. Thus, the prediction cultural competence scores on the CCPE would predict a significant amount of variance of cultural knowledge and confidence scores on the GCKI was partially supported.

Table 4

Linear Regression Results of Cultural Competence and General Cultural Knowledge Confidence

	β (SE)	t	p	95% CI for β	
				Lower	Upper
Intercept	-25.31 (7.68)	-3.30	.001	-40.40	-10.21
Cultural Competence (CCPE)	.75 (.08)	9.40	.000	.59	.91

Hypothesis 3 (H3) stated: That knowledge and confidence scores on the GCKI would potentially demonstrate a Dunning-Kruger effect, specifically: a) Participants with knowledge scores in the lowest performance quartile would demonstrate over-confidence regarding their performance on the GCKI and b) Participants with knowledge scores in the top performance quartile would demonstrate under-confidence regarding their performance on the GCKI.

To examine H3, a repeated-measures ANOVA was carried out on the data with GCKI answer type repeated as a within-participant measure (Correct, Confidence) and Quartile group as a between-participant measure (Bottom, 2nd, 3rd, and Top). It was predicted that participants in this study would potentially demonstrate a Dunning-Kruger effect while completing the GCKI survey. This prediction was supported by a significant interaction between GCKI answer type and Quartile, $F(3,379) = 27.51$, $p < .001$, $\eta^2 = .18$. A main effect for GCKI answer type was also

observed, $F(3,379) = 3.84, p = .05, \eta^2 = .01$, with participants generally rating their confidence percentage as significantly higher ($M = 46.12$) compared to their actual correct answer percentage ($M = 43.77$).

However, post-hoc analyses on the difference between answer confidence ratings and actual answer performance revealed overconfidence effects only held true for participants in the Bottom quartile ($M_{DIF} = 19.55$), $F(1,68) = 56.29, p < .001, \eta^2 = .45$. Participants in the 2nd ($M_{DIF} = 2.57$) and 3rd quartiles ($M_{DIF} = -.49$) demonstrated accurate alignment in their answer and confidence responses (all $ps > .25$). Participants in the Top quartile demonstrated significant under-confidence in their answer accuracy ($M_{DIF} = -12.24$), $F(1,111) = 32.10, p < .001, \eta^2 = .22$.

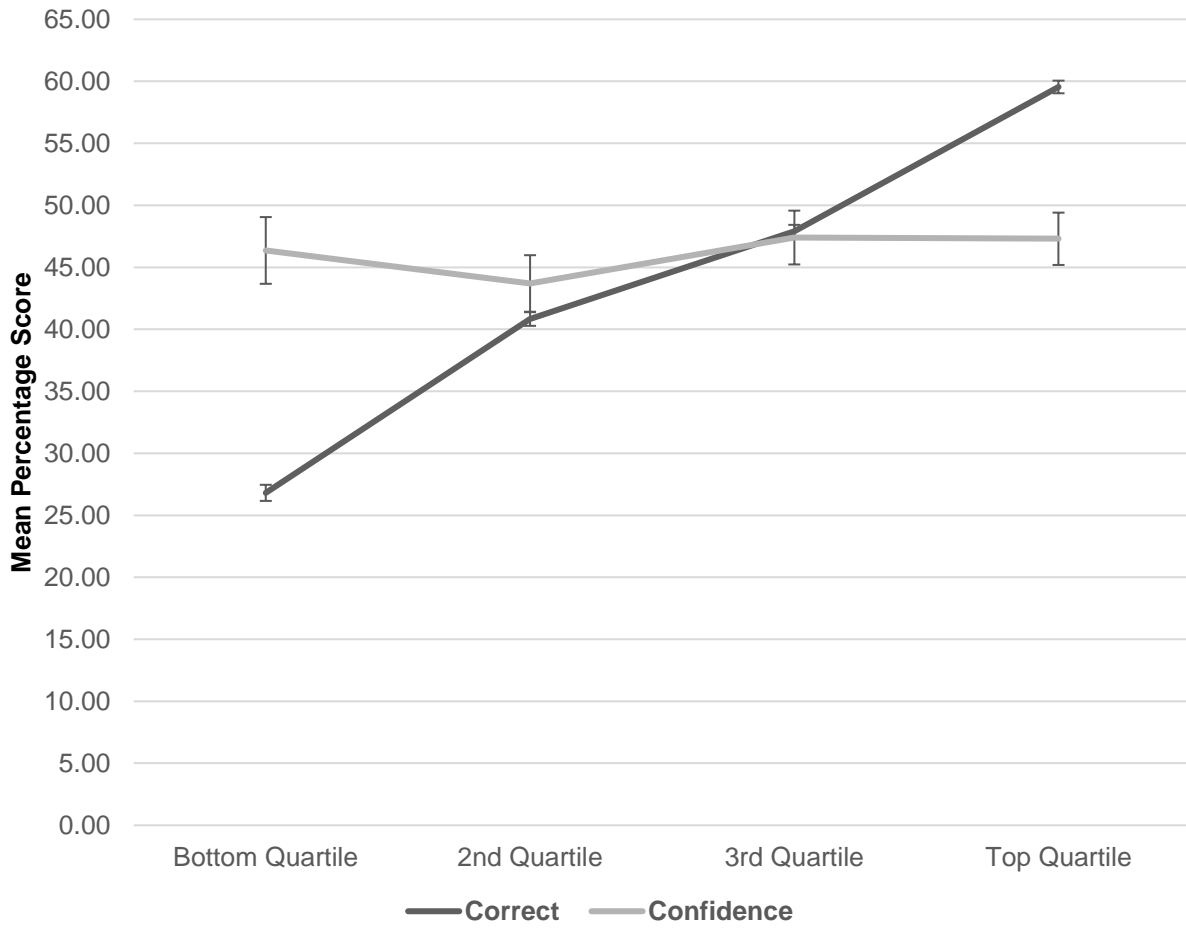


Figure 1. Correct cultural knowledge items and confidence mean percentages by quartile. Error bars represent standard error of the mean.

Chapter IV: Discussion

The main purpose of this study was to investigate the relationship between cultural knowledge, self-efficacy, and the relationship between these factors to overall cultural competence. To address these questions, a sample of faculty and staff from two institutions of higher education in Wisconsin completed an online survey which contained three separate inventories on the areas of interest. The resulting data was then statistically evaluated to determine potential relationships between cultural knowledge, self-efficacy, and overall cultural competence.

This discussion section will provide a review of the hypotheses, a summary of the findings and implications from those findings, future research directions, and possible limitations of the study.

Self-Efficacy and Cultural Knowledge

The first hypothesis was that self-efficacy scores would predict a significant amount of variance in terms of scores on an inventory of cultural knowledge, as well as confidence ratings on that knowledge in a linear-regression model. However, this hypothesis was not supported within the linear-regression model. This means that individuals' self-efficacy levels appear to not be significantly related to cultural knowledge or confidence in that knowledge. The reason for self-efficacy levels appearing to not be significantly related to cultural knowledge or confidence in that knowledge could be because self-efficacy does not necessarily correlate with confidence predictions related to specific knowledge. In addition, it's possible that cultural knowledge may be somewhat implicitly acquired, resulting in a concept that an individual may feel like they have little direct control over. Finally, Self-Efficacy is a concept that is typically related to specific and familiar topics and tasks (Bandura, 1977), so it could be the case that

cultural competence in this study was a novel consideration for participants, and one without a direct link to self-efficacy.

Cultural Competence and Cultural Knowledge

The second hypothesis was that overall cultural competence scores would predict a significant amount of variance in scores on cultural knowledge and confidence in a linear regression. To examine this portion of the second hypothesis, two linear regressions were carried out, with the first regression examining cultural competence and cultural knowledge. However, there were no significant relationships observed for this linear model. This outcome can potentially be explained by the observation that knowledge doesn't necessarily translate to concrete behaviors and beliefs (Brenner, Delamater, Charmaz, & Sell, 2016). For example, a person may perform well on a survey about cultural knowledge and expectations, but they may fail to demonstrate cultural competence when faced with a difficult cultural scenario in a real-life setting. Essentially, there may be a disconnect between what one knows and how one applies that knowledge to culturally responsive behaviors.

To examine the final portion of the second hypothesis, an additional linear regression was carried out to examine cultural competence and confidence in the cultural knowledge inventory. In this instance, a significant relationship was observed, in that participants' average cultural competence scores predicted about 19% of the variance in participants confidence ratings on the cultural knowledge inventory. This result provided partial support for the second hypothesis, suggesting that cultural competence is partially related to one's confidence in their cultural knowledge. This observation also provides additional evidence to the presence of the Dunning-Kruger effect discussed in hypothesis 3, that individuals can vary greatly in terms of the

alignment between their self-reported behaviors, knowledge, and the amount of confidence they have in the accuracy of that knowledge (Dunning, Heath, & Suls, 2004).

Cultural Knowledge and Confidence and the Dunning-Kruger Effect

The third and final hypothesis was that knowledge and confidence scores on the GCKI would potentially demonstrate a Dunning-Kruger effect, specifically: a) Participants with knowledge scores in the lowest performance quartile would demonstrate over-confidence regarding their performance on the GCKI and b) Participants with knowledge scores in the top performance quartile would demonstrate under-confidence regarding their performance on the GCKI.

To test H3, a repeated-measures ANOVA was carried out on the data and quartiles were created on the sample based on proportion correct and confidence ratings were examined for a Dunning-Kruger effect. Importantly for the support of the third hypothesis, a significant interaction effect was observed between quartile and answer type. Specifically, participants in the bottom quartile significantly over-estimated the accuracy of their performance, compared to their actual answers; while participants in the top quartile significantly under-estimated their accuracy.

Although some participants demonstrated an accurate alignment of knowledge and confidence, other participants demonstrated significant misalignment, which replicates the findings of Kruger and Dunning (1999). Johnson and Fowler (2009) also found that individuals who are overconfident in their abilities, are most likely to give more accurate statements. Therefore, over-confidence can result in individuals having inaccurate perceptions about their capabilities. One explanation for these observations is that low performing individuals do not accurately self-evaluate the shortcomings of their performance (Schlosser, Dunning, Johnson, &

Kruger, 2013). Alternatively, high performers tend to self-report their abilities as lower than they are in reality, however this may not necessarily be a problem that requires addressing (Schlosser, et al., 2013). Yet, for employees who lack important cultural knowledge, additional training can increase fundamental knowledge and greatly reduce or eliminate the Dunning-Kruger effect (Dunning, 2011). Thus, cultural training that employees might receive becomes incredibly important to employers; which will be discussed in the next section.

Implications and Future Directions

The purpose of the current study was to examine the relationships that may exist between self-reported cultural knowledge, cultural competence, and self-efficacy in higher-education employees. Although self-efficacy was predicted in this study to be significantly related to cultural competence and knowledge, this prediction was not supported by the data. While self-efficacy, or an individual's confidence in their learning ability, may be an important factor to consider regarding how an individual acquires cultural competence (Jeffreys, 2016), it does not appear to have significant utility in terms of how individuals actually demonstrate that knowledge in real-life situations.

Interestingly, cultural competence predicted participants' confidence scores on the cultural knowledge inventory, but not the accuracy of that knowledge. Knowing that cultural competence is the capability to recognize, appreciate, and relate to others who come from a variety of different cultures (DeAngelis, 2015), it stands to reason that cultural confidence scores and cultural competence are significantly related. One explanation for this observation is that individuals may consider their cultural knowledge and their confidence in that knowledge in different ways, and that only the processes related to confidence are tapped by a cultural competence inventory. In addition, both low and high-knowledge participants tend to have

difficulty in accurately evaluating their own knowledge, as demonstrated by the Dunning-Kruger effect.

This observation directly leads to the final construct examined by this study: The Dunning-Kruger effect, which posits that individuals may be highly inaccurate regarding the evaluation of the accuracy of their cultural knowledge (Kruger & Dunning, 1999). As with previous research, this study also found misalignment between performance and confidence for participants who scored the lowest and highest on the cultural knowledge inventory. This discrepancy has been explained by researchers as giving necessary trainings to the individuals to align their confidence to their answers (Kruger & Dunning, 1999). In their study Kruger and Dunning (1999) gave a specific test to their participants and asked them to rate themselves. Half of the participants then received a training. As a result, participants who received the training were able to successfully estimate their answers, many of the participants moved themselves from bottom and top quartiles to the second and third quartile meaning they were accurately rating their answers to their confidence in the answers (Kruger & Dunning, 1999).

One implication for these findings is that cultural competence trainings can increase participants' cultural knowledge, awareness, and intelligence, and thus, increase cultural competence (Reichard et al., 2015). Specifically, individuals who have higher knowledge and awareness of their surroundings, values, behaviors and the interaction with others can also be improved by the trainings (Taylor et al., 2008). Implementing new trainings or providing employees with the right learning materials, is important for organizations who value culturally competent employees (Joutsenvirta & Uusitalo, 2010).

Individuals who are culturally competent are more successful in dynamic and multi-cultured environments (Reichard et al., 2015). Having culturally competent employees leads to

higher success at both an individual and organizational level, better work environment, and better employee-employer relations. Employees who goes through CC training are more effective at dealing with issues related to diversification and multicultural conflict within the work environment (Chrobot-Mason, 2012). Finding out different ways to pinpoint the potential problems that could occur will be helpful for companies to come up with teaching strategies and cultural competence trainings. Employees and employers who are aware of this fact can use this knowledge to their benefit and ultimately turn this knowledge into effective business practices (Joutsenvirta & Uusitalo, 2010). Given the fact that diversity is increasing in organizations in many fields, training today's employees and providing them with the necessary knowledge, skills, and abilities is of the utmost importance. This is necessary in order to create an environment for employees where there is effective communication between individuals belonging to different cultures (Reichard, Serrano, Condren, Wilder, Dollwet, & Wendy, 2015). This is another valid reason for employers to think about the importance of Cultural Competence trainings.

Future research should examine the effects of cultural competence training on both perceptions and behaviors in the workplace. As Kruger and Dunning (1999) found a success in their training-based study to see improvement in individuals' answers to their confidence in the answers, workplace trainings can be designed that it specifically targets cultural competence and knowledge. Future research could also consider the interactions that might occur between business locations and workplace cultures, as well as the home culture of their employees. The focus of such studies would be important to better understanding potential individual differences within a workforce, and the best ways a culturally responsive work environment can be implemented successfully.

Overall, more participants in this study demonstrated accuracy in their knowledge of cultural competence than those who did not. There are several explanations for this effect. First, it is likely that the educational levels of the sample are greater than those of the general population (235 participants held post-graduate degrees, followed by college graduates (4 Year Degrees) ($n = 72$), some post graduate work ($n = 32$), and trade/technical/vocational training ($n = 22$), some college ($n = 17$), high school ($n = 6$)). It stands to reason that this sample has better cultural knowledge in general, as well as more experience evaluating the limits of their own knowledge. Future research should potentially examine if individuals with significant educational attainment are more resistant to Dunning-Kruger effects.

Second, the workplace environments of faculty and staff could be highly culturally responsive, as both institutions host a large number of both international students and faculty and staff from non-US cultures. Thus, the genuine interaction with students and co-workers from diverse cultures likely provides significant benefits to cultural knowledge. Future studies regarding the cultural compositions of workplaces, and the customers they may serve, could potentially further illuminate the benefits of a diverse population to a business.

Cultural competence is a vital topic as the workforce is getting more diverse, and potentially provides an important predictor of effective workplace behaviors. Therefore, future research should attempt to examine the direct connections between cultural knowledge, cultural competence, and desirable employee behaviors. As previously discussed, self-report responses and actual behaviors do not always align, especially in the workplace (Brenner, Delamater, Charmaz, & Sell, 2016). For example, it may be the case that a lack of cultural competence can spoil effective workplace relationships and could create tensions between coworkers. However,

future research would need to establish significant correlations between perceptions and workplace behaviors to support such claims.

Limitations

This study has some limitations that should be considered. The first limitation with this study involved the sample drawn from the two examined institutions of higher education. A total of 398 participants completed the survey out of 1000 survey invitations that were sent. In order to keep the participation pool larger, the researcher chose to put all participants into the same pool. Collecting samples from two different institutions is a limitation because the participants were from two different higher education institutions. First, the higher education institutions might have different approaches to cultural competence from each other. For example, the trainings in these two colleges could differ and that could influence the participants' knowledge and answers. This could also be because of the student body and the population that these two institutions have. As diverse population from these two colleges differ, so do employees' interactions with people from other cultures than their own.

The second limitation of this study is the generalizability to the general public, as the participants in this study were faculty and staff from two colleges. As stated before, the approach to cultural competence is not the same in every level of education and institution. Individuals from a higher education institution are more likely to be familiar and educated with the topic of culture than the general public. Since different institutions may have different requirements and regulations, specific approaches to culture and trainings might differ. These differences can affect people's knowledge and confidence levels. Thus, these findings might not hold true in different populations.

Finally, it's possible that one of the most important surveys deployed in this study may have not accurately assessed cultural knowledge. While most of the scales utilized had been previously normed and peer-reviewed [New General Self-Efficacy (NGSE), and the Cultural Competence of Program Evaluators (CCPE) Self- Report Scale]; the General Cultural Knowledge Inventory scale was adapted from a cultural consulting organization and the true or false questions were created to introduce culture via a fun test. It's possible that the GCKI does not actually serve as a useful marker of cultural knowledge, and it's also possible that some of the cultural preferences and behaviors contained in the inventory are actually inaccurate as they relate to the cultures. In addition, given the diverse makeup of many countries and cultures, it's difficult to distill the behaviors of any one culture into simple true or false statements. As an example, one could imagine a survey item that stated, "Americans enjoy eating hamburgers." It is certainly true that some Americans enjoy eating hamburgers, but it is also true that many Americans do not.

Conclusion

The current study sought to examine the relationships between self-efficacy, cultural competence, cultural knowledge and confidence in that knowledge in a sample of employees from two higher-education institutions in Wisconsin. The findings of this study show that Self-Efficacy does not predict individuals' cultural competence and knowledge. However, the cultural competency of an individual might influence one's prediction of their own cultural knowledge. Given the fact that the diversity is increasing in many organizations within a variety of fields, training today's employees and providing them with the necessary knowledge, skills, and abilities is at the utmost importance in order to create an environment for employees where there is

effective communication between individuals belonging to different cultures (Reichard, Serrano, Condren, Wilder, Dollwet, & Wendy, 2015).

DeAngelis (2015) states that cultural competence has been an important aspect of psychological thinking and training for over five decades. The results of this study suggest that there is a wide range of cultural knowledge and ability, even in organizations where many employees have high level of educational achievement. As diversity continues to increase in the work force, employers find themselves searching for more effective cultural competency trainings in order to create a work environment for employees to be able to work with each other regardless of their individual differences. Given the importance of cultural competence in the modern workforce, it is vital that this topic should be explored further in terms of training employees to have a higher understanding of their communication skills and understanding people from different cultures than their own.

References

- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory* (Prentice-Hall series in social learning theory). Englewood Cliffs, N.J.: Prentice-Hall.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: Freeman,
- Beauregard, T. (2012). Perfectionism, self-efficacy and OCB: The moderating role of gender. *Personnel Review*, *41*(5), 590-608.
- Belzen, J. A. (2010). *Towards cultural psychology of religion: Principles, approaches, applications*. Dordrecht; New York: Springer.
- Betancourt, J., Green, A., Carrillo, J., & Park, E. (2005). Cultural competence and health care disparities: Key perspectives and trends. *Health Affairs*, *24*(2), 499-505.
- Brenner, P., Delamater, J., Charmaz, K., & Sell, J. (2016). Lies, Damned Lies, and Survey Self-Reports? Identity as a Cause of Measurement Bias. *Social Psychology Quarterly*, *79*(4), 333-354.
- Bussema, E., Nemeč, P., Anthony, William A., & Gill, Kenneth J. (2006). Training to increase cultural competence. *Psychiatric Rehabilitation Journal*, *30*(1), 71-73.
- Chen, G., Gully, S. M., & Eden, D. (2001). Validation of a new general self-efficacy scale. *Organizational Research Methods*, *4*(1), 62-83
- Chen, X.-P., Liu, D., & Portnoy, R. (2012). A multilevel investigation of motivational cultural intelligence, organizational diversity climate, and cultural sales: Evidence from U.S. real estate firms. *Journal of Applied Psychology*, *97*, 93–106. <http://doi.org/10.1037/a0024697>
- Cheung, Wong, & Wu. (2011). Towards an organizational culture framework in construction. *International Journal of Project Management*, *29*(1), 33-44.

- Chrobot-Mason, D. (2012). Developing multicultural competence to improve cross-race work relationships. *The Psychologist Manager Journal.*, 15(4), 199.
- Coget, Jean-Francois (2011). Does natural culture affect firm investment in training and development? (Report). *The Academy of Management Perspectives*, 25(4), 85.
- Chua, R., & Ng, K. (2017). Not just how much you know: Interactional effect of cultural knowledge and metacognition on creativity in a global context--Addendum. *Management and Organization Review*, 13(2), 301-306.
- Crisp, R. J., & Turner, R. N. (2011). Cognitive adaptation to the experience of social and cultural diversity. *Psychological Bulletin*, 137(2), 242–266. Retrieved from <http://doi.org/10.1037/a0021840>
- Dana, R., & Allen, J. (2008). *Cultural Competency Training in a Global Society (International and Cultural Psychology)*. New York, NY: Springer New York.
- DeAngelis, T. (2015). In search of cultural competence. *Monitor on Psychology*, 46(3), 64-67.
- Dunning, D. (2011). The Dunning-Kruger effect. On being ignorant of one's own ignorance. *Advances in Experimental Social Psychology*, 44(1).
- Dunning, D., Heath, C., & Suls, J. (2004). Flawed self-assessment: Implications for health, education, and the workplace. *Psychological Science in the Public Interest*, 5(3), 69-106.
- Dunaway, K., Morrow, J., & Porter, B. (2012). Development and validation of the Cultural Competence of Program Evaluators (CCPE) self-report scale. *American Journal of Evaluation*, 33(4), 496-514.
- Elias, S., Barney, C., & Bishop, J. (2013). The treatment of self-efficacy among psychology and management scholars. *Journal of Applied Social Psychology*, 43(4), 811-822.

- Ely, R., & Thomas, D. (2001). Cultural diversity at work: the effects of diversity perspectives on work group processes and outcomes. *Administrative Science Quarterly*, 46(2), 229-273.
- Fine, M. G. (1996). Cultural diversity in the workplace: The state of the field. *Journal of Business Communication*, 33(4), 485-502.
- Gardner, D.G., & Pierce, J.L. (1998). Self-esteem and self-efficacy within the organizational context an empirical examination. *Group & Organization Management*, 23(1), 48-70
- Hardy, J. (2014). Dynamics in the self-efficacy-performance relationship following failure. *Personality and Individual Differences*, 71, 151-158.
- Heise, D. (2007). Sub-Cultures. In *Expressive Order: Confirming Sentiments in Social Actions* (pp. 21-26). Boston, MA: Springer US.
- Jeffreys, M. A. (2016). *Teaching cultural competence in nursing health care* (3rd ed.). New York, NY: Springer.
- Jeffreys, M. R., & Dogan, E. (2012). Evaluating the influence of cultural competence education on students' transcultural self-efficacy perceptions. *Journal of Transcultural Nursing*, 23(2), 188–197.
- Johnson, D., & Fowler, J. (2009). The evolution of overconfidence. *Nature* 477, 317--320.
- Johansson, C., & Stohl, C. (2012). Cultural competence and institutional contradictions: The hydropower referendum. *Journal of Applied Communication Research*, 40(4), 329-349.
doi:10.1080/00909882.2012.720379
- Joutsenvirta, M., & Uusitalo, L. (2010). Cultural competences: An important resource in the industry-NGO dialog. *Journal of Business Ethics*, 91(3), 379-390.
- Kagawa Singer M., Dressler W., & George S. (2016). Culture: The missing link in health research. *Social Science & Medicine*, 170, 237-246.

- Keller, R., Julian, S., & Kedia, B. (1996). A multinational study of work climate, job satisfaction, and the productivity of R&D teams. *IEEE Transactions on Engineering Management*, 42(1), 48-55.
- Kruger, J., & Dunning, D. (1999). Unskilled and unaware of it: how difficulties in recognizing one's own incompetence lead to inflated self-assessments. *Journal of Personality and Social Psychology*, 77(6), 1121-34.
- Loeb, C., Stempel, C., & Isaksson, K. (2016). Social and emotional self-efficacy at work. *Scandinavian Journal of Psychology*, 57(2), 152-161.
- Martin, G. (2014). The Effects of Cultural Diversity in The Workplace. *Journal of Diversity Management (Online)*, 9(2), 89.
- O'Neill, R. (2016). The importance of a diverse and culturally competent workforce. *Busidate*, 24 (3), 9.
- Oettingen, G. (1995). Cross-cultural perspectives on self-efficacy. *Self-efficacy in changing societies*, 149-176.
- Payne, N (2013). Cultural Awareness Quizzes, Quick-Fire True or False. *Commisceo Global*. Retrieved April 06, 2017, from http://www.commisceo-global.com/quizzes/cultural-awareness-quizzes?view=quiz&quiz_id=3&force=1
- Pennycook, G., Ross, R. M., Koehler, D. J., & Fugelsang, J. A. (2017). Dunning–Kruger effects in reasoning: Theoretical implications of the failure to recognize incompetence. *Psychonomic Bulletin & Review*, (Type 1). Retrieved from <http://doi.org/10.3758/s13423-017-1242-7>
- Pilhofer, K. (2011). *Cultural knowledge a critical perspective on the concept as a foundation for respect for cultural differences*. Hamburg: Diplomica Verlag.

- Reichard, R. J., Serrano, S. A., Condren, M., Wilder, N., Dollwet, M., & Wendy, W. (2015). Engagement in cultural trigger events in the development of cultural competence. *Academy of Management Learning & Education, 14*(4), 461-481. Retrieved from doi:10.5465/amle.2013.0043
- Sample, S. (2013). Intercultural competence as a professional skill. *Pacific McGeorge Global Business & Development Law Journal, 26*(1), 117-122.
- Schlusser, T., Dunning, D., Johnson, K. L., & Kruger, J. (2013). How unaware are the unskilled? Empirical tests of the “signal extraction” counter explanation for the Dunning-Kruger effect in self-evaluation of performance. *Journal of Economic Psychology, 39*, 85–100. <http://doi.org/10.1016/j.joep.2013.07.004>
- Shachaf, P. (2008). Cultural diversity and information and communication technology impacts on global virtual teams: An exploratory study. *Information and Management, 45*(2), 131–142. <http://doi.org/10.1016/j.im.2007.12.003>
- Simosi, M. (2012). The moderating role of self-efficacy in the organizational culture–training transfer relationship. *International Journal of Training and Development, 16*(2), 92-106.
- Stahl, G. K., Maznevski, M. L., Voigt, A., & Jonsen, K. (2010). Unraveling the effects of cultural diversity in teams: A meta-analysis of research on multicultural work groups. *Journal of International Business Studies, 41*(4), 690–709. Retrieved from <http://doi.org/10.1057/jibs.2009.85>
- Stajkovic, A., Luthans, F., & Eisenberg, Nancy. (1998). Self-Efficacy and Work-Related Performance: A Meta-Analysis. *Psychological Bulletin, 124*(2), 240-261.
- Sue, S. (1998). In search of cultural competence in psychotherapy and counseling. *American Psychologist, 53*(4), 440.

Taylor-Ritzler, T., Balcazar, F., Dimpfl, S., Suarez-Balcazar, Y., Willis, C., & Schiff, R. (2008).

Cultural competence training with organizations serving people with disabilities from diverse cultural backgrounds. *Journal of Vocational Rehabilitation, 29*(2), 77-91.

Tot, P. (2011). Handling culture. *Journal of Positive Management, 2*(1), 59-74.

U.S. Census Bureau. (2017). *State & county Quick facts: Allegany County, N.Y.*

Appendix A: New General Self-Efficacy Scale (NGSE)

1. I will be able to achieve most of the goals that I have set for myself.

Strongly disagree

Strongly agree

1 2 3 4 5

2. When facing difficult tasks, I am certain that I will accomplish them.

Strongly disagree

Strongly agree

1 2 3 4 5

3. In general, I think that I can obtain outcomes that are important to me.

Strongly disagree

Strongly agree

1 2 3 4 5

4. I believe I can succeed at most any endeavor to which I set my mind.

Strongly disagree

Strongly agree

1 2 3 4 5

5. I will be able to successfully overcome many challenges.

Strongly disagree

Strongly agree

1 2 3 4 5

6. I am confident that I can perform effectively on many different tasks.

Strongly disagree

Strongly agree

1 2 3 4 5

7. Compared to other people, I can do most tasks very well.

Strongly disagree

Strongly agree

1 2 3 4 5

8. Even when things are tough, I can perform quite well.

Appendix B: Cultural Competence of Program Evaluators (CCPE) Self-Report Scale

Please circle the number that most accurately reflects your current understanding of the following terms.

1. Ethnicity						
Very limited						Very good
	1	2	3	4	5	
2. Racism						
Very limited						Very good
	1	2	3	4	5	
3. Prejudice						
Very limited						Very good
	1	2	3	4	5	
4. Ethnocentrism						
Very limited						Very good
	1	2	3	4	5	
5. Discrimination						
Very limited						Very good
	1	2	3	4	5	
6. Stereotype						
Very limited						Very good
	1	2	3	4	5	

Please read the statements below and circle the number that most accurately reflects your perceptions or behavior. Answer to the best of your ability. Please keep in mind that there is no way to perform poorly.

7. At this time in your life, how would you rate yourself in terms of understanding how your cultural background has influenced the way you think and act?

Very limited Very aware
 1 2 3 4 5

8. At this point in your life, how would you rate your understanding of the impact of the way you think and act when interacting with persons of different cultural backgrounds?

Very limited Very aware
 1 2 3 4 5

9. At the present time, how would you generally rate yourself in terms of being able to accurately compare your own cultural perspective with that of a person from another culture?

Very limited Very aware
 1 2 3 4 5

10. Culture is not external but is within the person.

Strongly disagree Strongly agree
 1 2 3 4 5

11. The education system as a whole has failed to meet the needs of racial/ethnic/cultural minorities.

Strongly disagree Strongly agree
 1 2 3 4 5

12. Ambiguity and stress often result from multicultural situations because people are not sure what to expect from each other.

Strongly disagree Strongly agree

1 2 3 4 5

13. I think my beliefs and attitudes are influenced by my culture.

Strongly disagree Strongly agree

1 2 3 4 5

14. I think my behaviors are influenced by my culture.

Strongly disagree Strongly agree

1 2 3 4 5

15. I often reflect on how culture affects beliefs, attitudes, and behaviors.

Strongly disagree Strongly agree

1 2 3 4 5

16. I believe individuals' own cultural beliefs influence their work-related decisions.

Strongly disagree Strongly agree

1 2 3 4 5

17. I can discuss my own ethnic/cultural heritage.

Strongly disagree Strongly agree

1 2 3 4 5

18. I am able to discuss how my culture has influenced the way I think.

Strongly disagree Strongly agree
 1 2 3 4 5

19. I can recognize when my attitudes, beliefs, and values are interfering with providing the best service to others.

Strongly disagree Strongly agree
 1 2 3 4 5

Please read the statements below and choose the number that most accurately reflects your perceived level of proficiency in performing the following tasks.

20. I feel comfortable discussing cultural issues.

Strongly disagree Strongly agree
 1 2 3 4 5

21. I can discuss within-group differences among ethnic groups (e.g., low SES Puerto Rican vs. high SES Puerto Rican).

Strongly disagree Strongly agree
 1 2 3 4 5

22. I can discuss work-related issues from a cultural/ethnic/racial perspective.

Strongly disagree Strongly agree
 1 2 3 4 5

23. How would you rate your ability to perform work-related tasks involving persons from a cultural background significantly different from your own?

Very limited Very good
 1 2 3 4 5

24. How well would you rate your ability to accurately identify culturally biased assumptions as they relate to your professional training?

Very limited

1

2

3

4

5

Very good

25. How well would you rate your ability to analyze a culture into its component parts?

Very limited

1

2

3

4

5

Very good

26. In general, how would you rate your skill level in terms of being able to provide appropriate job-related decision-making with culturally different individuals?

Very limited

1

2

3

4

5

Very good

Appendix C: Cultural Awareness Quiz--Quick-Fire True or False?

True/False

How confident are you that your answer is correct? _____ %

1. Muslims can eat Kosher meat (T)
2. Italian executives often come to business meetings in designer sports jackets and flannels (T)
3. Japanese and Chinese can read each other's newspapers (F)
4. The further South you go in Europe, the more authoritarian the boss is expected to be (T)
5. Spaniards like to maintain eye contact during conversations (T)
6. Mexicans are supposed to keep their hands on the table during a meal (T)
7. Number "4" is considered lucky in Japan (F)
8. Armenians and Georgians belong to the same language family (F)
9. British people drink more than 200 million cups of tea a day (T)
10. All Arabs are Muslims (F)
11. The thumbs up sign means "OK" in Argentina (F)
12. Most Scandinavians start their bargaining with what is in their opinion, the fair price (T)
13. Japanese often send money to bereaved friends as an expression of sympathy (T)
14. Arabs expect gifts to be opened in front of the giver (F)
15. American businessmen dislike detailed written contracts (F)
16. Eating with your hands is rude in Malaysia (F)
17. Lithuanian is a Slavic language (F)
18. In Thailand, a pale face is a sign of beauty in a woman (T)
19. Japanese, unlike Chinese, do not mind 'losing face' (F)
20. Brazilians usually wear black shoes in the offices (F)
21. White flowers in Japan are given at funerals (T)
22. Eating with left hand is taboo in Saudi Arabia (T)
23. In India, holy men usually wear white (F)
24. Germans like deadlines (T)
25. Shaking hands with women is acceptable in Indonesia (T)
26. In Britain, you tip your plate away from you when eating soup (T)

Appendix D: Demographics

Age _____

What is your gender?

- Man
- Woman
- Other

What is your relationship status?

- Single
- In a Relationship
- Another relationship status, please specify:

What is your position/what department do you work in? _____

How long have you been with Green Bay Packers?

In which region of the United States are you from? _____

- Midwest - IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, SD, WI
- Northeast - CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VT
- Southeast - AL, AR, FL, GA, KY, LA, MS, NC, SC, TN, VA, WV
- Southwest - AZ, NM, OK, TX
- West - AK, CA, CO, HI, ID, MT, NV, OR, UT, WA, WY
- I am not from the U.S. (please specify where you reside) _____

Appendix E: Qualitative Responses

Table 1: Qualitative Responses (<i>n</i> = 167)		
- Please explain your Cultural Competence training to the best of your ability in the space below.		
Theme	Example/s	Frequencies
University, Workplace Training - Professional Development	<ul style="list-style-type: none"> • Cultural Humility training through education and work; implicit bias work online. • Culturally responsive training: recognize that there are differences in ethnicity, gender, sexual orientation and learning how to not "accept" but take on a responsible role and embrace all difference at the organization in as a community. Change for a better future starts with me. Embrace differences. We are a better community when we embrace diversity in all forms, not just ethnicity. • We have had a course called Culturally Responsive Training to help us bring up our awareness regarding cultural differences. The awareness was more on the line of expecting differences and accepting them, not specific cultural differences. 	88
Education	<ul style="list-style-type: none"> • I completed a master's degree in Intercultural Relations that had cultural competence courses and course content infused in them. • I took an Introduction to Diversity Studies class in college. It was a class as part of my college degree. • I also had a class on how we look at the world through our own cultural lens. 	27
Experience	<ul style="list-style-type: none"> • I know that every culture has differences and I accept and respect them. I don't know every rule for each culture. And when I say I can discuss them it means I want to learn about them, not that I can lecture on it. • I enjoy reading about different cultures, have visited 20 different countries. Very interesting and thought-provoking experience. • Learning from local cultures. 	19
IDI	<ul style="list-style-type: none"> • Taken the IDI. • IDI and coursework. • IDI Introduction, IDI exam and follow-up, Conflict Management Style, Time Perceptions. 	17

Others	<ul style="list-style-type: none"> • NAFSA. • Introduction by PINK - LLC and follow up on intercultural communication. • Intercultural Competence 	16
Outcome / What is learned?	<ul style="list-style-type: none"> • One's culture helps make sense of the world they live in; diversity makes the world an interesting place. • The training encouraged openness to differences and a willingness to ask questions if more information is needed. • We learned about recognizing our own, and other culture, and tolerance. We didn't learn any factoids about other cultures, though. 	11

Appendix F: Scoring the CCPE Self-Report Scale

Scoring the Cultural Competence of Program Evaluators (CCPE) Self-Report Scale

(developed by Krystal Dunaway, Ph.D., Jennifer Ann Morrow, Ph.D., & Bryan Porter, Ph.D.)

To score the 3 subscales of the CCPE, sum the scores for the questions in each subscale.

Cultural Skills (CCPE Factor 1): sum the following 14 item scores

Questions 7, 8, 9, 15, 17, 18, 19, 20, 21, 22, 23, 24, 25, and 26

This range of scores can be 14 – 70 - the higher the score, the higher the level of self-reported cultural skills. Generally speaking, scores above 54 are good.

Cultural knowledge (CCPE Factor 2): sum the following 7 item scores

Questions 1, 2, 3, 4, 5, 6, and 10

This range of scores can be 7 – 35 - the higher the score, the higher the level of self-reported cultural knowledge. Generally speaking, scores above 27 are good.

Cultural awareness (CCPE Factor 3): sum the following 5 item scores

Questions 11, 12, 13, 14, and 16

This range of scores can be 5 – 25 - the higher the score, the higher the level of self-reported cultural awareness. Generally speaking, scores above 19 are good.