Development and Assessment of Cultural Competemility Among Supervised Experiential Learning Preceptors in Nutrition and Dietetics Education

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A gap in the literature exists on how to develop and assess cultural competemility in dietetics; however, there is potential to adapt models from other allied health disciplines. The problem of practice this inquiry focuses on is *the Dietitian Nutritionist Program is not confident in the assessment strategy of student's cultural competence to know if we are graduating healthcare professionals who will practice with cultural competemility.*

Using an improvement science inquiry design, I explored how 22 preceptor's knowledge of, and confidence in assessing, cultural competence changed after adding benchmark criteria to the existing assessment tool coupled with a training module on the concepts and assessment tool. Preceptors completed surveys before, immediately following, and two months after the training to examine these changes in knowledge and confidence.

The preceptors' knowledge of cultural competence was 5.67 ± 1.24 at baseline and 6.38 ± 1.24 (maximum score possible: 8.0) immediately following the training. Total confidence score (range 1 – 5) was 3.85 ± 0.55 at baseline, 4.23 ± 0.43 post-immediate, and 4.00 ± 0.71 at post-delayed.

This study showed initial success of modifications to an assessment tool and a brief training module in improving preceptor's knowledge of, and confidence in their ability to develop and assess Dietitian Nutritionist Program student's, cultural competemility. We will expand the training module content to include self-reflection, scale the population to all preceptors for the

Dietitian Nutritionist Program, and center culturally sustaining teaching methods to better support students in the process of becoming culturally competent healthcare practitioners.

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Preface

Thank you to my dissertation committee for helping me let go and "trust the process." Thank you to the students at the University of Pittsburgh who helped me identify this "Problem of Practice." Thank you to my coworkers in the Department of Sports Medicine and Nutrition for your support and input along the way to help me identify a solution that can be scaled across our Programs. Thank you to the preceptors for the Community Rotation within the Dietitian Nutritionist Program for willingly and enthusiastically participating in this research, and providing excellent feedback to ensure we graduate students who are culturally competent. Thank you to my friends and family for your unwavering support and endless encouragement. Finally, thank you to Luciana, my daughter, for standing by me every step of the way (literally, standing next to me during many Saturday Zoom classes), and for reminding me to approach the world with curiosity.

1.0 Introduction: Naming and Framing the Problem of Practice

1.1 Broader Problem Area

In the field of dietetics, there is a frequent mismatch of cultural backgrounds and identities between registered dietitian nutritionists and their patients. A growing body of evidence suggests that health outcomes and quality of life are at stake when cultural customs are not honored, which emphasizes the need to focus on cultural competence and cultural humility in both education and healthcare delivery (Peregrin, 2016; Wright & Lundy, 2014). Regardless of the term, there is a need for dietetic practitioners to explicitly use cultural awareness, knowledge, and skill and take an other-oriented stance to benefit the individual's health outcomes and quality of life (Campinha-Bacote, 2019).

According to the 2020 U.S. Census, the United States has a population that is 18.7% Hispanic or Latino, 12.4% Black or African American, and 6% Asian (U.S. Census, 2022). According to the Commission on Dietetic Registration (CDR), 6% of practicing registered dietitian nutritionists (RDNs) are Hispanic or Latino, 3% are Black or African American, and 5% identify as Asian (Academy, 2021). Matching patients to providers of nutrition therapy based on ethnicity and race is nearly impossible in many parts of the country due to the lack of dietitian nutritionists of color. The gap will continue to widen as both the demographics of the United States changes and the continued lack of purposeful training up of registered dietitian nutritionists of color occurs.

As dietitians, we must focus on the cultural competence and cultural humility of RDNs while the racial and ethnic diversity of the dietetics profession catches up to the diversity of the U.S. population. Cultural *humility* is a lifelong process that focuses on self-reflection, personal

critique, and redressing power imbalances (Tervalon, 1998). According to Campinha-Bacote (2019), cultural *competence* includes awareness, knowledge, skill, encounter, and desire:

> *"cultural* awareness *is being aware of one's own prejudices and biases, cultural* knowledge *is understanding different cultures' worldview and the importance of social determinants of health, cultural* skill *is the ability to effectively conduct a culturally specific assessment in a culturally sensitive manner, cultural* desire *is truly wanting to engage in cultural* encounters *and seeking them out, and culture* encounter *refers to spending time with people from cultures different than one's own and remaining committed to resolving any cross-cultural conflict."*

To illustrate the synergistic process between cultural competence and cultural humility, Campinha-Bacote (2019) coined the phrase *cultural competemility*, suggesting that cultural humility is integrated into each of the five constructs of cultural competence: awareness, knowledge, skill, desire, and encounters.

Cultural competemility makes explicit the need for one to both possess cultural knowledge and skills and simultaneously recognize the importance of continuing to engage in cultural encounters to gain and apply new cultural knowledge and skills throughout a lifetime. With the mismatch of racial/ethnic makeup between the U.S. population and registered dietitian nutritionists, increasing competemility can advance health equity, improve quality of care, and help eliminate health care disparities (U.S. Department of Health and Human Service, n.d.). In addition to improving the quality of care, incorporating cultural competemility into dietetics instruction aligns with the field's shift toward competency-based education (CBE) model. The CBE model requires student learning activities and assessment strategies to build upon each other throughout the program so that the student can demonstrate their mastery of learning, typically

during the Supervised Experiential Learning portion of the program (Gervais, 2016). Given the focus on experiential learning, there is a need to research effective and reliable competency-based assessment tools for cultural competemility, train preceptors on competency-based assessment methods, and measure preceptor competency in assessing student's demonstration of cultural competemility (O'Donovan, 2021).

Preceptors oversee the Supervised Experiential Learning portion of dietetics students' training, a core component of dietetics competency-based education curriculum. Preceptors are responsible for providing experiences, knowledge, and feedback necessary for students to develop the skills required of a competent entry-level practitioner. Due to the evolving nature of nutrition science and dietetics practice requirements, it is a requirement for all practitioners, including preceptors, to participate in continuing education to maintain registration (CDR, n.d.). However, the continuing education, or professional development (PD) preceptors can choose to complete does not need to relate directly to their knowledge and skills as a preceptor and measurement of preceptor competence is not standard in dietetic practice (Bartlett, 2020). For example, a community-based dietitian may choose to complete continuing education directly related to their job, (i.e., program development and evaluation and to improve their nutrition advocacy skills). This dietitian may also act as a preceptor but is not required to complete any continuing education on how to be an effective preceptor in new and emerging areas required by the accrediting body, such as cultural competence.

Competency-based dietetics programs focus on the development of students' ability to demonstrate mastery of the required knowledge, skills, and attitudes to become a registered dietitian nutritionist. This development relies on faculty and preceptors who are assumed competent in all standards of professional practice. However, the standards of professional practice

in dietetics are constantly evolving and there is a need to focus on the professional development of faculty and preceptors. An intentional focus on the student's development of cultural competence and humility is one specific standard of professional practice area that faculty and preceptors would benefit from additional training and support. Standardized measurement tools, for assessing this specific standard of professional practice, do not exist in dietetics.

1.1.1 . National Focus on Cultural Competence in Healthcare and Education

The U.S. Department of Health and Human Services Office of Minority Health (OMH) has long had a focus on improving healthcare quality and health equity, which includes the services delivered by registered dietitians. Since 2000, the OMH has had National Standards for Culturally and Linguistically Appropriate Services (CLAS) in Health Care (HHS, n.d.). The principal standard is to "provide effective, equitable, understandable, and respectful quality care and services that are responsive to diverse cultural health beliefs and practices, preferred languages, health literacy, and other communication needs" (HHS, n.d.). The CLAS Standards act as a blueprint for developing necessary federal and state regulations and to guide competency development in medical education and allied healthcare programs, like nutrition and dietetics.

1.1.1.1 Healthcare

The acquisition of cultural knowledge, skills, and attitudes will be a lifelong endeavor—the process, not the result, is the focus (Abe, 2020; Botelho, 2020; Tervalon, 1998). To practice with cultural competemility involves the ability to understand, communicate with, and both willingly and effectively interact among individuals of different races, ethnicities, identities, and cultures. In the healthcare setting, it is also important to understand that this lifelong process of

culturally humble care includes a focus on self-critique and mitigating the impacts at the local level of the larger healthcare system (Abe, 2020; Botelho, 2020; Tervalon, 1998; Watkins, 2020).

1.1.1.2 Development and Assessment

To develop and display cultural competence, it is essential for healthcare practitioners to have both a baseline knowledge of the relation between culture and health beliefs and the skill to apply that knowledge in practice (Campinha-Bacote, 2002). There is limited research explicitly looking at how to support dietetics students' development of cultural competence and best practices of assessment for competency-based education overall and specific to cultural competence in the dietetics field (Jamieson, 2019; O'Donovan, 2021). For this, the dietetics field can learn from the growth of competency-based education and assessment of cultural competence in medical education, that begins with a focus on critical self-reflection and clarifying the supervisor's role (Watt, 2016). We also know from research in the healthcare field broadly, students benefit from preceptors who effectively model the skills, attitudes, and behaviors required of the profession, such as cultural competence (Irby, 1986, Kenny, Mann, & MacLeod, 2003; Wright, Kern, Kolodner, Howard, & Brancati, 1998). Therefore, to ensure the development of cultural competence among our students, we must first focus on the knowledge and confidence of the preceptors' cultural competence

1.1.1.3 Local Focus on Assessment of Cultural Competence

The Accreditation Council for Education in Nutrition and Dietetics (ACEND) is the accrediting agency for the Academy of Nutrition and Dietetics. To be eligible to sit for the national exam and become a registered dietitian nutritionist upon successful completion, a person must complete the education requirements at an ACEND-approved institution. During the 2018-2019

school year, the University of Pittsburgh was one of five ACEND-approved institutions in the country to pilot a new competency-based education program known as the Future Education Model – Graduate. The changes necessary to implement and assess a competency-based education curriculum created unforeseen challenges across the Dietitian Nutritionist Program. For this dissertation in practice, I focused specifically on the development and assessment of competency 1.7, "[i]ntegrates the principles of cultural competence within own practice and when directing services" (ACEND, 2021b, p. 19), during the third year of the Dietitian Nutritionist Program under the guidance of community preceptors. The problem of practice is that we are not confident in the assessment strategy of Pitt's Dietitian Nutritionist Program students' cultural competence to know if we are graduating healthcare professionals who will practice with and contribute to an overall improvement in health equity.

1.2 Organizational System

The University of Pittsburgh is a public institution located in the City of Pittsburgh, Pennsylvania. It is in the Oakland neighborhood and is considered a large city campus. The Dietitian Nutritionist Program is in the Department of Sports Medicine and Nutrition in School of Health and Rehabilitation Sciences (SHRS). The primary faculty of the DN Program consists of five White cisgender women.

The Dietitian Nutritionist Program receives oversight from the accrediting agency for the Academy of Nutrition and Dietetics, ACEND. To maintain accreditation status, the Dietitian Nutritionist Program must assess students' ability to demonstrate competence in seven distinct

areas, including cultural competence. Therefore, my place of practice is aligned with the mission, vision, values, and standards of multiple organizations and overlapping systems.

1.2.1 Positionality and Sphere of Influence

I am faculty at the School of Health and Rehabilitation Sciences (SHRS) at the University of Pittsburgh (Pitt) for the Dietitian Nutritionist Program. I am a White, thin, able-bodied, cisgender women looking at the development of cultural competence among a moderately diverse group of students. I acknowledge that my own cultural way of knowing may have an unseen impact on my approach and interpretation of the findings. I must always challenge my thinking and bring in the perspectives of others, because as Farrell (2019) indicates, it is the perspectives of those doing the work that matter when it comes to producing meaningful results.

During the 2021-2022 Annual Review process with the department chair and program director, I established a goal to work with the director to develop a framework for scaffolded curriculum and valid assessments to better meet the needs of students within the ACEND guidelines for a competency-based education program. My problem of practice falls within the purview of my annual review goal for two reasons. First, documentation of scaffolded learning activities, standard measurements, and validated assessments of competencies related to cultural dimension do not currently exist in our program or from ACEND. Secondly, the program relies on competent and confident preceptors to model and assess the students' demonstration of competence, and we have room for improvement here. Without useful assessment tools and modeling during supervised practice, students will not be prepared to demonstrate the competencies themselves.

Five of the assessments of a student's ability to demonstrate cultural competence are completed by preceptors, which occur in semesters five and six out of a six-semester program. These preceptor assessments are summative for the students and occur when the students complete their supervised experiential learning in the final year of the program. A quick review of the students' ratings for their demonstration of cultural competence from school year 2021-2022 indicated variability in how preceptors and faculty rate the same students' demonstration of cultural competence. The average rating of students' demonstration of cultural competence during the community nutrition rotation, on a 9-point scale, was 6.1 for faculty and 7.8 for preceptors.

A review of the DN Program curriculum map does not show explicit scaffolding of learning activities and assessment methods being used to determine students' level of cultural competence throughout the program, and therefore readiness for supervised practice. According to Miller's Pyramid of Assessment, assessment should match the learning outcomes and be scaffolded from *knows* to *shows* to *does* (Ramani, 2008). The 2021-2022 curriculum map showed assessment of some performance indicators for cultural competence at the *does* level before *knows* and *shows*.

In my role as the community coordinator of supervised experiential learning for the Dietitian Nutritionist Program, I am well-positioned to test and make improvements based on the results of this intervention for three reasons. First, five of the six performance indicators for competency 1.7 (cultural competence) are included in the Community Public Health Nutrition (CPHN) rotation that I coordinate. Secondly, I recruit, onboard, and support the community preceptors while students complete the CPHN rotation. Lastly, I have the full support of my Program Director and Department Chair, and a 5-year performance goal, to improve the scaffolding of our curriculum and assessment of the competencies to better meet the individual needs of students within a Competency Based Education program.

1.3 Stakeholders

Stakeholders of my problem of practice (POP) include the accrediting body for our program, the Accreditation Council for Education in Nutrition and Dietetics (ACEND), registered dietitian nutritionists (RDNs) who are either educators or preceptors associated with the Dietitian Nutritionist Program, and Dietitian Nutritionist Program students. I will explain the reciprocal relationship between these stakeholders and my problem of practice below.

1.3.1 Accreditation Council for Education in Nutrition and Dietetics (ACEND)

Based on current practices and new evidence in the field of nutrition science and dietetics practice, ACEND continually revises the competencies all nutrition and dietetics programs. This includes the Dietitian Nutritionist Program and what competencies must be developed and assessed in the students. ACEND is responsible for establishing the competencies and monitoring accredited programs' compliance, but the accrediting body does not require specific learning activities for students or provide standard assessment tools for faculty and preceptors. ACEND will add required competencies as needed to meet the future demands of the profession, but often without clear guidance or professional development for the faculty and preceptors currently responsible for developing these competencies in the students.

1.3.2 Dietitian Nutritionist Program Preceptors

Most of the preceptors the Dietitian Nutritionist Program partners with are RDNs working in the healthcare system; however, in the community setting the preceptors may be another allied

health professional (e.g., occupational therapist or social worker). While we do not collect demographic data from the preceptors, anecdotally I can say that the current community preceptors I work with in the Dietitian Nutritionist Program present as White women.

The preceptors are not compensated for their time working with students, and each site is unique in how they support preceptors' allocation of time for the additional tasks associated with precepting and professional development into their daily workflow. For many, being a preceptor means taking on additional work without any work relief or additional recognition or compensation. Therefore, the motivation to act as a preceptor and the time available to pursue professional development opportunities vary widely (Benoit, 2022).

The brief empathy interviews I completed with six preceptors currently supervising the Dietitian Nutritionist Program students revealed a wide variety of self-reported knowledge and self-confidence related to cultural competence, with a strong desire for more, specifically related to their confidence in their ability to assess student's demonstration of cultural competence in practice. This lack of confidence is due in part to the quality of the current assessment strategy and the preceptors' perceptions of their own level of cultural competence. The quality of assessment tools and preceptor competence are lacking due to the introduction of new competencies from ACEND without supporting resources and professional development for the faculty and preceptors.

1.3.3 Dietitian Nutritionist Program Faculty and Coordinators

Primary faculty members are responsible for developing learning activities, assessment tools, and evaluation methods to ensure the students of the program can demonstrate competence in the areas outlined by ACEND. Two primary faculty members, myself included, also act as

coordinators for the students' community and clinical supervised experiential learning, where the students are supervised and trained by preceptors.

Faculty are overwhelmed by the demands of teaching, service, and research and therefore lack the time necessary to design and implement rigorous and evidence-based strategies for a program-wide transition to competency-based education. Faculty and preceptors also have limited time available to complete professional development. During the empathy interviews with three faculty members, it became clear that the faculty need, and the majority desire, additional training and understanding of cultural competence; they unanimously acknowledge that developing cultural competence is a life-long process. Being under-resourced and over-extended hinders the development of certain competencies, like those related to culture, which require repeated exposure, scaffolding, feedback, and reflection within a safe space. The potential to introduce unintentional harm to the students exists when there is not an explicit focus on equity in the policies, procedures, and culture of the organization (Lund, 2020).

1.3.4 Dietitian Nutritionist Program Students

The students' goal upon entering the Dietitian Nutritionist Program is to gain the knowledge, skills, and attitudes necessary to become registered dietitian nutritionists, which include foundational knowledge and skills (e.g., critical thinking and cultural competency). Based on an equity audit I conducted in 2021, the Dietitian Nutritionist Program student body showed less diversity than the national average among the profession. Currently, the 2022-2023 Dietitian Nutritionist Program has 50 students across the three years; 92% are White and 93% identify as female (ACEND, 2021a). Program evaluation surveys from the 2021-2022 school year indicate students desire more learning activities related to cultural competency.

Based on an anonymous survey I conducted in 2021 with twenty-six students in the Dietitian Nutritionist Program, sixty-five percent of current students do not feel the program provides adequate time for them to develop culturally sensitive approaches, specifically communication skills. Students report they do not understand how their cultural competence is assessed and they desire an explicit focus on culturally competent role modeling by the faculty and preceptors. Until these issues are addressed, we cannot be confident that students are graduating from the Dietitian Nutritionist Program with the ability to demonstrate cultural competence in their practice.

1.4 Statement of the Problem of Practice

Cultural competence, as defined by Campinha-Bacote (1994) is "an ongoing process in which the health care provider continuously strives to achieve the ability to effectively work within the cultural context of the client (individual, family, community)." As a requirement of program accreditation standards, students in the Dietitian Nutritionist Program at the University of Pittsburgh are required to demonstrate their ability to integrate the principles of cultural competence (cultural awareness, cultural knowledge, and cultural skill) within their own practice and when directing services (ACEND, 2021b). While there is agreement in the dietetics field that a focus on cultural competence is needed, there is a gap in the literature when it comes to best practices for development and assessment of a student's ability to practice with cultural competence.

Many tools exist to measure students' and healthcare providers' cultural competence. However, tools for providers vary greatly based on the underlying theory and construct of interest,

and most of the tools for assessing students' demonstration of cultural competence have not been validated. The Dietitian Nutritionist (DN) Program does not use any of these existing measurement tools for faculty, preceptors, or students. The DN Program also does not have a defined assessment strategy for determining students' demonstration of cultural competence. We cannot be sure we, faculty and preceptors, are modeling culturally competent behavior and we cannot improve what we cannot measure. Without these tools and a defined assessment strategy, we cannot confidently graduate students who will demonstrate cultural competence in their practice.

Based on student's applications and stated interested, we know all students enter the Dietitian Nutritionist Program with different lived experiences, cultural awareness, and cultural skills. However, the Dietitian Nutritionist Program expects all students to progress to culturally competent along the same timeline. From focus groups, we know preceptors are not consistently provided with professional development when new competencies are added to the curriculum. However, it is the expectation of the Dietitian Nutrition Program for all preceptors to be able to confidently recognize and assess the students' level of cultural competence.

Effective, patient-centered healthcare requires culturally competent healthcare practitioners. With the mismatch of racial/ethnic makeup between the U.S. population and registered dietitian nutritionists, increasing cultural competence has the potential to advance health equity, improve quality of care, and help eliminate health care disparities (U.S. Department of Health and Human Service, n.d.). Following implementation of the ACEND Future Education Model, the Dietitian Nutritionist Program currently does not have a clear plan to ensure the faculty and preceptors have the knowledge and skills necessary to develop and assess student's demonstration of cultural competence. *The problem of practice is that we are not confident in the*

assessment strategy of Pitt's Dietitian Nutritionist Program students' level of cultural competence to know if we are graduating healthcare professionals who will practice with and contribute to an overall improvement in health equity.

1.5 Review of Scholarship and Professional Knowledge

The purpose of this review of supporting scholarship is to gain a better understanding of how cultural competence and cultural humility are conceptualized and developed among healthcare professionals and how to support the development and assessment of dietetic student's demonstration of cultural competence and cultural humility. This review of supporting scholarship is guided by the following questions:

1. What does it mean to practice with cultural competence and cultural humility in the health sciences?
2. What are principles for supporting dietetic students' development of cultural competence and cultural humility?
3. How have others sought to assess cultural competence and cultural humility in students?

1.5.1 What Does It Mean to Practice with *Cultural Competence* and *Cultural Humility* in the Health Sciences?

Scholars have conceptualized culture, competence, and humility in a variety of ways. Most authors agree that *culture* always represents race and ethnicity, *competence* includes a measure of

knowledge, attitude, and skills, and *humility* requires an other-oriented stance and self-reflection (Botelho, 2020; Rajaram, 2014; Seeleman, 2009). One point of difference within the literature involves what else is, or is not, included in the definition of culture, i.e., sex, gender, language, religion, social groups and more (Stein, 2009). Another obvious point of difference is the model's nomenclature and whether "competency" or "humility" is explicitly chosen. Some authors argue that humility is inherent in cultural competence models (Abe, 2020; Campinha-Bacote). Other authors emphasize that a distinct focus on the attributes of humility— such as encounters, desires, and a balance of power— need to be considered independent of cultural competence (Abe, 2020; Botelho, 2020; Tervalon, 1998; Watkins, 2020).

Cultural competence/humility are not exclusive to the health sciences. The concept has been concurrently evolving in many disciplines, including the field of education, and is most often referred to as *multicultural education*. James Banks (1991) is credited for formulating the five constructs of the concept in the education field: content integration, knowledge construction, prejudice reduction, equity pedagogy, and empowering school culture. It is important to consider the evolution of these concepts in both healthcare and education. The place of practice for registered dietitians lies in the healthcare arena and it is during formal education where the knowledge and skills must be introduced to future practitioners.

1.5.1.1 Cultural Competence

Variability not only exists between perspectives on the concepts of cultural competence and cultural humility— it also exists within each concept. Cultural competency researchers agree the concept of cultural competence is important to equitable patient-centered healthcare, that neither "culture" nor "competency" are consistently defined or clearly understood, and the process

of becoming culturally competent is ongoing (Abe, 2020; Albougami, 2016; Campinha-Bacote, 2002; Hayward, 2014).

Cultural competence first appeared in the health sciences literature in the 1950s and was associated with psychiatric education (Suh, 2004). Beginning in 1980, there is documentation of conceptual models which provide a framework for cultural competence in healthcare, mainly nursing, followed by social work. Cross (1989) defined cultural competence as a predictable interplay of behaviors, attitudes, and policies at the professional, organizational, or systemic level required to support cross-cultural situations. After Cross' definition of cultural competence was published, various models were conceptualized to provide alternative frameworks for this theory, most of them instead acknowledging that the development of cultural competence is a non-linear process without a clear end. A few of those models, relevant to the field of nutrition and dietetics, are discussed below.

Campinha-Bacote (1994) conceptualized the Culturally Competent Model of Care for nursing, which had four constructs: cultural awareness, cultural knowledge, cultural skill, and cultural encounters. With additional research and new knowledge, Campinha-Bacote revised her concept to better represent a process and the interdependent relationship of the constructs. For this she added the fifth construct of *desire* and published The Process of Cultural Competence in the Delivery of Healthcare Services (Campinha-Bacote, 2002).

The Purnell Model for Cultural Competence was introduced in 1998 and encompasses twelve interrelated cultural domains (Purnell, 1998). This ethnographic model explains how the concepts of heritage, communication, care provider relationships, and lifestyle issues converge to form an individual's expression of culture (Purnell, 1998).

The CLAS Standards were proposed by the Office of Minority Health to address inequities in healthcare (HHS, n.d.). The implication is that cultural competence is part of a central set of professional competencies, rather than an isolated aspect of medical care with limited relevancy. To support the development of this concept within medical professionals, cultural competence requirements were added to the state regulations for medical curricula in 2000 (Jernigan, 2016). In 2009, cultural competence standards were introduced to the education requirements of registered dietitians, however, it was not a requirement for practicing dietetics professionals to receive any training in cultural competence (Stein, 2009).

1.5.1.2 Cultural Humility

Despite disagreements elsewhere, many authors agree that both cultural competency and cultural humility refer to a continual process (Abe, 2020; Botelho, 2020; Tervalon, 1998). Cultural humility goes beyond cultural competence and involves introspection and deep personal reflection (Yeager, 2013). Tervalon & Murray-Garcia (1998) argue that using the word *competence* to describe this cultural concept misleads healthcare providers. The traditional definition of competence implies there is a finite body of knowledge to master. Tervalon & Murray-Garcia (1998) suggest that *humility* requires competence and is a better description of the concept healthcare providers should apply to cross-cultural interactions. Humility is an ongoing process that can help one identify and address implicit cultural biases through learning and self-reflection (McCabe, 2020; Tervalon & Murray-Garcia, 1998).

A variety of approaches have also been used to conceptualize cultural humility in healthcare. Betancourt (2003) suggests that practicing with cultural humility means healthcare practitioners must check their egos and make room for the patients. Betancourt rebukes cultural competency in favor of cultural humility; he also proposes that *cultural responsiveness*, *cultural*

sensitivity, or *cultural effectiveness* would more accurately convey the constructs of the concept (2003). To effectively tackle the structural inequities that give rise to health disparities, Rajaram (2014) defines humility as incorporating Public Health Critical Race Consciousness. This level of cultural humility involves centering marginalized populations, and Rajaram (2014) acknowledges that not all healthcare practitioners have the tools to do so. Most recently, a liberation psychology lens urges healthcare providers to look beyond the *intra*personal level and consider the *inter*personal and collective levels of the healthcare system to truly practice with cultural humility (Abe, 2020). Cultural humility requires an acknowledgment of how *we* view the world (*intra*personal) but focuses more on our ability to view and accept the realities of *others* (*inter*personal).

1.5.1.3 Cultural Competemility

The core constructs of cultural competemility are cultural awareness, cultural knowledge, cultural skill, cultural encounters, and cultural desire through the lens of cultural humility (Campinha-Bacote, 2019). Campinha-Bacote (2019) insists cultural humility is developed through cultural encounters in which cultural awareness, cultural knowledge, cultural skills, cultural desire, are experienced. Rather than consider cultural competency and cultural humility as opposing ideas, Campinha-Bacote (2019) argues that they are synergistic. Combining the two words into one—competemility–is a dynamic concept for the field of healthcare.

1.5.1.4 In Sum

Over the years it has become clear that effective cross-cultural interactions require specific cultural knowledge, skills, and attitudes. However, it is not possible for healthcare providers to become competent in all the cultures they will encounter. What is required instead is an

understanding that the acquisition of cultural knowledge, skills, and attitudes will be a lifelong endeavor— that the *process*, not the result, is the focus. In the healthcare setting, it is also important to understand that this lifelong process includes a focus on self-critique and balancing power inequities that exist within the system. To effectively understand these principles requires humility. Therefore, instead of suggesting healthcare providers become humble *or* competent, we need healthcare providers that are humble *and* competent and practice with cultural competemility. With the mismatch of racial/ethnic makeup between the U.S. population and registered dietitian nutritionists, increasing cultural competemility has the potential to advance health equity, improve quality of care, and help eliminate health care disparities (U.S. Department of Health and Human Service, n.d.).

1.5.2 What are Principles for Supporting Students Development of Cultural Competemility?

To display cultural competemility, it is essential for the healthcare practitioner to have baseline knowledge of the relationship between a variety of cultures and healthcare. There is limited research explicitly looking at how to support dietetic students' development of cultural competemility. The subsequent sections review existing literature on four key principles of developing the constructs of cultural competence and cultural humility in the health sciences.

1.5.2.1 Model the Attitudes and Behaviors of Cultural Competemility

There are policies and procedures behind curricula that focus on students' development of cultural competemility constructs (Albougami, 2016; Knoblock-Hahn, 2010). The policies reflect the goals of the organization toward faculty becoming culturally self-aware and maintaining this

self-awareness over time (AOTA, 2020; Jones, 2019; Truong, 2014; Watson, 2017). The following attitudes and behaviors are key dimensions of cultural competemility that should be modeled by the faculty, preceptors, and organization:

- The ability to critically self-reflect (Hook, 2013; Foronda, 2008; Tervalon, 1998; Truong, 2014)
- The desire to be compassionately curious (Bibus, 2019; Botehlo, 2020)
- The capacity to actively listen (Bibus, 2019; Jones, 2019)
- The willingness to negotiate (Bibus, 2019; Botehlo, 2020)
- The possession of a beginner's mind (Watson, 2017)

Of importance to this inquiry is the work done by psychologist Albert Bandura. Bandura's work suggests humans are agents of their own self-development and can build-self-efficacy (self-confidence). According to Bandura, "*self-efficacy* refers to an individual's belief in his or her capacity to execute behaviors necessary to produce specific performance attainments" (Bandura, 1977, 1988). One way to build confidence and self-efficacy in a specific skill is to observe demonstrations of others competently perform the skill (Bandura, 2008). There exists a positive correlation between healthcare practitioner's confidence, self-efficacy, and their performance which leads to improved well-being of the patient (Walsh, 2021).

1.5.2.2 Emphasize the Importance of Cultural Awareness and Ongoing Self-Reflection

A successful curriculum needs to begin with a pedagogy that provides students a chance to develop both an awareness and understanding of their own cultural identity (Bibus, 2019; Jones, 2019; McCabe, 2020; Stein, 2009). Learning activities designed to support cultural awareness, such as how to recognize personal privilege and uncover implicit biases, need to be included early

and often throughout the program so that students are repeatedly exposed to the principles from a variety of faculty and program members (McCabe, 2020). Having a strong self-identity, the ability to self-reflect, and an attitude of curiosity and growth are imperative attributes for developing cultural competemility and professionalism in general (Gray, 2005). It is suggested that teaching metacognition could be key to developing students that are critical thinkers and lifelong learners of cultural competence knowledge and skills (McCabe, 2020). By understanding and utilizing critical thinking skills, the student has a foundation to support ongoing knowledge creation throughout their career (Andrade, 2019). Effective learning activities can involve coursework or service-learning experiences, self-reflection, journaling, discussion components, and modeling by preceptors. These activities are meant to achieve more than just the transfer of knowledge— they are meant to encourage a change in attitude and behavior (Andrade, 2019; Bibus, 2019; Hayward, 2014; Horacek, 2009; Watson, 2017; Wright & Lundy, 2014).

1.5.2.3 Incorporate Multiple, Varied, and Scaffolded Cultural Exposures Throughout the Curriculum

Learning activities that support the development of cultural competemility vary within the literature. Multiple formal exposures to cultural competence-building activities are needed, and the informal curriculum must also be considered for the development of the skill (AOTA, 2020). Many authors focus on the impact of a singular assignment or learning activity. Examples of these activities include preparing meals from a variety of ethnic cultures (Knoblock-Hahn, 2010), doing windshield tours of specific cultural group neighborhoods (Bogle, 2011), engaging in an interprofessional simulation (AOTA, 2020; McCabe, 2020), or reading and critiquing articles on the various models of cultural competence (Horacek, 2009). Others focus on experiences that expose students to a variety of cultural groups by having them interact with the groups, such as

service-learning (Gray, 2017; Horacek, 2009; Wright & Lundy, 2014) and study abroad programs (Hayward, 2014; McArthur, 2011; Wright & Lundy, 2014). Learning activities that were scaffolded from baseline cultural knowledge prior to an experience through reflection and discussion after the experience positively impacted students' attitudes and behaviors (Hayward, 2014; McCabe, 2020). Properly scaffolded learning activities with periodic assessment and formative feedback are less likely to introduce unintended harm to minoritized populations with which the students interact.

1.5.2.4 Acknowledge the Impact of Desire

The learning activities such as coursework, service-learning experiences, and study abroad programs support more than just students' cultural knowledge—they may also support a change in student attitudes and behaviors (Andrade, 2019; AOTA, 2020; McCabe, 2020). What makes these same learning activities effective for some students and not for others may come down to the core construct of individual cultural desire, which is an important construct to cultural competemility (Allen, 2013; Campinha-Bacote, 2002; Foronda, 2008; Tervalon & Murray-Garcia, 1998). However, only one of the six empirical studies I reviewed explicitly assesses the concept of desire as it relates to cross-cultural experiences (Abe, 2020). Many of the interventions that report successful improvements in student's cultural competence during a cultural encounter were based on student's self-selection to participate in the encounter (Jager, 2021; McArthur, 2011). While desire is not explicitly mentioned or assessed in those reports, it can be assumed that the students possessed a desire for cultural knowledge and cultural encounters because they self-selected to participate in the cultural encounter. Simply improving a student's knowledge of a specific culture does not necessarily increase their *desire* to practice with cultural competemility

(Abe, 2020). This emphasizes the desire to display cultural humility may need to be scaffolded through repeated exposures, rather than simply taught.

1.5.3 How Have Others Sought to Assess Cultural Competence/Humility in Students?

1.5.3.1 Assessment Tools

There is a clear gap in the literature when it comes to current and best practices for assessing competence of dietetic students, which includes the assessment of *cultural* competence (Jamieson, 2019). There is emerging research on methods of competency-based assessment in nutrition education which show promise for assessing a student's cultural competence (O'Donovan, 2021). One component of competence-based assessment is the focus on effective measures and tools with clear benchmarks of performance, such as rubrics (Brookhart, 2018). Assessment instruments that measure single competencies are unable to reliably capture complex and context-sensitive performance, like cultural competence (Jamieson, 2019). These assessment instruments are recognized to perform as well as the assessors who use them and point to a need for competent preceptors, interrater reliability, and student assessment at the programmatic level (Jamieson, 2019).

A true *rubric* must contain two parts: "coherent sets of criteria and descriptions of levels of performance on the criteria (Brookhart, 2013, p.4)." The current assessment tool used by the Dietitian Nutritionist Program is colloquially referred to as a "rubric." However, it does not meet the true definition of a *rubric* since it includes performance criteria and a rating scale, yet lacks specific indicators of performance (i.e. benchmark criteria).

1.5.3.2 Assessment Methods

A variety of methods exist to assess cultural competence, such as observations, portfolios, behavior-based interviews, and programmatic assessment. One specific approach is the combined use of portfolios with reflection activities to allow students to learn and investigate autonomously. According to Sabatini (2015), a food and culture portfolio project sparked curiosity, fostered a greater interest in food and culture, and expanded student's understanding beyond biological aspects of food, to encompass important historical, sociocultural areas of knowledge. Assessment of dietetic students' competence holistically at the program level is an emerging approach to competency-based assessment (Dart, 2021). A programmatic assessment approach has also been shown to increase the assessor's confidence in their decisions. Programmatic assessment requires a paradigm shift and buy-in at all levels of the organization.

Without a clear and standard definition of cultural competency or uniformity in the delivery of learning activities among programs, it is not surprising that assessment methods of cultural competence/humility are not agreed upon (Chun, 2021). Even when there was agreement on the evaluation method between authors, the learning activities or underlying pedagogical theory differed (McCabe, 2020; Wright & Lundy, 2014). While there are a few assessment tools available to measure a healthcare professionals' cultural competence or cultural humility, scholars argue that their reliability and validity need to be ascertained in settings beyond medical education, specifically for nutrition and dietetics (Chun, 2021; Hook, 2013; McCabe, 2020).

When cultural competence is evaluated in students or healthcare professionals, three of the five constructs of cultural competence: cultural knowledge, skills, and attitudes, seem to be assessed most often (Chun, 2021). Assessments of students' cultural competence are often completed by instructor-created instruments or through self-report data (McArthur, 2011;

McCabe, 2020). These instruments are not standardized and there is concern over the validity of the instrument and the self-reported information due to the risk of someone providing the socially desirable response (Jager, 2021).

1.5.3.3 Assessment Strategies

There is also debate over assessment strategies and whether rubrics should assess specific tasks analytically or student's performance holistically throughout the program (Brookhart, 2018). Questions exist on the development of established benchmark criteria from which to observe and compare student behavior. From a constructivist standpoint, the focus of the criteria should be the development of the competence rather than a discrete classification of the observed behavior. As Massy (1994) suggest: "[p]erformance measures should focus on process and inputs as well as output assessment (in Meyerson & Massy, 1994, p. 39)." The Developmental Model of Intercultural Sensitivity (DMIS) created by Bennett (2017), is a grounded theory based on constructivist perception that looks at processes and inputs in the development of cultural competence.

The *Intercultural Knowledge and Competence VALUE Rubric* from the American Association of Colleges and Universities is one such rubric based on the DMIS (AAC&U, 2009). "The VALUE rubrics are developed by teams of faculty experts from colleges and universities across the United State and articulate fundamental criteria for each learning outcome, with performance descriptors demonstrating progressively more sophisticated levels of attainment (AAC&U, 2018)." The rubrics are not intended to be used for grading, but developmental discussions with students. The Intercultural Knowledge and Competence VALUE Rubric specifically "suggests a systematic way to measure our capacity to identify our own cultural patterns, compare and contrast them with others, and adapt empathically and flexibly to unfamiliar

ways of being (AAC&U, 2018)." The rubric assesses the six areas of the student's knowledge, skills, and attitudes related to intercultural competence, specifically: cultural self-awareness, knowledge of cultural worldview frameworks, empathy, verbal and nonverbal communication, curiosity, and openness.

1.6 Summary

My review of literature revealed the complexity and nuance surrounding the concepts of cultural competence and cultural humility, or *competemility*. One aspect of complexity relates to the conflation of core aspects of cultural competemility with foundational knowledge, attitude, and skills for all healthcare professionals. Principles, such as critical self-reflection and active listening, are not unique to the concept of cultural competemility.

Effective learning activities to develop, and authentic assessment strategies to measure, student's demonstration of the principles of cultural competemility must be intentionally designed and integrated throughout Pitt's Dietitian Nutritionist Program. As Campinha-Bacote (2019) emphasizes, the difference between programs that succeed in developing student's cultural competemility and those that do not may be those programs that also intentionally support cultural encounters. The cultural encounters, as part of place-based scholarship, provide students a way to experience a variety of cultures and apply skills and principles they already possess. The preceptor's knowledge and confidence are essential components of successful place-based scholarship. Successful curricula will have strong support from the organization and will provide multiple touchpoints for students to develop and demonstrate their cultural competence.

Paramount to place-based scholarship is reciprocity; we must ensure students are prepared to engage in cultural encounters without doing unintentional harm to the community (Tighe, 2012).

There is a need to practice with both cultural competence and cultural humility to improve the inequities we see in healthcare today. Practicing with cultural competence acknowledges the acquisition of cultural knowledge, skills, and attitudes will be a lifelong endeavor— that the *process*, not the result, is the focus. Programs must include the principles of role-modeling, self-reflection, scaffolding, and desire to support dietetic students' development of cultural competence and cultural humility. Programs must ensure that faculty and preceptors practice with cultural competence. Finally, programs must assess the student's demonstration of cultural competemility holistically throughout the program and with effective measurement tools.

2.0 Theory of Improvement and Implementation Plan

2.1 Theory of Improvement

Using an improvement science inquiry design, I aim to address the problem that the Dietitian Nutritionist Program at the University of Pittsburgh is not confident in the assessment strategy of the students' cultural competence to know if we are graduating students who will demonstrate cultural competence in their practice. The theory of improvement suggests that by providing cultural competence training to the educators, continuously improving the curriculum map to ensure learning activities are appropriately scaffolded throughout the program, and offering assessment tools and trainings to preceptors, the Dietitian Nutritionist Program will graduate students who demonstrate cultural competence in practice.

This inquiry followed an improvement science approach centered on problem-solving by continuous inquiry and learning, referred to as the Plan-Do-Study-Act (PDSA) cycle (Bryk et al., 2015). Each theory of improvement involves multiple PDSA cycles, or small tests of change, to determine the impact on the overall system. A Driver Diagram is a tool to visually represent leverage points, or potential avenues for improvement toward an aim, within a system (Perry and Zambo, 2020). A change idea is "an alteration to a system or process that is to be tested through a PDSA cycle, to examine its efficacy in improving some driver in the working theory of improvement" (Bryk, et al., 2015, p. 199). See **Appendix A** for the Driver Diagram that visually outlines this theory of improvement.

2.1.1 Driver Diagram

The goal of the Dietitian Nutritionist Program is to graduate students who demonstrate competence in all areas required by ACEND. To develop students appropriately, the educators and preceptors responsible for developing and assessing the students need to also be competent in these areas. As new professional competencies are introduced by the accrediting body into the required curriculum, preceptors must stay up to date to model the intended skills and attitudes.

We cannot improve what we cannot measure, therefore effective measurement tools (i.e. assessment rubrics) are paramount to achieving this goal. The focus of ensuring preceptors remain competent in emerging areas of practice aligns with the 2021-2025 strategic plan, the Plan for Pitt, in which the university acknowledges "[t]he important work of students, faculty, and staff to realize their full potential is always evolving" (Plan for Pitt, 2021). We must evolve our assessment tool and preceptor training to help students realize their full potential of becoming culturally competent healthcare practitioners who work to reduce healthcare disparities.

2.1.2 Aim Statement

By August 2024, 100% of employers surveyed will "mostly agree" or "completely agree" the graduates of 2023-2024 class of the Dietitian Nutritionist Program demonstrate cultural competence in practice. Cultural competence is necessary to deliver quality care for culturally diverse patients and reduce health inequities.

2.1.3 Primary Drivers

To achieve the above aim, I am carrying out multiple Plan-Do-Study-Act (PDSA) cycles. I have identified three primary drivers of my aim, one of which was the focus of the first PDSA cycle and associated dissertation in practice. To graduate competent students, we must have three things: qualified educators in charge of teaching, learning, and precepting; a strategically designed curriculum map; and the ability to consider students' lived experiences and desires. The theory suggests if these three primary drivers are addressed, employers will "mostly agree" or "completely agree" that Pitt's Dietitian Nutritionist Program graduates demonstrate cultural competence in practice.

2.1.4 Secondary Drivers

The theory guiding this research suggests that one primary driver, qualified educators, which includes preceptors, is dependent upon the secondary driver that the educators are confident in their ability to assess students' demonstration of cultural competence. The other two primary drivers of strategically designing a curriculum map and knowing the importance of the student's lived experiences and desires for their own success, are impacted by two additional secondary drivers. The secondary drivers require appropriately scaffolded learning activities and assessments throughout the entire program curriculum and the ability to develop equitable, individualized plans of study for the students in the Dietitian Nutritionist Program.

2.1.5 Change Ideas

Each secondary driver has two associated change ideas, or areas where improvement may be made to achieve the overall aim. A secondary driver, individualized plans of study, could be achieved if two change ideas were in place: authentic cultural competence related learning activities were planned early and often throughout the curriculum and if remediation plans existed for students in need. To achieve the secondary driver of an appropriately scaffolded curriculum, two additional change ideas are needed: the yearly programmatic curriculum review must focus on a review of competencies across the curriculum rather than reviewing each class in a silo and include a dedicated staff or faculty member responsible for ongoing continuous quality improvement. To make meaningful progress toward final secondary driver, that addresses preceptor confidence in their ability to assess student's demonstration of competencies, the Dietitian Nutritionist Program can provide assessment tools and trainings and routine pedagogical training with a focus on the assessment tools to the educators.

2.1.6 Inquiry Questions

I was interested to know if adding specific benchmark criteria to an existing assessment tool, and providing training on the tool, impacts preceptor's confidence in their ability to assess the Dietitian Nutritionist students' demonstration of cultural competence in Supervised Experiential Learning. To help me understand the changes that take place because of this intervention, I considered the following:

- IQ1. How does the preceptor's knowledge of cultural competence change after participation in the cultural competence training module?

- IQ2. How does providing benchmark criteria to a rubric and training on the tool change preceptor's confidence in their ability to assess student's demonstration of cultural competence?
- IQ3. When new required competencies are introduced from ACEND, what additional support do preceptors desire for improving their competence and confidence in assessing students in these areas?

  As I monitor the questions above, I anticipate the following:

- Preceptor knowledge of cultural competence will improve after completing the training module.
- Preceptors will report a high-level of confidence in their ability to assess students' level of cultural competence with the addition of benchmark criteria to the numeric rubric.
- Preceptors will find the framework of a rubric with benchmarks and training helpful for them to confidently assess students as new professional competencies are introduced by ACEND.

2.2 Methods and Measures

2.2.1 Participants

All 24 community nutrition preceptors affiliated with the Dietitian Nutritionist (DN) Program were invited to participate. The preceptors are predominantly dietetics and nutrition professionals with a few allied healthcare professionals (e.g., exercise physiologists and

occupational therapists) and work in community and public health nutrition-related organizations. These organizations serve as experiential learning sites for the Dietitian Nutritionist Program students to complete their required 120 hours of supervised practice in Community/Public Health Nutrition (CPHN). The preceptors provide supervised experiential learning opportunities that align with the ACEND competency requirements for the students. In addition to planning and supervising the students' experiential learning, the preceptors also complete a midpoint and a final assessment on the students' demonstration of the required competencies in practice.

Preceptors participated in the standard CPHN preceptor orientation process in August 2022. During the orientation process, preceptors learned about the study when they completed the initial online survey that preceded the training module. Preceptors had the opportunity to opt-out of the study at this point. If they chose to opt-out of the study, the preceptors would have still participated in the training and completed the midpoint evaluations, but no data would have been collected from the preceptors nor would they have been eligible to receive an honorarium. Of the 22 preceptors who attended the orientations, no preceptor chose to opt-out of the study.

I offered compensation to the participants for their time at two points in the study for a total of $25, if they completed all three surveys. I provided a $10 honorarium after the participants completed the pre-module survey, training, and immediate post-module survey, and I provided a $15 honorarium after they completed the delayed post-module survey. All participants also had a chance to be selected for a free registration to the Academy of Nutrition and Dietetics (Academy) annual Food, Nutrition, Conference, and Expo (FNCE).

I approached Pitt's Institutional Review Board (IRB) and it was determined this study protocol did not meet the definition of research and is considered a benign-behavioral based intervention. The IRB also granted a "Man on the Street" payment option and an exemption to

collect participant social security numbers. Documentation regarding approval and the exemption are included as **Appendix B**.

2.2.2 Intervention Description

In the 2021-2022 school year, the guidelines for the 9-point measurement tool were as follows:

> *Please evaluate the intern's abilities to meet the competencies at an Advanced Beginner level. Note the scoring scale. 1-5 is below expectations, 6-7 is met expectations, 8-9 exceeds expectations. All competencies must be met with a score of 6 or higher.* See **Figure 1** for the original measurement tool.

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Final Evaluation

Please evaluate the intern's abilities to meet the competencies at an Advanced Beginner level. Note the scoring scale. 1-5 is below expectations, 6-7 is met expectations, 8-9 exceeds expectations. All competencies must be met with a score of 6 or higher.
Students must meet competency expectations to pass with the minimum threshold of 80%

Competency	Criteria	Below Expectations					Met Expectations		Exceeded Expectations		N/A	Comments
1.7	Integrates the principles of cultural competence within own practice and when directing services.											
	1.7.4 Identifies and implements strategies to address cultural biases and differences	1	2	3	4	5	6	7	8	9	n/a	
	1.7.5 Applies culturally sensitive approaches and communication skills.	1	2	3	4	5	6	7	8	9	n/a	

Figure 1. Portion of the 9-Pt "Rubric" Previously Utilized by Preceptors to Assess Student's Demonstration of Cultural Competence

The original tool lacked explicit direction for preceptors on how to assess the students based on their demonstrated performance. Therefore, I added clearer guidance for preceptors to better understand the expectations and specific benchmark criteria to indicate when a student is

performing below, at, or above those expectations. The benchmark criteria also serve as guideposts for the preceptor to share with the student to help them continue to improve. The benchmark criteria that were added to the tool came from the reliable and valid *Intercultural Knowledge and Competence VALUE Rubric* developed by American Association of Colleges and University (AAC&U, 2009). See **Appendix C** for the revised measurement tool with benchmark criteria that was used as the rubric for preceptors to assess student's demonstration of cultural competence.

In July 2022, the revised measurement tool with benchmark criteria was sent to seven colleagues with instructions for them to review and provide specific feedback to assess content validity. The colleagues were selected for their expertise in dietetics related cultural competence or competency-based assessment. Five colleagues reviewed the measurement tool and provided valuable feedback. Example feedback regarding the benchmark criteria for performance indicator 1.7.2 from two different reviewers are as follows, "I think more guidance is needed as to what is 'surface' 'partial' 'adequate' and 'sophisticated'" and

> *Benchmark criteria is written is too much like a performance indicator and not specific description of performance – what would a surface understanding "look like" and write this as the anchor descriptor – this needs to be done across all items in P1.7.2*

Based on this feedback, the benchmark criteria were revised and reviewed one additional time by one expert reviewer.

Once the rubric was finalized, the training module was created. The training content was derived from the Process of Cultural Competemility in the Delivery of Healthcare Services (Campinha-Bacote, 2019) and the *Intercultural Knowledge and Competence VALUE Rubric* (AAC&U, 2009). The training module included a primer on cultural competence and cultural humility, and the background, rationale, and practice illustrations associated with the specific

benchmark criteria added to the rubric. The completed training module was sent to two subject matter experts, however neither were available to provide feedback before the scheduled trainings. See **Appendix G** for the learning activities used in the training module. The objectives of the training module were as follows:

After the training, preceptors will be able to:

1. correctly differentiate between cultural competence and cultural humility by selecting the correct definition for each term.
2. correctly identify at least three patterns of human behavior that make up one's "culture".
3. select the correct definition for four key terms used in the rubric to assess the student's demonstration of cultural competence in practice.
4. State at least two "look fors" when assessing a student's cultural competence.

Preceptors participated in a training module on both the constructs of cultural competemility and the use of the new 9-pt measurement tool with benchmark criteria, now referred to as the rubric. See **Appendix H** for the slides used in the training module. The 30-minute training module was delivered as part of the yearly orientation process for preceptors that took place in August 2022. Identical trainings were delivered twice, synchronously, and remotely via Zoom and participants had the choice of which one they attended. Due to unavoidable scheduling challenges, there was also a group of participants who received a link to the training module via email and completed the training and surveys asynchronously within one week from the live trainings.

2.2.3 Measures

2.2.3.1 Pre-module Survey

Immediately prior to the interactive training on the rubric and cultural competence constructs, the preceptors were asked to complete a short, confidential, and anonymous pre-module survey to collect demographic information and baseline data. The pre-module survey included the required language to provide participants more information on the study and to explain how they could opt-out of the study. See **Appendi**x **D** for the pre-module survey of demographic information and both knowledge and confidence measures.

The pre-module survey included demographic questions and questions to establish the participants' prior exposure to cultural competence training. Eight multiple choice questions were asked to establish the participant's level of knowledge related to cultural competence. The maximum total knowledge score a participant could receive was eight. One example knowledge question was "*Cultural competence can be viewed as which of the following?"* Three response options were provided, and the correct answer was "*a process of continual improvement*." One additional survey question collected information on preceptor's confidence in assessing student's demonstration of cultural competence. This item used a 5-point Likert scale with response options ranging from 1= strongly disagree to 5 = strongly agree. Likert scales allow researchers to measure means, medians, and standard deviations to note variations between groups, including same group analyses pre and post an intervention (Boone & Boone, 2012).

2.2.3.2 Immediate Post-module Survey

The same nine questions, to assess knowledge and confidence, from the pre-assessment were asked along with one additional question to assess perceived change in knowledge and two

additional open-ended questions to assess change in confidence after the training (**Appendix E**). Participants' perceived change in knowledge item asked participants to rate their level of agreement with the statement "*After completing this training module, my knowledge of cultural competence has improved*." Response options ranged from 1=strongly disagree to 5 = strongly agree.

2.2.3.3 Delayed Post-module Survey

Appendix F includes the delayed post-module survey questions to assess preceptor confidence and desire for future support. Confidence was assessed with the same question from the pre-survey and immediate post-survey. Six additional questions were asked on this survey. One Likert scale question was asked for preceptor's self-assessment of confidence in their ability to specifically use the new rubric to assess a student's demonstration of cultural competence. One open-ended question asked what, if anything changed their confidence level in their ability to assess a student's demonstration of cultural competence. Three new questions were asked to determine the type and level of support preceptors would like to see in the future to assist them in developing and assessing the students in the ACEND required competency areas. The final new question collected preceptors' overall thoughts regarding cultural competence to ascertain if I may have overlooked an important aspect in the training.

2.2.4 Data Collection Procedures

I pilot tested the questionnaire process via Qualtrics with one colleague who has extensive experience with survey design and is familiar with the role of the preceptor (Qualtrics, Provo, UT). The pilot test afforded me the opportunity to improve the clarity of questions, confirmed I had

created the three Qualtrics surveys in a way that minimized participant burden, yielded the intended results, and met the allotted timeframe for completion.

Preceptor's self-assessment of confidence in their ability to assess a student's demonstration of cultural competence was collected before, immediately after, and two-months after the training intervention. The preceptors were asked to complete three short, confidential, and anonymous surveys via Qualtrics. The surveys were used to collect their demographic information and determine changes in their knowledge of and confidence in assessing the student's demonstration of cultural competence.

The two synchronous trainings took place over Zoom and the links to the online Qualtrics surveys were provided to participants (n=15) in the chat function through Zoom. A direct link to the online Qualtrics survey was sent in the chat feature of the Zoom meeting, and participants were given eight minutes to complete the pre-module survey and ten minutes to complete the immediate post-module survey. The group of participants (n=7) who completed the study asynchronously received an email with a link to the training video on the Panopto® platform. Using this platform allowed me to imbed the pre and post module surveys into the video and prompt the participants to complete the surveys at their respective times.

In October 2022, after the preceptors had utilized the rubric to assess the student's demonstration of cultural competence, the delayed post-module survey was emailed to the participants. During the delayed post-module survey, preceptors reported their level of confidence in their ability to assess the student's demonstration of cultural competence, described future support for assessing student's competence they desired, and provided feedback on the overall training process. See **Figure 2** for a visual representation of the data collection procedure timeline.

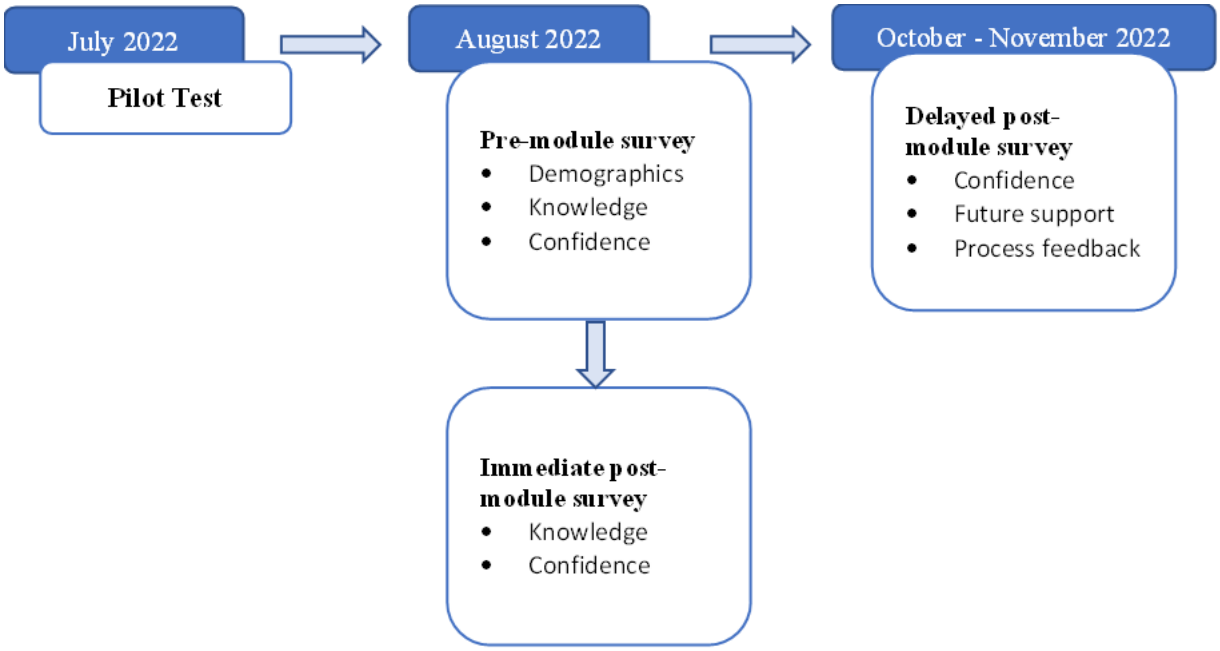


Figure 2. Data Collection Procedure Timeline

2.3 Analysis of Data

The data to inform my understanding of this change came from a quantitative approach via three different surveys with both closed and open-ended questions. See **Table 1** for an overview of the data analysis plan, including the inquiry questions, data sources, and analytic approach.

Table 1. Inquiry Questions and Associated Methods of Collection and Analysis Plan

Inquiry Question	Data Sources	Analytic Approach
1.How does the preceptor's knowledge of cultural competence change after participation in the cultural competence training module?	Pre-module survey via Qualtrics. See **Appendix D.** •Multiple choice knowledge questions (Q7-14) Immediate post-module survey via Qualtrics. See **Appendix E.** •Multiple choice knowledge questions (Q1-8).	Quantitative: Change in central tendency
2.How does providing benchmark criteria to a rubric to assess student's demonstration of cultural competence improve the confidence of the preceptors utilizing the assessment tool?	Pre-module survey via Qualtrics. See **Appendix D**. •Likert scale confidence question. 1 = strongly disagree to 5 = strongly agree (Q15) Immediate post-module survey via Qualtrics. See **Appendix E.** •Likert Scale confidence question. 1 = strongly disagree to 5 = strongly agree (Q9). •Open-ended question on what impacted confidence (Q11) Delayed post-module survey via Qualtrics. See **Appendix F.** •Likert scale confidence questions. 1 = strongly disagree to 5 = strongly agree (Q1) •Likert scale confidence questions. 1 = not at all to 5 = completely agree (Q2) •Open-ended question on what impacted confidence (Q3)	Quantitative: Change in central tendency Qualitative: Thematic coding
Inquiry Question	**Data Sources**	**Analytic Approach**
3.When new required competencies are introduced from ACEND, what additional support do preceptors desire for improving their confidence in assessing students in these areas?	Delayed post-module survey via Qualtrics. •Open-ended question (Q4) •Multiple Option question (Q5) See **Appendix F** for the survey.	Qualitative and Quantitative: Thematic coding to run descriptive statistics and determine frequency

2.3.1 Quantitative Analysis

The analyses of the quantitative data were completed in Microsoft Excel and included descriptive statistics including mean (standard deviation), median (inter-quartile range), and standard deviation to describe demographic and outcome variables of preceptor participants. Primary outcomes included participant change in knowledge, change in confidence, and desire for additional support.

The mean scores for each scale from all three assessment points (pre-module, immediate post-module, and delayed post-module) are presented in tabular form, along with the mean scores and standard deviations for the individual questions. These sets will include pre-survey and immediate post-survey scores, pre-survey and delayed post-survey scores, and immediate post-survey and delayed post-survey scores. The items regarding the self-perception of competencies (presented in **Appendices D, E,** and **F**) were adapted from the Perceived Competence Scale first developed by Williams and Deci (1996). The quantitative data is important as it shows the rubric and training ultimately contribute to an improvement in the preceptor's confidence in their ability to assess the student's demonstration of cultural competence.

2.3.2 Qualitative Analysis of Open-ended Survey Items

For qualitative data, I included open-ended questions on the delayed post-module survey via Qualtrics. To analyze the qualitative data, I drew from the reflexive thematic analysis first proposed by Braun and Clarke (2006). Coding was completed by adding comments to a Microsoft Word document and transferring the codes into a table that informed the categories. I continued the process of inductive and deductive reasoning to make sense of the data and summarized the

themes at a latent level. Thematic analysis at the latent level, as opposed to the semantic level, examines the underlying ideas and assumptions of the qualitative data (Braun & Clarke, 2006).

3.0 Results

3.1 Participants

The sample for this study included community nutrition preceptors from the University of Pittsburgh's Dietitian Nutritionist Program, and the entire population was recruited (*n*=24). Of the 24 community preceptors, 22 (for a response rate of 92%) completed the pre-survey instruments; 21 completed the training module and both the pre- and immediate-post module surveys; and 16 completed the training module and all three survey instruments, pre-module, immediate post-module, and delayed post-module. Details on participant attrition are shown in **Figure 3**.

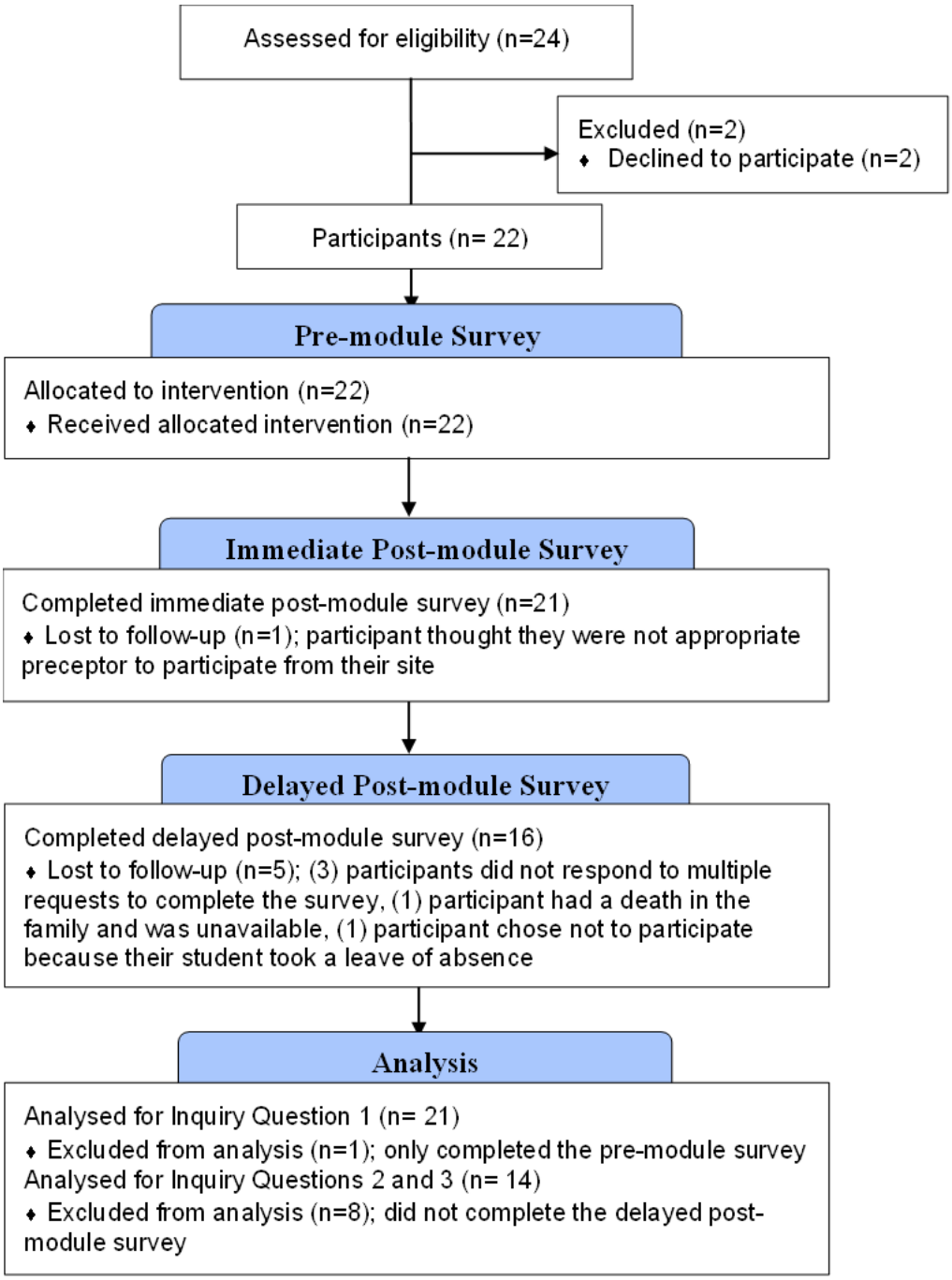


Figure 3. CONSORT Flowchart of Participants

Of the 21 study participants, 95.2% (*n*=20) identify as female/woman and 4.8% (*n*=1) identify as male/man. The primary race/ethnicity of the study participants' clients were 47.7% (*n*=21) White, 20.5% (*n*=9) Black or African American, 15.9% (*n*=7) Hispanic or Latino, 13.6%

(*n*=6) Asian, and 2.3% (*n*=1) other. The participants' reported the following as their primary profession: 71.4% (*n*=15) registered dietitian nutritionist, 9.5% (*n*=2) nutritionist, and 19% (*n*=4) other, such as exercise physiologist. This was the first year as a preceptor for 23.8% (*n*=5) of participants, 38.1% (*n*=8) of participants were in their second year as a preceptor, 9.5% (*n*=2) were in their third year, 4.8% were in their fourth year, and 19.2% have served as a preceptor for students for five or more years.

Over half, 57.1% (*n*=12) of participants were not aware the Academy of Nutrition and Dietetics offers preceptor training. The training includes seven online modules and provides strategies to enhance preceptor's teaching effectiveness (Eat Right Pro, 2023). Of the 42.9% (*n*=9) who were aware of the training, 77.8% (*n*=7) have not completed the training. Most participants, 76.2% (*n*=16), reported their workplace offers Professional Development (PD) for cultural competence and half (*n*=8) have completed the workplace PD. Demographic information of the analytic sample is shown in **Table 2**.

Table 2. Demographic Characteristics of n=21 Community Nutrition Preceptors

Characteristics of Study Participants	n	%
Gender		
Female/Woman	20	95.2%
Male/Man	1	4.8%
Primary Profession		
Nutritionist	2	9.5%
Registered Dietitian Nutritionist	15	71.4%
Other Professional	4	19%
Primary Race/Ethnicity of Clients		
Asian	6	13.6%
Black or African American	9	20.5%
Hispanic or Latino	7	15.9%
White	21	47.7%
Other	1	2.3%
Number of Years as a Preceptor		
First year	5	23.8%
Second year	8	38.1%
Third year	2	9.5%
Fourth year	1	4.8%
Five+ years	4	19.%
Aware of Academy's Preceptor Training?		
No	12	57.1%
Yes	9	42.9%
If Aware (n=9), Completed the Academy Training?		
No	7	77.8%
Yes	2	22.2%
Workplace Offers PD for Cultural Competence?		
No	5	23.8%
Yes	16	76.2%
If Offered (n=16), Completed the Workplace PD?		
No	8	50%
Yes	8	50%

3.2 Findings Related to Inquiry Question 1

The data and analysis findings for Inquiry Question 1 are presented in **Table 3**. The mean (± SD) total knowledge of cultural competence score on the pre-module survey for the 21 participants was 5.67 ± 1.24 and on the immediate post-module survey was 6.38 ± 1.24. Participants scored 71% correct on the pre-module survey and 80% current on the immediate post-module survey.

Table 3. Mean (± SD) Knowledge of Cultural Competence Scores for Participants on Pre- and Immediate Post-module Surveys

	Pre-module Survey (*n*=21)	Immediate Post-module Survey (*n*=21)
Total Knowledge Score	5.67 ± 1.24	6.38 ± 1.24
% Correct Knowledge Items	71%	80%

Participants self-assessment of change in knowledge are presented in **Table 4**. After completion of the training module, 29% (*n*=6) of participants strongly agreed, 67% (*n*=14) somewhat agreed, and 5% (*n*=1) neither agreed nor disagreed their knowledge of cultural competence improved. No one somewhat or strongly disagreed their knowledge of cultural competence improved.

Table 4. Participants Level of Agreement (%[n]) with Improvement of Cultural Competence-related Knowledge after Completion of Training Module

Level of Agreement	% (n)
Strongly disagree	0
Somewhat disagree	0
Neither agree nor disagree	5% (1)
Somewhat agree	67% (14)
Strongly agree	29% (6)

3.3 Findings Related to Inquiry Question 2

Descriptive statistics on the preceptor's self-confidence in their ability to accurately assess a student's demonstration of cultural competence are presented in **Table 5**. The mean (± SD) total confidence score on the pre-module survey (n = 13) was 3.85 ± 0.55, on the immediate post-module survey was 4.23 ± 0.43, and on the delayed post-module survey was 4.00 ± 0.71.

Table 5. Participants Level of Confidence to Accurately Assess a Student's Demonstration of Cultural Competence (n = 13)[a]

Confidence Statement	Pre-Module Survey Scale Score	Immediate Post-Module Survey Scale Score	Delayed Post-Module Survey Scale Score
I am confident in my abilities to accurately assess a student's demonstration of cultural competence.	3.85 ± 0.55 Range: 3-5	4.23 ± 0.43 Range: 4-5	4.00 ± 0.71 Range: 2-5

[a] *Excludes response from a participant where the confidence score selected did not match the qualitative data provided.*

The percentage for each level of confidence from the delayed post-module survey is presented in **Figure 4**. Ninety-two percent of participants "agreed" or "strongly agreed" they felt confident to assess a student's demonstration of cultural competence.

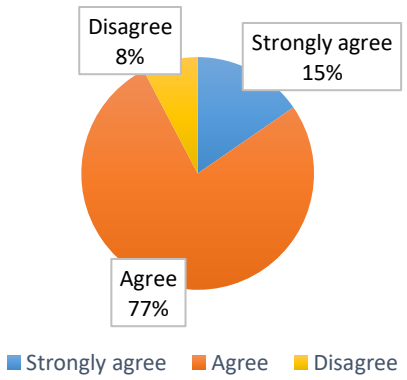


Figure 4. Preceptors Level of Agreement (%) They Can Confidently Assess a Student's Cultural Competence (n=13) on Delayed Post-Module Survey

One response was excluded from the analysis because the qualitative data did not support the quantitative results (results not shown). Specifically, in response to the question, "*What, if anything, over the last three months, has changed your confidence in your ability to accurately assess a student's demonstration of cultural competence*?", the participant wrote "I think having the benchmark criteria makes it very clear, and that gives me more confidence." However, their response on the survey was "strongly disagree" to the statement "*I am confident in my abilities to accurately assess a student's demonstration of cultural competence*." It is possible the participants' confidence level could have decreased over the duration of the study, but the qualitative data did not support a decrease in confidence.

Participants (n = 16) confidence levels to accurately assess a student's demonstration of cultural competence specifically by using the new assessment tool (i.e., rubric) is presented in **Table 6**. This measure was only assessed at one point in time, during the delayed post-module survey, and looks specifically at the impact of the rubric. The mean score reported was 4.25 ± 0.58 (range 3 – 5).

Table 6. Participants Level of Confidence to Accurately Assess a Student's Demonstration of Cultural

Confidence Statement	Delayed Post-Module Survey ScaleScore
I am confident in my ability to use the assessment tool to accurately assess a student's demonstration of cultural competence.	4.25 ± 0.58 Range: 3-5

Of the 16 participants who completed the delayed post-module survey, 14 participants provided a response to both open-ended questions on the immediate post-module and delayed post-module surveys that asked *"What, if anything, changed your confidence in their ability to*

accurately assess a student's demonstration of cultural competence.?" From those 14 responses, all comments were coded, and 6 key factors were identified (**Figure 5**). The factors are 'Explicit Definitions', 'Rubric Criteria', 'Example Scenarios', 'Experiential Practice', 'Pitt's Training Overall', and 'Nothing/No Change.'

One factor mentioned more frequently on the immediate post-module survey than on the delayed post-module survey was that of 'Explicit Definitions'. An example comment for this factor is "*explanations of the different words used*." Another factor, 'Rubric Criteria', was mentioned equally on the immediate post-module survey and delayed post-module survey. The comment "*the specific details related to the scale of 1-9 is helpful to determine where exactly the student falls on this continuum*" reflects the role of the 'Rubric Criteria' in improving their confidence. 'Example Scenarios' was a factor mentioned four times on the immediate post-module survey and not at all on the delayed post-module survey. For example, on the immediate post-module survey, one participant wrote: "*the example of the student tabling when approached by a family from Turkey was helpful in understanding one of the ways the situation could have been handled correctly.*"

A factor that was not mentioned during the immediate post-module survey but emerged during the delayed post-module survey is that of 'Experiential Practice'. The comment "*watching the students' interactions with our client population*" is an example of a comment for the 'Experiential Practice' factor. One participant reported the 'Pitt's Training Overall' changed their confidence immediately following the training. 'Nothing/No Change' in confidence was reported more frequently on the delayed post-module survey than on the immediate post-module survey.

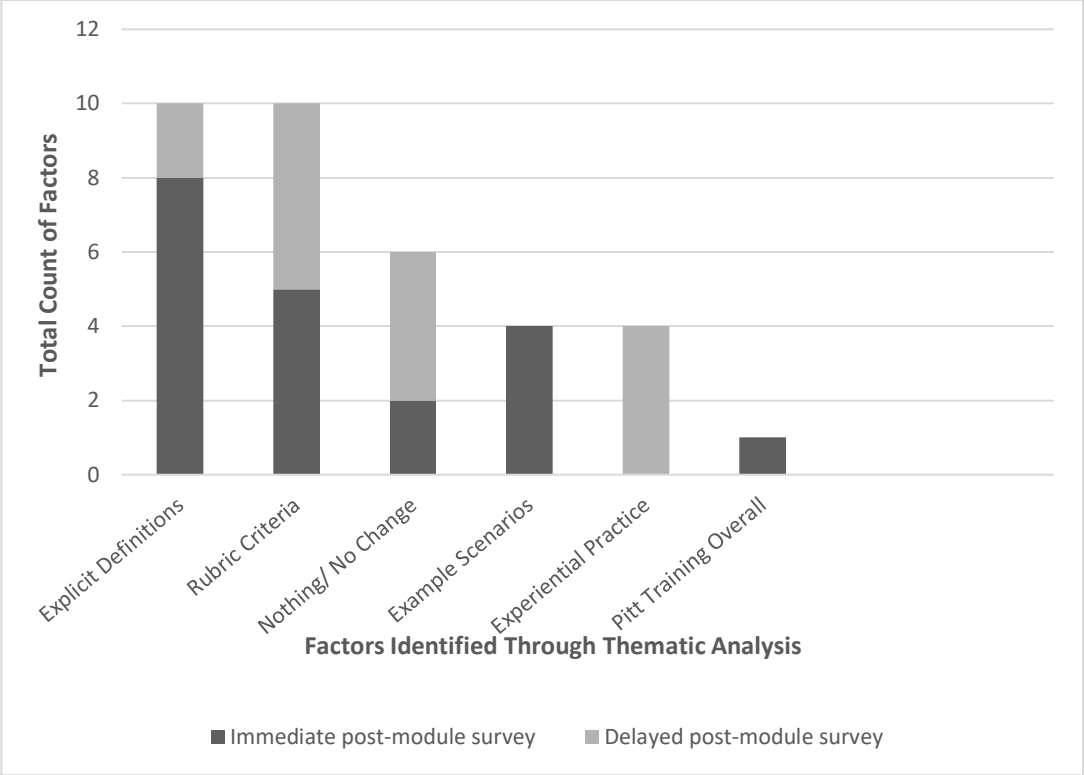


Figure 5. Factors That Changed Preceptor's Confidence in Assessing Student's Demonstration of Cultural Competence

Figure 6 includes the results for participant responses to the question, "*The following would improve my confidence in my ability to assess students in ACEND-required competency areas?"* The most frequently selected format was 'Self-study Video Modules', 12 (80%) participants chose this format followed by 7 (47%) participants selecting 'Online Learning Community." The remaining preferred training formats were selected by 5 or fewer participants.

3.4 Findings Related to Inquiry Question 3

Figure 6 includes the results for participant responses to the question, "*The following would improve my confidence in my ability to assess students in ACEND-required competency areas?"* The most frequently selected format was 'Self-study Video Modules', 12 (80%) participants chose this format followed by 7 (47%) participants selecting 'Online Learning Community." The remaining preferred training formats were selected by 5 or fewer participants.

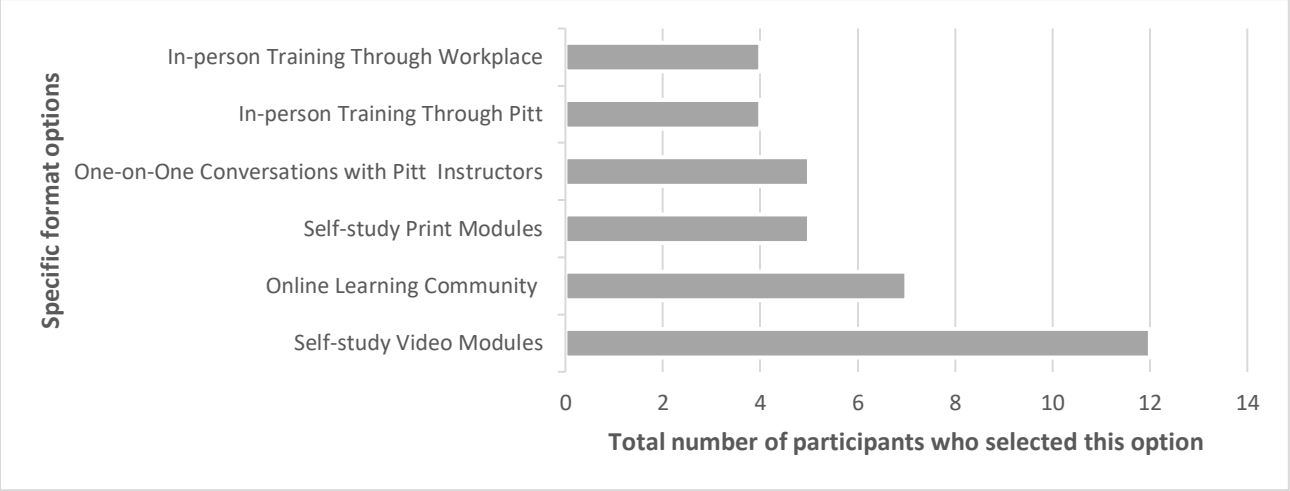


Figure 6. Preceptors Preferred Training Format to Improve Their Confidence in Assessment Abilities

Sixteen participants completed the delayed post-module survey and thematic analysis of the qualitative data was completed for the thirteen participants who provided a response to the open-ended question "*How can the Dietitian Nutritionist Program support you when ACEND adds – or enhances the focus of – a competency requirement to the curriculum, that you as a preceptor will be responsible for developing and assessing with the dietetic students*?" From those 13 responses, all comments were coded, and 6 themes were identified (**Figure 7**). Three participants reported they were 'Unsure' of the training content that might support their ability to develop and

assess dietetic students. The remaining five themes that emerged were open 'Communication with Preceptors as needed' – both on changes to the competencies and as needed for support (n=5), 'Training and Resources based on Best Practices' (n=4), 'Detailed Rubrics with Benchmark Criteria' (n=3), provide the preceptors the 'Same resources as the students receive from Pitt' (n=1), and more 'Specific examples in practice' (n=1).

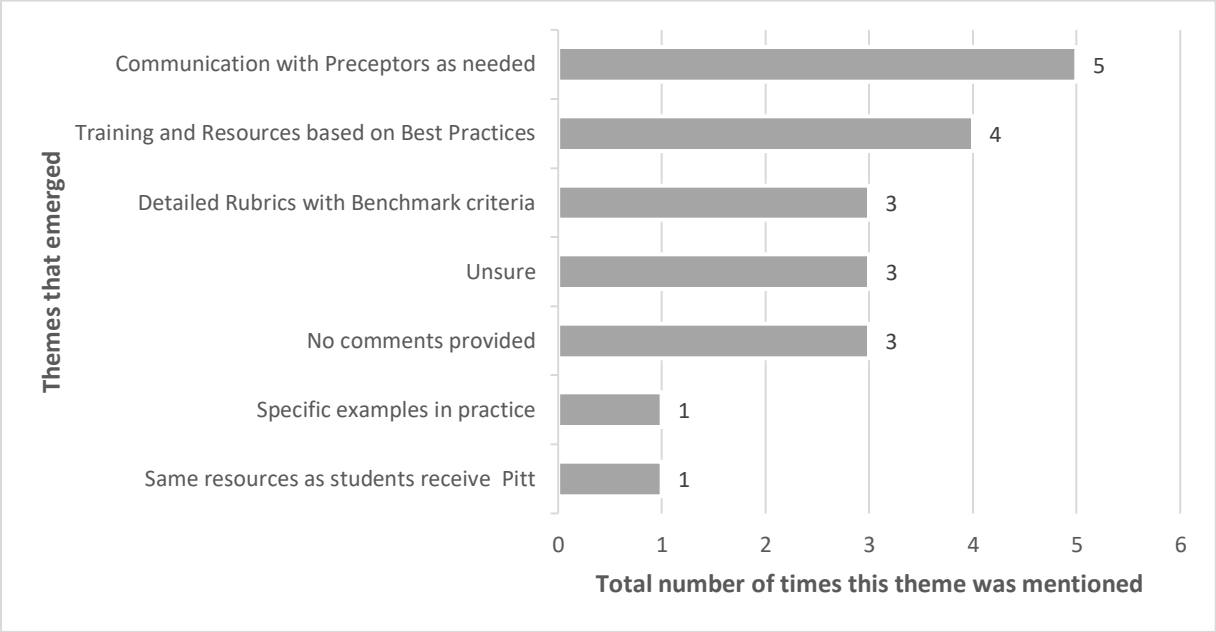


Figure 7. Preceptors Preferred Training Content to Support Their Assessment of Students

4.0 Learning and Actions

The first PDSA cycle began in August 2022. Data was collected through November 2022, and next steps are discussed in the following sections. For all three inquiry questions I discuss the key findings and future directions for research based on the results. I outline a plan to strategically advance the actions of the proposed future directions, and I conclude with an evaluation of the strengths and weaknesses of the inquiry process and change idea.

4.1 Inquiry Question 1: Preceptors Knowledge of Cultural Competence

4.1.1 Key Finding

Results comparing preceptors' responses on the pre-module survey and immediate post-module survey indicated that preceptors' basic knowledge of cultural competence and cultural humility increased. A systematic review of interventions to improve preceptors' knowledge and skills showed professional development interventions produced some positive impact on preceptor development (Griffiths, 2022). However, a guiding framework for best practices to develop preceptors' knowledge and skills does not exist due to the lack of homogeneity among the structure and content of the interventions (DeWolfe, 2010). Similarly, the current level of cultural competence among preceptors is difficult to ascertain due to context dependency and the discordance of the instruments that measure unrelated constructs, i.e., worldview, knowledge, attitudes, or skills (DiBiasio, 2022; Jager, 2020).

4.1.2 Future Directions

Given the promising results of this initial PDSA cycle and ACEND requirements for diversity, equity, and inclusion training for faculty and preceptors in their revised standards, (ACEND, 2021b), I plan to expand the training module content, streamline the delivery method of the training, and scale the population to all preceptors for the Dietitian Nutritionist Program.

To expand the module content to improve preceptors' self-awareness of, and ability to, role model cultural competence through self-reflection, critical thinking, and meaning making, I will recruit subject matter experts on cultural competence to develop a curriculum based on Transformative Learning Theory (Mezirow, 1991). This theory was selected because it focuses on adult learning, particularly in the context of post-secondary education, and suggests that everyone has ingrained views of the world that dictate behavior. Mezirow argues the learner needs to become aware of their worldview and assumptions before they can critically analyze those views and create new meaning from experiences (Mezirow, 1997).

Based on the qualitative data on the preceptors' preference and the existing literature on potentially effective training methods (Mulherin, 2018), the delivery method of the training will be a series of self-paced online modules with additional tools and resources for continued engagement with the material. The Dietitian Nutritionist Program will expand the population from 22 community preceptors to also include the over 200 food service and clinical preceptors . Based on preceptor feedback that the current training, during the annual orientation, was a valuable use of their time and did not negatively impact their workload, the next training will be offered to preceptors during the annual orientation in August 2023. All resources and trainings will be housed electronically and all preceptors will have access to the materials to reference on demand.

4.2 Inquiry Question 2: Preceptor's Confidence in Assessing Student Demonstration of Cultural Competence

4.2.1 Key Finding

Based on the results of this first PDSA cycle, we have evidence that adding benchmark criteria and providing training on the new rubric improved preceptors' confidence in their ability to assess students' demonstration of the competency. This aligns with research in the nursing field by Wilburn (2018) that showed preceptors' access to evidence-based evaluation tools improved their confidence in assessing students. According to my theory of improvement and based on Bandura's (1977) theory of self-efficacy, an improvement of preceptor confidence in their ability to assess students will positively impact their ability to act as a qualified educator. This indicates the need to be more intentional in the development of, and training on, future competency-based rubrics for the preceptors.

4.2.2 Future Directions

The revised rubric with benchmark criteria used in this study for the community nutrition rotation has been incorporated into the standard operating procedures for both students and preceptors during this rotation. The rubric will continue to be used to assist community preceptors in their assessment of students' demonstration of cultural competence in subsequent years. A future PDSA cycle, based on the current theory of improvement, will expand the population from community preceptors to include the food service and clinical preceptors in the Dietitian Nutritionist Program. In this iteration, and based on the current preceptor feedback, there will be

more explanation, along with examples, of what each criteria looks like in practice when it is met and not met. I will assess the secondary driver measure of "*preceptors' confidence in their ability to assess a student's demonstration of cultural competence"* before and after they complete the training module and two months later, after they use the rubric to assess the student.

4.3 Inquiry Question 3: Preceptor's Desire for Future Support to Assess Student Demonstration of Competence

4.3.1 Key Finding

Preceptors agreed the framework of providing training on a revised rubric and professional development on the central concept of the rubric supported them in their ability to confidently assess student's demonstration of required competencies. Specifically, qualitative data indicated the detailed rubrics, training, and clear communication of student expectations were helpful, and they desire additional materials to reference on-demand. The constructs of structure, (i.e., detailed rubrics), and process, (i.e., clear communication), have been shown in one study by DeWolfe (2010) to enhance preceptor development. However, empirical evidence is not conclusive to identify an effective approach for supporting the development of preceptors' knowledge, confidence, and skills (Griffiths, 2022; Wyndy, 2015).

4.3.2 Future Directions

In a future PDSA cycle, we will utilize the framework from this inquiry and intentionally design rubrics with clear, validated, and observable benchmark criteria to assess student's demonstration of required competencies during supervised experiential learning within the Dietitian Nutritionist Program. Training modules on the constructs of the specific competencies and revised rubrics, along with materials to reference on-demand, will also be provided to the preceptors. In addition to evaluation tools, research shows preceptors also need access to ongoing education and resources to support their confidence and in turn the development of health care professionals (Smith, 2022).

4.4 Advancing the Actions

To enhance the effectiveness of the proposed future directions, the Dietitian Nutritionist Program will incorporate the Transformative Learning Theory (Mezirow, 1991) within a transformational framework (Melton, 2018). The transformational framework (Melton , 2018) was developed by a registered dietitian nutritionist of color and is explicitly for improving cultural competence of faculty and preceptors within ACEND-accredited dietetics programs. This framework will be used to facilitate change among dietetics educators and preceptors to achieve diversity, equity, and inclusion at the Program level (Thornton, 2022). The Transformative Learning Theory, with a focus on critical self-reflection, will guide the development of the training curricula. Paramount to the success of the future change ideas is a critical self-reflection at both the educator and program level, according to Melton's (2018) framework. We must adopt an

equity-focused program mission that is reinforced through anti-racist program-level policies and culturally sustaining teaching (Thornton, 2022) to truly transform the program and graduate students who consistently demonstrate cultural competence in practice.

4.5 Strengths and Weaknesses

4.5.1 Strengths of the PDSA Cycle

I approached this project from an asset-frame rather than a deficit-frame (Milner, 2008). Said another way, I focused on enhancing the preceptors' abilities in their role with students rather than assuming a knowledge deficit of the preceptors. The preceptors were open to learning the new information to become more effective in their work. I tried to be respectful of the preceptors' time and designed the study intervention to be incorporated into the preceptor's annual orientation. Because I was concerned the intervention may have taken up more of the participants time than intended, I measured preceptor's perception of the impact of the intervention on their workload as a balance measure.

Throughout the years leading up to this study, I developed strong relationships with key stakeholders locally at the University of Pittsburgh, and broadly throughout the Academy of Nutrition and Dietetics. These relationships afforded me the opportunity to routinely share my ideas and protocols and receive valuable insights and support along the way. One example is the financial support I received to show my appreciation for the preceptors' time, funding came from both the University of Pittsburgh and the Academy of Nutrition and Dietetics (Academy). The Department of Sports Medicine and Nutrition at the University of Pittsburgh allocated research

and development funds to enable me to provide a small honorarium to all preceptors. The Academy donated one registration to attend the national conference and one preceptor was selected at random to receive the registration.

4.5.2 Weaknesses of the PDSA Cycle

I am passionate about patient-centered and culturally competent care and identified a gap in our curriculum and assessment strategy. However, I am not a subject matter expert on cultural competence and cultural humility and was not able to have subject matter experts review the training materials as planned. The training I developed concentrated on improving preceptors' cultural competence knowledge but did not include a necessary component: a focus on their own cultural awareness through critical self-reflection. Three registered dietitian nutritionists with expertise and experience in cultural competence trainings were contacted to consult on this project. However, these subject matter experts were not available because they were publishing their own research, framework, and training modules to improve the cultural competence and cultural humility of faculty and preceptors. Therefore, ongoing collaboration with subject matter experts in this area is essential to streamline the work and scale the findings.

While I was able to receive feedback from key stakeholders and experts on portions of the study, much of the exploration and iteration was done individually. Changes made (i.e., rubrics and preceptor training), toward an overall programmatic aim have widespread impact across the department and within the profession. A greater variety of perspectives from the organization and profession would have improved the PDSA cycle. The participant sample was not diverse in terms of race, ethnicity, or gender; however, it is representative of the dietetics profession (Rogers, 2021).

This study relied on preceptors' self-assessment of their cultural competence knowledge and confidence without bringing in the voice of the patient, client, or students themselves. Self-assessment methods carry the potential for participants to select a socially desirable response (Paulhus, 2017). Additionally, measurement of the impact of preceptor development interventions on the student, and ultimately the patient, is needed (Griffiths, 2022).

When the Dietitian Nutritionist Program moved to competency-based education, we began using a 9-point scale for all supervised experiential learning evaluations. Therefore, the rubric used in this inquiry design was adapted from a validated assessment tool; but the adaptations made for our program to align to an existing 9-point rubric were not validated (AAC&U, 2009).

Due to scheduling constraints, the training (intervention) format was not consistent for all participants. Two live synchronous training sessions took place on two separate days. Participants not able to join either of the live sessions watched a recording of the live training and completed the surveys asynchronously.

4.6 Summary of Learnings and Actions

Key findings of this inquiry process indicated that adding benchmark criteria and providing training on the new rubric improved preceptors' knowledge of cultural competemility and their confidence in their ability to assess students' demonstration of cultural competence. I plan to expand the training module content, streamline the delivery method of the training, and scale the population to all preceptors for the Dietitian Nutritionist Program.

The strengths of this intervention were the application of an asset-frame approach, the preceptors' (participants) willingness to participate, and strong support of key stakeholders. The

weaknesses included the lack of subject matter expert involvement, the reliance on self-assessment by the preceptors, and the need to adapt the rubric to a 9-point scale, not simply use the validated tool without adaptations. Future iterations of the PDSA cycle should build upon the current strengths by including content developed by subject matter experts, using the *International Knowledge and Competence Value Rubric* (AAC&U, 2009) in its original form, triangulating the preceptor's self-assessment with additional measures, and including the views of the students.

5.0 Discussion

Completing a PDSA cycle on a programmatic-level aim is complex work and requires systematic thinking. The premise of the PDSA approach is iterative cycles of continuous improvement, indicating there is no true end to the improvement process (Perry, 2020). Embarking on this continuously evolving complex work requires the individual to develop habits of an improver and demonstrate specific skillsets of a leader, a scholar, and a practitioner simultaneously (Lucas & Nacer, 2015).

Here, I expand on the habits and skillsets I developed and demonstrated during my experience, elaborate on specific lessons I learned about myself as an improver, and highlight my perceived strengths as a scholarly practitioner (Perry, 2020). I organize the discussion based on three of the six principles of improvement science: 1) *see the system that produces the current outcomes, 2) we cannot improve at scale what we cannot measure,* and *3) use disciplined inquiry to drive improvement* (Bryk, et al., 2015). I end with a personal reflection on *trusting the process.*

5.1 See the System That Produces the Current Outcomes

A theory of action requires the identification of specific targets for change within a system. Of importance to selecting the targets to change is the ability to synthesize the systematic processes, make connections within the processes, and uncover hidden complexities. Systems-level improvement work requires input from multiple stakeholders. A challenge of completing

this dissertation in practice was evaluating the system and uncovering hidden complexities as a one-person team.

I appreciate the valuable input I received from co-workers and colleagues as well as fellow cohort members throughout our courses. There is immense value to learning in community rather than in isolation. The dedication of my committee chair and co-chair to help me think broadly about the system, and narrowly on targets to change, exceeded my expectations of their level of involvement and commitment. As Heifetz (2009) suggests, taking a break and stepping away from the work, i.e., getting on the balcony, affords you the opportunity to clearly see the entire system. Fortunately, leadership strengths I possess include the ability to see the system, develop a vision, and get specific to operationalize the vision into a strategic plan. Having a strategic plan and exhibiting strong communication skills inspires others to get on board and act.

5.2 We Cannot Improve at Scale What We Cannot Measure

Measurements are essential for both improvement and accountability. The change idea central to my theory of improvement itself involved a measure for accountability, the rubric. The outcome, process, driver, and balance measures were used to determine if the change idea was an improvement for the given circumstances (Bryk et al., 2015; Perry, 2020). These limited, quick, and easy to collect measurements operationalized the concepts from the theory of improvement and provided a language for me to communicate that the change was an improvement.

Originally, my problem of practice was that the Dietitian Nutritionist Program was graduating students who did not demonstrate cultural competence in practice. Inherent to my original problem was the lack of valid and consistent measurements of cultural competence in the

health sciences and within the Dietitian Nutritionist Program. Therefore, I was not able to understand the extent or nature of that original problem. I needed to first introduce an assessment tool to measure student's demonstration of cultural competence before we can begin to justify improvements to the pedagogy that would improve the overall cultural competence of the graduating students.

Measurement of effect afforded me the opportunity to observe a quantifiable change in preceptors' knowledge and confidence as a result of the initial change ideas. Lastly, measurement supported my ability to build in accountability and dedicated time for sharing results. This internal accountability was integral to the project timeline, that needed to coincide with specific dates when the work happens annually in my place of practice.

5.3 Use Disciplined Inquiry to Drive Improvement

Disciplined inquiry is an iterative process by nature. Of importance to a successful iterative process is the ability to display divergent thinking, i.e., exploring different perspectives and possibilities (Guilford, 1968), and continually checking yourself for potential confirmation and recall bias. Disciplined inquiry also involves being specific on your aim, clearly communicating a change idea, having sound measurements to know if the change was an improvement, and the ability to be reflexive and agile.

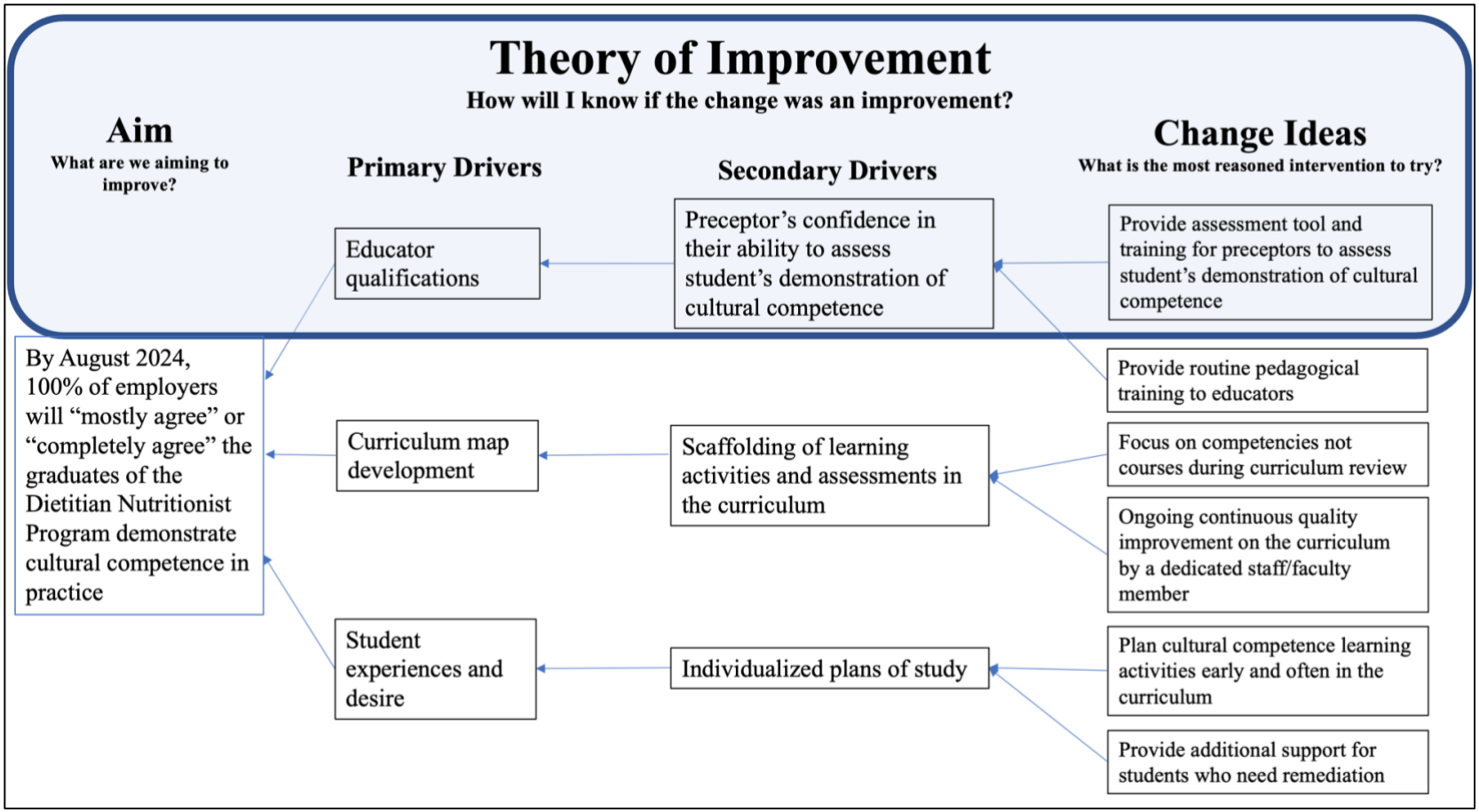
To include different perspectives and check myself for potential recall bias, I routinely discussed my work with colleagues, re-read my field notes, and remained curious. I noticed I tended to defend my original thoughts and positions during some advisement meetings, likely because my ego took over. After these meetings, I would reflect on the discussion, review my

notes, and sit with the feedback to consider different possibilities. The inclusion of multiple perspectives was a result of intentional planning, strong communication skills, and an ability to question my own thinking.

5.4 In Sum

A common phrase we heard throughout the EdD program was *trust the process*. I attribute my success in the program to my ability to *trust the process*. Said another way, I was able to see the system that produces the outcomes – the system was the process, and my personal success was the outcome. I did not expend unnecessary mental energy or time questioning the process and instead focused my efforts on disciplined inquiry related to my problem of practice. To me, this exemplifies the saying, *you get out of it what you put into it*. I trusted the process, was disciplined in my inquiry approach, gained quantifiable knowledge and skills, and experienced a shift in attitude. Knowledge of improvement science principles and models of cultural competence, skills to apply improvement science methodologies, and a shift toward an attitude of curiosity. With these measurable changes, I will continue to scale my personal improvements long after the EdD program and throughout future leadership roles.

Appendix A Driver Diagram



Appendix B Documentation of Approval and Exemption From IRB

University of Pittsburgh | Institutional Review Board
Office of Research Protections

EXEMPT DETERMINATION

Date:	August 15, 2022
IRB:	STUDY22050184
PI:	Caroline Passerrello
Title:	Development and Assessment of Cultural Competence and Cultural Humility Among Supervised Experiential Learning Preceptors in Nutrition and Dietetics Education
Grant Title:	<Indicate "None" if there is none.>

The Institutional Review Board reviewed and determined the above referenced study meets the regulatory requirements for exempt research under 45 CFR 46.104.

Determination Documentation

Determination Date:	8/15/2022
Exempt Category:	(1) Educational settings

Determinations:	• Employees
Approved Documents:	• ISDiP Survey Questions_IRB.v2.pdf, Category: Data Collection; • Introductory Script_IRB.v2.pdf, Category: Recruitment Materials; • Passerrello_HRP-720 - WORKSHEET - Exemption_Educational Strategies.docx, Category: IRB Protocol; • Rubric with Benchmark Criteria_IRB.pdf, Category: Other;

If you have any questions, please contact the University of Pittsburgh IRB Coordinator, Carolyn Ivanusic.

Please take a moment to complete our Satisfaction Survey as we appreciate your feedback.

University of Pittsburgh
Institutional Review Board

Office: 3500 Fifth Avenue
Pittsburgh, PA 15213
Phone: 412.383.1480
Fax: 412.383.1508

Approval of Vincent™ Exception Request: "Man on the Street" Payment Option

Date: September 15, 2022
IRB Number: **STUDY22050184**
Investigator: Caroline Passerrello
IRB Protocol Title: Development and Assessment of Cultural Competence and Cultural Humility Among Supervised Experiential Learning Preceptors in Nutrition and Dietetics Education

Thank you for submitting a request to make payments using the "Man on the Street" option and for an exception to the requirement to collect social security numbers for subjects receiving payments for participating in the above referenced research study. I have carefully reviewed all of the materials provided to me about this project and on that basis, approve your requests. Both exceptions are applicable to this research study only.

Please note that we are granting exceptions as part of a feasibility study that examines the extent to which subjects participate in multiple research studies over the course of a calendar year and obtain $600 or more in incentive payments. The $600 limit is the IRS threshold that requires the paying organization to report this other income to both the taxpayer and the IRS on Form 1099-MISC. Should we subsequently discover that subjects in this 'exception' program have reached that IRS reporting threshold, we may modify or disband this program. If that happens, you will be notified in a timely manner.

You have also requested permission to use the "Man on the Street" payment option. Based on the small payment and the subject population and nature of the study, I am also happy to approve that request for this research study only.

The PI or designate will obtain funds through a Vincent™ card issued in their name for distribution to study subjects. A separate record must be maintained in sufficient detail to account for all payments (e.g., a subject receipt log initialed by the recipient of the payment) should be prepared and maintained by the PI as necessary for audit purposes.

The University of Pittsburgh's Office of Finance can answer detailed questions about the Vincent™ system.

If you have any other questions, please don't hesitate to contact the IRB Office.

Dana DiVirgilio
Research Review Specialist
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Appendix C Rubric with Benchmark Criteria

University of Pittsburgh Dietitian Nutritionist Program Midpoint Evaluation

Please evaluate the student's abilities to perform the actions below. *Performance indicators* and benchmark criteria are included for reference. Note the scoring scale: 1-5 is below expectations, 6-7 is meets expectations, 8-9 exceeds expectations of an *Advanced Beginner*.

Competency	Performance Indicator	Below Expectations	Met Expectations	Exceeded Expectations	N/A	Comments
1.7	**Integrates the principles of cultural competence within own practice and when directing services.**					
	1.7.2 Applies knowledge of foods, cultural foods, eating patterns, and food trend					
		1 2 3	4 5	6 7	8 9	**N/A**	
		Is unaware of elements important to members of another culture in relation to its history, values, communication styles, economy, or beliefs and food practices.	Is aware of, but does not consider, elements important to members of another culture in relation to its history, values, communication styles, economy, or beliefs and food practices.	Includes elements important to members of another culture in relation to its history, values, communication styles, economy, or beliefs and food practices.	Confirms their understanding of elements important to members of another culture in relation to its history, values, communication styles, economy, or beliefs and food practices.		
	1.7.3 Identifies challenges that arise when different cultures, values, beliefs, and experiences exist between clients/patients and nutrition and dietetics professionals					
		1 2 3	4 5	6 7	8 9	**N/A**	
		Has a minimal level of understanding of cultural differences in verbal and nonverbal communication; is unable to negotiate a shared understanding.	Identifies some cultural differences in verbal and nonverbal communication and is aware that misunderstandings can occur based on those differences but is still unable to negotiate a shared understanding.	Recognizes and participates in cultural differences in verbal and nonverbal communication and begins to negotiate a shared understanding based on those differences.	Articulates a complex understanding of cultural differences in verbal and nonverbal communication (e.g., demonstrates understanding of the degree to which people use physical contact while communicating in different		

									cultures or use direct/indirect and explicit/implicit meanings) and can skillfully negotiate a shared understanding based on those differences.			
	1.7.4 Identifies and implements strategies to address cultural biases and differences											
		1	2	3	4	5	6	7	8	9	**N/A**	
		Receptive to interacting with culturally different others. Has difficulty suspending any judgment in their interactions with culturally different others, but is unaware of own judgment. Views the experience of others but does so through own cultural worldview.			Expresses openness to most, if not all, interactions with culturally different others. Has difficulty suspending any judgment in their interactions with culturally different others, and is aware of own judgment and expresses a willingness to change. Responds in all situations with own worldview.		Begins to initiate and develop interactions with culturally different others. Begins to suspend judgment in valuing their interactions with culturally different others and sometimes uses more than one worldview in interactions.		Initiates and develops interactions with culturally different others. Suspends judgment in valuing their interactions with culturally different others and demonstrates ability to act in a supportive manner that recognizes the feelings of another cultural group.			
	1.7.5 Applies culturally sensitive approaches and communication skills.											
		1	2	3	4	5	6	7	8	9	**N/A**	
		Stumbles when communicating with patients or provides incorrect information; is unable to negotiate a shared understanding. Does not use culturally sensitive or gender-neutral language.			Identifies some cultural differences in verbal and nonverbal communication and is aware that misunderstandings can occur based on those differences but is still unable to negotiate a shared understanding.		Identifies many cultural differences in verbal and nonverbal communication and is aware that misunderstandings can occur based on those differences. Speaks in terms that are easy for the patient to follow and understand. Utilizes culturally sensitive or gender-neutral language.		Demonstrates understanding of the degree to which people use physical contact while communicating in different cultures or use direct/indirect and explicit/implicit meanings) and is able to skillfully negotiate a shared understanding based on those differences. Utilizes culturally			

								sensitive and gender-neutral language.			
	1.7.6 Develops awareness of own personal beliefs, values, and biases to better serve clients/patients of different cultures and backgrounds.										
		1	2	3	4	5	6	7	8	9		
		Shows minimal awareness of own cultural rules and biases (even those shared with own cultural group(s)) (e.g. uncomfortable with identifying possible cultural differences with others.)			Identifies own cultural rules and biases (e.g. with a strong preference for those rules shared with own cultural group and seeks the same in others.)		Recognizes new perspectives about own cultural rules and biases (e.g. not looking for sameness; comfortable with the complexities that new perspectives offer.)		Articulates insights into own cultural rules and biases (e.g. seeking complexity; aware of how their experiences have shaped these rules, and how to recognize and respond to cultural biases, resulting in a shift in self-description.)			

Appendix D Pre-Module Survey

The purpose of this research study is to determine the impact of both an enhanced rubric and a short cultural competence training on preceptor's ability to assess student's demonstration of cultural competence. We will be asking twenty community nutrition preceptors to complete three surveys; the pre-module survey, the immediate post-module survey, and the delayed post module survey.

Risks of this study include loss of time due to survey completion, breach of confidentiality, and/or mental fatigue. To minimize this risk, we will limit the number of survey questions to those that are essential to the study, provide participants an anticipated timeframe to complete the study, keep the survey anonymous, and the questions straightforward. Although every reasonable effort has been taken, confidentiality during Internet communication activities cannot be guaranteed and it is possible that additional information beyond that collected for research purposes may be captured and used by others not associated with this study.

Potential benefits include an increase in knowledge of cultural competence and cultural humility in dietetics practice. As a token of our appreciation, you can choose to receive $10 for completing the pre and immediate post-module surveys and an addition $15 upon completion of the delayed post-module survey. You also have the opportunity to be randomly selected to receive a complimentary registration to the Annual Food and Nutrition Conference and Expo, valued at $395.

Your participation is voluntary. You can stop participating at any time by closing the web browser. If you choose not to participate, or if you do not complete the study, this will have no effect on your relationship with the University of Pittsburgh Dietitian Nutritionist Program. This study is being conducted by Caroline Passerrello, who can be reached at cwp20@pitt.edu, if you have any questions. If you would like to participate, click here to proceed to the online survey.

Please enter a 4-digit code that you will remember and enter for each post-module survey (today and in October)

Demographic Questions

Instructions: Please indicate your response to the following questions:

1. With which gender do you most identify?
    - Agender
    - Female/Woman
    - Genderqueer
    - Gender Fluid
    - Gender Non-Conforming
    - Intergender
    - Intersex
    - Male/Man
    - Nonbinary
    - Other
    - Transgender
    - Trans Man/Male
    - Trans Woman/Female
    - I do not wish to provide this information

2. Please select the number of years you have been a preceptor: (this can be for students outside of Pitt's program and/or non-dietetic students)
    - This is my first year
    - 2
    - 3
    - 4
    - 5
    - 6
    - 7

- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20

(Branched if more than 1 year) How many years have you been a preceptor for Pitt's Dietitian Nutritionist Program?

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

3. Which of the following best indicates your profession?
    - Dietetic Technician, Registered
    - Exercise Physiologist
    - Nutritionist
    - Registered Dietitian Nutritionist
    - Other Allied Health Professional
    - Other Professional (please write in)

4. Please select the races/ethnicities of the patients/clients you interact with on a weekly basis. Select all that apply
    - American Indian or Alaska Native
    - Asian
    - Black of African American
    - Hispanic or Latino

- Native Hawaiian or Other Pacific Islander
- White
- Prefer Not to Answer
- Not Listed, please provide: _____

5. Are you aware of the free Academy of Nutrition and Dietetics Preceptor Training Program that provides 8 CEU credits for registered dietitian nutritionists or dietetic technicians, registered?
   - Yes
   - No

   (Branched, if yes) Have you completed the free Academy of Nutrition and Dietetics Preceptor Training Program that provides 8 CEU credits for registered dietitian nutritionists or dietetic technicians, registered?

   - Yes, I completed the full program
   - I started the program but have not completed it
   - No, I have not started the program

6. Does your workplace offer professional development or training related to practicing with cultural competence?
   - Yes; Branched (if YES) Is the training required?
   - No; Branched (If NO) Have you completed the training?

Knowledge of Cultural Competence and Cultural Humility in Dietetics Practice

Instructions: Please answer the following questions to the best of your ability:

7. Culture refers to integrated patterns of human behavior that include which of the following: (select all that apply)
   - *Actions
   - *Beliefs
   - *Communications
   - *Customs
   - *Ethnicity
   - *Language
   - *Race
   - *Religion

- *Thoughts
- *Values

8. Cultural Competence can be viewed as which of the following
    - a goal with an end date.
    - *A process of continual improvement
    - A commitment to redressing power imbalances

9. Cultural Humility can be viewed as which of the following
    - a goal with an end date.
    - A process of continual improvement
    - *A commitment to redressing power imbalances

10. "Boundaries within which an individual operates in order to feel a sense of belonging to a society or group, based on the values shared by that society or group" is a definition of which of the following terms?
    - *Cultural rules and biases
    - Culture
    - Intercultural experience
    - Worldview

11. "The experience of an interaction with an individual or groups of people whose culture is different from your own" is a definition of which of the following terms?
    - Cultural rules and biases
    - Culture
    - Worldview
    - *Intercultural experience

12. "Cognitive and affective lens through which people construe their experiences and make sense of the world around them" is a definition of which of the following terms?
    - Cultural rules and biases
    - Culture
    - Intercultural experience
    - *Worldview

13. Which of the following is NOT necessary for developing cultural fluency?
    a. *Setting your own culture completely aside so you can commit to another
    b. Comparing your behavior to the norms of another culture to identify gaps
    c. Changing your behavior to bridge gaps between your culture and another

14. Which of the below should you absolutely avoid during cross-cultural communication
    - Comparing cultures to find differences
    - *Determining which cultural practice is best
    - Asking questions about cultural norms
    - Finding common ground among cultures

Confidence in assessment of Cultural Competence

Instructions: Please indicate your response to the following question:

15. I am confident in my ability to accurately assess a student's demonstration of cultural competence.
    - Strongly disagree, disagree, neither agree nor disagree, agree, strongly agree

Appendix E Immediate Post-Module Survey

Please enter the 4-digit code that you selected during the pre-module survey

- What is your 4-digit code? ____

Knowledge of Cultural Competence and Cultural Humility in Dietetics Practice

Instructions: Please answer the following questions to the best of your ability

1. Culture refers to integrated patterns of human behavior that include which of the following: (select all that apply)
    - *Actions
    - *Beliefs
    - *Communications
    - *Customs
    - *Ethnicity
    - *Language
    - *Race
    - *Religion
    - *Thoughts
    - *Values

2. Cultural Competence can be viewed as which of the following
    - a goal with an end date.
    - *A process of continual improvement
    - A commitment to redressing power imbalances

3. Cultural Humility can be viewed as which of the following
    - a goal with an end date.
    - A process of continual improvement
    - *A commitment to redressing power imbalances

4. "Boundaries within which an individual operates in order to feel a sense of belonging to a society or group, based on the values shared by that society or group" is a definition of which of the following terms?
    - *Cultural rules and biases
    - Culture
    - Intercultural experience
    - Worldview

5. "The experience of an interaction with an individual or groups of people whose culture is different from your own" is a definition of which of the following terms?
    - Cultural rules and biases
    - Culture
    - Worldview
    - *Intercultural experience

6. "Cognitive and affective lens through which people construe their experiences and make sense of the world around them" is a definition of which of the following terms?
    - Cultural rules and biases
    - Culture
    - Intercultural experience
    - *Worldview

7. Which of the following is NOT necessary for developing cultural fluency?
    - *Setting your own culture completely aside so you can commit to another
    - Comparing your behavior to the norms of another culture to identify gaps
    - Changing your behavior to bridge gaps between your culture and another

8. Which of the below should you absolutely avoid during cross-cultural communication
    - Comparing cultures to find differences
    - *Determining which cultural practice is best
    - Asking questions about cultural norms
    - Finding common ground among cultures

9. After completing this training module, my knowledge of cultural competence has improved.
    - Strongly disagree, disagree, neither agree nor disagree, agree, strongly agree

Confidence in assessment of Cultural Competence

Instructions: Please indicate your response to the following questions:

10. The training for the assessment of students' demonstration of cultural competence in practice, was a valuable use of my time.
    - Strongly disagree, disagree, neither agree nor disagree, agree, strongly agree

11. Which aspects, if any, of the training changed your confidence in your abilities to accurately assess a student's demonstration of cultural competence?

12. What recommendations do you have for future trainings?

13. Is there anything else you would like to share about the focus on ACEND competency 1.7 related to cultural competence?

14. After completing this training module, I am confident in my abilities to accurately assess a student's demonstration of cultural competence.

    - Strongly disagree, disagree, neither agree nor disagree, agree, strongly agree

15. I would like to receive $10 and/or be entered into the drawing for the free FNCE registration.
    - No [If selected, participants will see "Thank you for your participation. You may exit the survey"
    - Yes [If selected, participants will be redirected to a new survey to anonymously collect their contact information to be able to send the honorarium to the participant

Appendix F Delayed Post-Module Survey

Please enter the 4-digit code that you selected during the pre-module survey

- 4-digit code? ____

1. I am confident in my abilities to accurately assess a student's demonstration of cultural competence.
    - Not at all, slightly, somewhat, mostly, completely agree

2. I am confident in my ability to use the assessment tool (rubric with benchmark criteria) provided by the Pitt Dietitian Nutritionist Program to assess a student's demonstration of cultural competence.
    - Not at all, slightly agree, somewhat agree, mostly agree, completely agree

Instructions: Please answer the following questions to the best of your ability:

3. What, if anything, over the last three months, has changed your confidence in your ability to accurately assess a student's demonstration of cultural competence?

4. How can the Dietitian Nutritionist Program support you when ACEND adds -- or enhances the focus of – a competency requirement to the curriculum, that you as a preceptor will be responsible for developing and assessing with the dietetic students.

5. The following would improve my confidence in my ability to assess students in ACEND-required competency areas? [Please select all that apply]
    - Self-study modules in print format
    - Self-study modules in video format
    - In-person, workplace provided, interactive training sessions
    - In-person, Pitt provided, interactive training sessions
    - One-on-one conversations with Pitt clinical instructor prior to the midpoint review session
    - Participation as a member in an online learning community of preceptors
    - Other: _____

6. What recommendations do you have for future competency-based trainings?

7. Is there anything else you would like to share about the focus on ACEND competency 1.7 related to cultural competence?

8. I have completed all 3 surveys for this research and would like to receive a $15 honorarium
    - Yes [if selected, the following will be displayed “in order to receive the honorarium, please click on this link]
    - No

Appendix G Objectives, Learning Activities, and Outline for Training Session

Learning Objectives:

After the training, preceptors will be able to

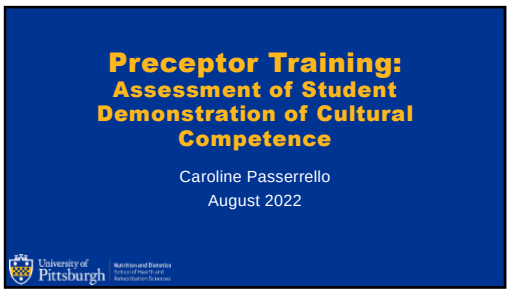
1.correctly differentiate between cultural competence and cultural humility by selecting the correct definition for each term.
2.correctly identify at least three patterns of human behavior that make up one's "culture."
3.select the correct definition for four key terms used in the rubric to assess the student's demonstration of cultural competence in practice.
4.State at least two "look fors" used when assessing a student's cultural competence. (this will occur in October)

Lesson Plan Outline:

Topic	**Details**	**Time (minutes)**
Welcome, introduction, and logistics	Read the intro (study purpose, risks, and consent to opt-in)	2
Time for pre-assessment survey	Copy and paste pre-module survey URL into the Zoom chat. Tell participants when we will resume the training. Turn video off while participants complete the pre-module survey.	8
Intervention		
Objective 1: correctly differentiate between cultural competence and cultural humility by selecting the correct definition for each term.	•Discuss the constructs of cultural competence as viewed through the lens of cultural humility (i.e. cultural competemility). ○Provide specific examples of each construct •Learning Activity: Poll – Ask: Think about the constructs of cultural competemility we just discussed, can you recall a time a student or co-worker displayed one of the constructs? Please select the CONSTRUCT(S) of the situation you have recalled. Optional: If you would like to share the situation in the chat with me or everyone, please do – but this is not required.	7
Objective 2: correctly identify	•Provide the definition of four key terms	10

at least three patterns of human behavior that make up one's "culture".	○Culture, cultural humility, cultural competence, and cross-cultural communication ○Expand on Culture: Surface culture versus Deep culture •Learning Activity: Poll – Ask: Of the aspects of culture I just discussed, what is one aspect of culture you had not previously considered as a construct of culture?	
Objective 3: select the correct definition for three key terms used in the rubric to assess the student's demonstration of cultural competence in practice.	•Provide the definition of three key terms/phrases used in the rubric ○Cultural rules and biases, intercultural experience, worldview •Review the updates to the rubric and discuss each performance indicator.	8
Objective 4: State at least two "look fors" used when assessing a student's cultural competence. (this will occur in October)	•Within the benchmark criteria are some "look fors" - or things you may see or hear a student do in practice that will demonstrate their competence in the specific performance indicator. When completing the assessment, you want to consider the student's demonstration overall and not one specific situation. •Let's review some specific "Look Fors:" for each performance indicator on the next few slides. •Learning Activity: Review a real-life scenario and ask participants to rate the student's demonstration of each performance indicator using the new rubric and benchmark criteria just discussed. Launch Poll for participants to record how they scored the student in the scenario.	
Wrap-up and Resources	Summarize the key points, thank everyone for their time, show slide of resources	3
Time for post-assessment survey	Copy and paste immediate post-module survey URL into the Zoom chat. Tell participants they are free to leave once they complete the survey. Turn video off while participants complete the immediate post-module survey. Remain on for anyone who has questions after the survey is complete.	7

Appendix H Slide Handouts from the Training Session



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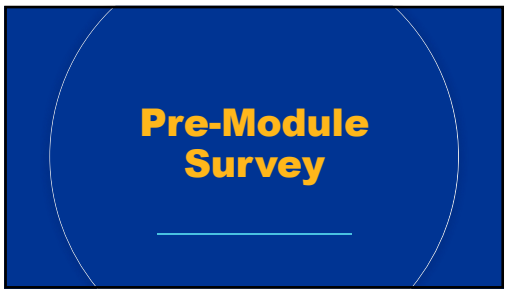

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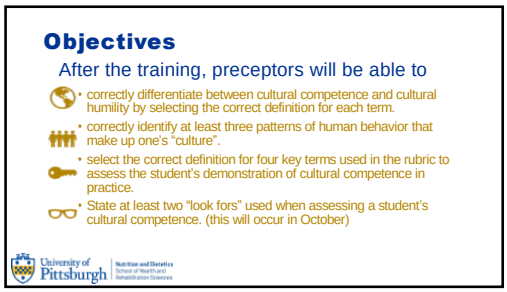

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Definition of Key Terms
• Culture
• Cultural humility
• Cultural competence
• Cross-cultural communication
is having the capacity to continually assess and identify commonalities within broad categories such as race, gender, and/or social class
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Definition of Key Terms
• Culture
• Cultural humility
• Cultural competence
• Cross-cultural communication
How people from differing cultural backgrounds communicate, in similar and different ways among themselves
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8

8


Surface Culture
• Observable actions: behaviors and practices
• Communication, fashion, food, holidays, language, music, race & ethnicity
Deep Culture
• Perceptions, attitudes, beliefs,& values
• Demographics, ideologies, manners, religion, self-concept, thought patterns, work ethic
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Poll
Of the aspects of culture I just discussed, what is one aspect of culture you had not previously considered as a construct of culture?
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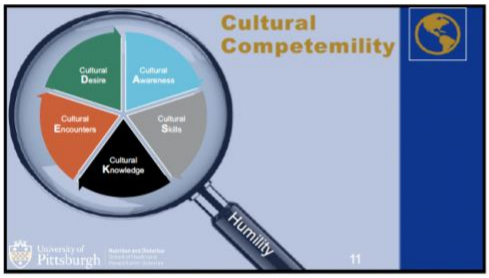
Cultural Competemility
Cultural Desire
Cultural Awareness
Cultural Encounters
Cultural Skills
Cultural Knowledge
Humility
University of Pittsburgh
11

11


Cultural Competemility
Cultural Awareness
• Aware of prejudices and biases
• Know differences in rules, behavior, and values that are different from own
Humility
University of Pittsburgh
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12

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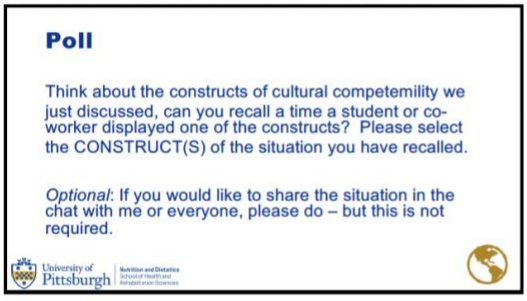

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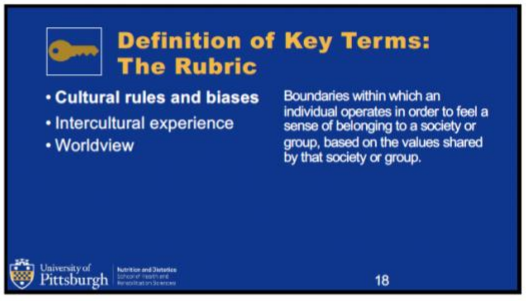

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Definition of Key Terms: The Rubric

- Cultural rules and biases
- **Intercultural experience**
- Worldview

The experience of an interaction with an individual or groups of people whose culture is different from your own.

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Definition of Key Terms: The Rubric

- Cultural rules and biases
- Intercultural experience
- **Worldview**

The cognitive and affective lens through which people construe their experiences and make sense of the world around them.

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University of Pittsburgh Dietitian Nutritionist Program - Midpoint Evaluation

Directions

Please evaluate the student's abilities to perform the actions below. *Performance indicators* and benchmark criteria are included for reference. Note the scoring scale: 1-3 and 4-5 are below expectations, 6-7 is meets expectations, and 8-9 exceeds expectations of an *Advanced Beginner*.

Competency	Performance Indicator	Below Expectations				Met Expectations		Exceeded Expectations		N/A	Comments
Competency		Integrates the principles of cultural competence within own practice and when directing services.									
Performance Indicator		*1.7.2 Applies knowledge of foods, cultural foods, eating patterns, and food trend*									
Rating Scale		1	2	3	4	5	6	7	8	9	N/A	
Benchmark Criteria		Is unaware of elements important to members of another culture in relation to its history, values, communication styles, economy, or beliefs and food practices.			Is aware of, but does not consider, elements important to members of another culture in relation to its history, values, communication styles, economy, or beliefs and food practices.		Includes elements important to members of another culture in relation to its history, values, communication styles, economy, or beliefs and food practices.		Confirms their understanding of elements important to members of another culture in relation to its history, values, communication styles, economy, or beliefs and food practices.			

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"Look Fors"

- *1.7.2 Applies knowledge of foods, cultural foods, eating patterns, and food trends.*
  - Knowledge of foods, cultural foods, and food trends are accurate
  - Confirms understanding of cultural foods, eating patterns, and food trends that are important to the patient/client
    - Exhibits compassionate curiosity
    - Displays active listening
    - Exhibits a growth mindset

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"Look Fors"

- *1.7.3 Identifies challenges that arise when different cultures, values, beliefs, and experiences exist between clients/patients and nutrition and dietetics professionals.*
  - Student is self-aware and can identify differences of culture, values, and beliefs between themselves and patients/clients/dietetics professionals
    - Shares knowledge of own culture, values, and beliefs
    - Shares knowledge of culture, values, and beliefs of others
    - Demonstrates critical self-reflection

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"Look Fors"

- *1.7.4 Identifies and implements strategies to addresses cultural biases and differences.*
  - Student is self-aware and can positively address differences of culture, values, and beliefs between themselves and patients/clients/dietetics professionals
    - Demonstrates a willingness to negotiate
    - Suspends judgment in valuing their interactions with culturally different others
    - Demonstrates ability to act in a supportive manner that recognizes the feelings of another cultural group.

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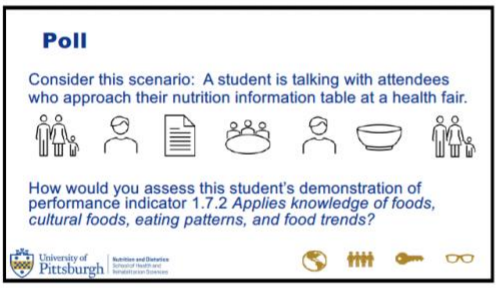

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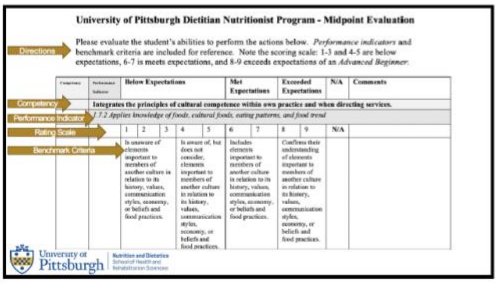

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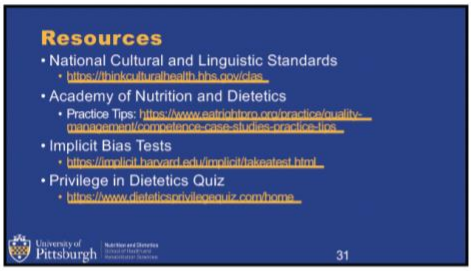
Resources
• National Cultural and Linguistic Standards
• https://thinkculturalhealth.hhs.gov/clas
• Academy of Nutrition and Dietetics
• Practice Tips: https://www.eatrightpro.org/practice/quality-management/competence-case-studies-practice-tips
• Implicit Bias Tests
• https://implicit.harvard.edu/implicit/takeatest.html
• Privilege in Dietetics Quiz
• https://www.dieteticsprivilegequiz.com/home
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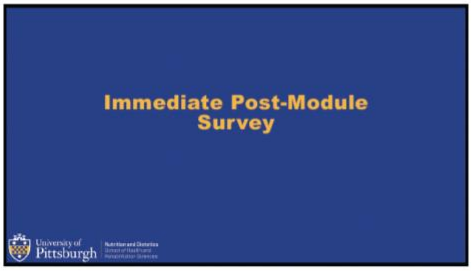
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