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Enhancing the cultural competence of women's health nurses via online continuing education

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ENHANCING THE CULTURAL COMPETENCE OF WOMEN'S HEALTH NURSES VIA ONLINE CONTINUING EDUCATION

By

Ella Thomas Heitzler

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ABSTRACT

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by

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By 2050, current minority groups will comprise almost half of the US population further challenging healthcare providers and nurses to deliver culturally competent care. Numerous organizations have published documents supporting cultural competence and its incorporation into nursing curricula has been encouraged since 1986. However, practicing nurses, specifically those providing care to childbearing women and families, continue to acknowledge their lack of cultural competence. This is concerning as large health disparities exist between culturally diverse women and cultural competence can lead to greater health equality and better client care. Studies have shown face-to-face education increases the cultural competence of healthcare providers; few studies have explored the impact of online education on cultural competence levels and no studies of online socially interactive continuing education (CE) have been conducted with nurses. Therefore, the purpose of this study was to evaluate the effect of two different online CE interventions on the cultural competence level of nurses who care for childbearing women and newborns in the US. The study also explored: the relationship between social desirability and self-reported level of cultural competence, the relationship between level of educational attainment and cultural competence level, and the

relationship between having previous cultural diversity training and level of cultural competence. The framework for the study included two existing models: the 3-dimensional puzzle model of culturally congruent care and the instructional strategy framework for online learning environments. The study had an experimental pre- and post-test design using the Cultural Competence Assessment instrument. Three groups of RNs who care for childbearing women and newborns in the US were used: (a) control, (b) socially interactive online CE intervention, and (c) socially isolated online CE intervention. The study began with 249 registered participants, 190 completed the informed consent process, 132 completed the pre-test, and 93 completed the study. Data was analyzed with a RM-ANOVA with a between-groups variable, ANCOVA, and correlation statistics. Major findings indicated socially isolated online cultural competence CE is significantly more effective than not having online cultural competence CE. However, socially interactive online cultural competence CE is not more effective than socially isolated, nor is it significantly more effective than not having online cultural competence CE. Findings also indicated MCSDS scores and the number of previous types of cultural diversity training are positively correlated with CCA scores.

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CHAPTER 1

INTRODUCTION

Cultural competence is of paramount importance as the United States (US) continues to become more culturally diverse. To utilize a common analogy, the US was once called a melting pot of different peoples who mixed together into one. Today, the US has been described as a stew or salad with differing ingredients that come together but keep their distinct flavors (Schim, Doorenbos, Benkert, & Miller, 2007). This diversity impacts healthcare providers and the client care they provide.

Numerous studies have focused on cultural competence in healthcare. However, many of these works have centered on promoting cultural competence in students or healthcare providers other than registered nurses (RNs). While a limited number of studies have been conducted with licensed nurses, there is no consensus regarding the best way to enhance the cultural competence of practicing nurses.

Background and Significance

By 2050, current minority groups (Hispanic, Asian, Pacific Islander, African American, and American Indian) will comprise approximately 48% of the US population (Gardner, 2010). In 2002 immigrant mothers accounted for 23% of all births, up from 15% in 1990 (Camarota, 2005), and in the past 20 years immigration has accounted for almost all of the enrollment increase within US public schools (Camarota, 2007). In fact, the US may be the most culturally diverse nation in the world (Cooper, Grywalski, Lamp, Newhouse, & Studlien, 2007).

This demographic shift challenges healthcare providers to deliver culturally competent care to improve health equality. However, equality of health is not currently a

reality. One major goal of the *Healthy People 2010* initiative was to elevate minority health into public view and eliminate health disparities (Office of Minority Health, 2008). One of the overarching goals of the *Healthy People 2020* framework continues to address healthy equality, the elimination of health disparities, and enhancement of health for all peoples (Office of Disease Prevention and Health Promotion, 2009). Furthermore, as part of the *Initiative to Eliminate Racial and Ethnic Disparities in Health*, six major areas of racial and ethnic disparity have been targeted by the US President because they impact many minority groups: cancer screening and management; cardiovascular disease; diabetes; HIV and AIDS; immunizations; and infant mortality (Office of Minority Health, 2008).

Large health disparities also exist between women of varying cultural, ethnic, and racial groups within the US (Callister, 2005; Sarto, 2005). For example, although the US maternal mortality rate has declined, maternal mortality among African American women is four times that of Caucasian women, comprising one of the biggest racial disparities in public health indicators (Sarto, 2005). Additionally, American Indians and Alaska Natives are twice as likely as Caucasian Americans to lack first trimester prenatal care (Agency for Healthcare Research and Quality [AHRQ], 2007). This is unfortunate, as the link between prenatal care and birth weight has been evident since 1977 (Showstack, Budetti, and Minkler, 1984) and early prenatal care can potentially decrease infant mortality rates, infant injury rates, and maternal postpartum depression (Alexander & Kotelchuck, 2001). Further minority disparities exist in the incidence of preterm birth (Moore, Moos, & Callister, 2010), infant mortality (Moore et al., 2010; Sarto, 2005), and very low birth-weight newborns (Callister, 2005).

Cultural competence can ultimately lead to greater health equality (Doorenbos, Schim, Benkert, & Borse, 2005; Edwards, 2003; Jackson, 2007; Lipson & Desantis, 2007; McHenry, 2007; Paez, Allen, Carson, & Cooper, 2008) and has numerous other benefits as well. Cultural competence increases client satisfaction (Bussema & Nemec, 2006), enhances communication between providers and clients (Kelly & Papadopoulos, 2009), and lessens societal economic strain (Schultz, 2004). Within women's health, cultural competence has been said to increase the incidence of breastfeeding (Hernandez, 2006; Riordan & Gill-Hopple, 2001), which could potentially decrease the incidence of childhood obesity in Hispanic Americans (Hernandez, 2006). Additionally, culturally sensitive healthcare providers increase the willingness of Hispanic women to access prenatal care (Shaffer, 2002) and culturally competent patient-centered care directly impacts the amount of prenatal care received by Hispanic women and their ability to learn at prenatal appointments (Tandon, Parillo, & Keefer, 2005). Finally, Latina women are more satisfied with providers who have undergone cultural competence training and are more likely to be compliant with recommended treatments (Castro & Ruiz, 2009). Clearly cultural competence impacts women's healthcare.

In recent years numerous groups and organizations have published standards, statements, or other documentation supporting the importance of cultural competence within healthcare. In 2001 the Office of Minority Health, a department of the US Department of Health and Human Services, published the national standards for culturally and linguistically appropriate services in health care, or the CLAS standards. The CLAS standards address the importance of cultural competence in healthcare and provide 14 standards of care for healthcare organizations and providers (Office of

Minority Health, 2001). Standard 1 states organizations should ensure all clients receive respectful care provided in a manner which is consistent with their cultural beliefs. Standard 3 then urges organizations to ensure all staff receives training regarding culturally appropriate service (Office of Minority Health, 2001). The Office of Minority Health has published a document entitled *Teaching Cultural Competence in Health Care: A Review of Current Concepts, Policies and Practices* prepared by the American Institutes for Research (2002). Additionally, the Liaison Committee on Medical Education, the National Committee for Quality Assurance, the Accreditation Council for Graduate Medical Education, and the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) have all actively supported cultural competence in one or more ways (American Institutes for Research, 2002). Both the American Association of Colleges of Nursing (AACN) and the American Nurses Association (ANA) have encouraged the incorporation of cultural training into nursing curricula (AACN, 2008; Campinha-Bacote, 2006). The need to embrace cultural competence in healthcare and nursing is articulated across these organizations.

Although guidelines for incorporating cultural material into nursing programs have existed since 1986 (Campinha-Bacote, 2006), a meta-synthesis completed by Coffman (2004) reveals many practicing nurses perceive they do not have the needed training or skills to appropriately care for clients of various cultures and therefore express the desire for additional cultural training. Specifically, women's health nurses, or RNs caring for childbearing women and/or newborns in the US, acknowledge their inability to provide culturally competent care (Cooper et al., 2007). While the exact cultural competence level of women's health nurses is unknown, a study by Noble, Noble, Geiss,

and Hand (2006) found 77% of providers working with breastfeeding mothers in the US were not culturally competent. This is unfortunate as views of childbearing often depend on cultural beliefs related to health, healthcare, reproduction, and the role of women.

Many cultures have customs that guide behaviors during pregnancy, labor, delivery, and the postpartal period (Dean, 2010; Mattson, 2000). Specific customs, beliefs, and needs related to childbearing have been documented for: Native American women (Cesario, 2001; Galanti, 2008), Russian women (Callister et al., 2007), Asian women (Davis, 2001; Galanti, 2008), Hispanic women (Higgins & Learn, 1999; Galanti, 2008), Mexican women (Galanti, 2008; Johnson, 2005; Kim-Godwin, 2003), Middle Eastern women (Galanti, 2008; Kim-Godwin, 2003), Arab women (Bowers, n.d.; Galanti, 2008), African American women (Bowers, n.d.; Galanti, 2008), Orthodox Jewish women (Galanti, 2008; Semenic, Callister, & Feldman, 2004), Sephardic Jewish women (Galanti, 2008), and Muslim women (Bowers, n.d.; Galanti, 2008) residing in the US. Cultural groups have unique beliefs and behaviors related to childbearing; therefore, cultural competence is important to women's health nursing. In fact, the Association of Women's Health, Obstetric, and Neonatal Nurses (AWHONN) incorporates cultural competence into its vision, mission, and values, stating the association has a responsibility to increase the cultural competence knowledge and skills of nurses who serve childbearing women and newborns (AWHONN, n.d.).

Problem Statement

The diverse childbearing population of the US needs culturally competent nurses to provide them with adequate care and reduce health disparities. While nursing programs have been encouraged to incorporate transcultural training into their curricula,

practicing nurses, specifically women's health nurses, continue to acknowledge their lack of cultural competence. No specific work has measured or addressed the cultural competence of nurses practicing in the specialty area of women's health, but studies have shown face-to-face educational interventions increase the cultural competence of healthcare providers (Pugh, 2008). However, face-to-face continuing education (CE) is limited by time and space. Furthermore, one of the key research questions identified by the AHRQ, in their publication entitled *Setting the Agenda for Research on Cultural Competence in Healthcare*, asks which educational delivery methods most effectively increase cultural competence (Fortier & Bishop, 2004).

While two pieces of literature have explored the effect of socially interactive (interaction between individuals) online education on the cultural competence of nurses enrolled in graduate coursework (Hunter, 2008; Kelly & Papadopoulos, 2009), no studies of online socially interactive education have been conducted with nurses who are not enrolled in graduate study. Furthermore, no conclusive evidence supports the effectiveness of the two identified publicly accessible socially isolated (no interaction between individuals) CE modules (Gerace & Salimbene, n.d.; Office of Minority Health, 2007). While research supports the importance of social interaction in online education (Gallien & Oomen-Early, 2008; Mancuso-Murphy, 2007; Rovai, 2002; Zhao, Lei, Lai, & Tan, 2005), no studies have actually compared the effectiveness of socially isolated online CE to socially interactive online CE. As online CE courses are growing in popularity (Cobb, 2004), further studies are needed to evaluate the impact of both socially isolated and socially interactive online cultural competence CE on the cultural competence level of nurses, particularly those specializing in women's health.

Purpose Statement

The purpose of this study was to evaluate the effect of two different online CE interventions on the cultural competence level of nurses who care for childbearing women and newborns in the US. A quantitative methodology was used to compare change in cultural competence level after completing a socially isolated online cultural competence CE course to the change in cultural competence level following completion of a socially interactive online cultural competence CE course. The study also explored: the relationship between social desirability and self-reported level of cultural competence, the relationship between level of educational attainment and cultural competence level, and the relationship between having previous cultural diversity training and level of cultural competence.

Summary and Organization of Remaining Chapters

This introductory chapter presents basic study details. The background and significance, problem, and purpose are detailed. The next chapter (Chapter 2) provides a comprehensive review of literature related to cultural competence, its measurement, previously utilized interventions designed to increase cultural competence, and research which has been conducted with practicing healthcare professionals. Chapter 2 also details existing literature related to online teaching and learning theories, best practices in online education, and previous research of online CE. Chapter 3 describes the two theoretical frameworks employed in greater detail, provides conceptual and operational definitions, and lists the hypotheses and assumptions. Chapter 4 outlines study methodology, Chapter 5 presents study findings, and the sixth and final chapter expounds

upon study findings, discusses their implications, and sets forth recommendations for nursing, nursing education, and further research.

CHAPTER 2

REVIEW OF RELATED LITERATURE

This chapter provides a comprehensive review of the literature related to cultural competence and online education. Culture will be defined and cultural competence models discussed. Instruments measuring cultural competence will be detailed as well as studies of face-to-face and online education designed to enhance the cultural competence of healthcare providers. The second half of the chapter reviews online teaching and learning, detailing theories/frameworks, pros and cons, the importance of social interaction, course evaluation, and best practices for designing online courses.

Culture

The term culture must be defined before cultural competence can be discussed. Many definitions of culture are found in the literature. Leininger (1997) defines culture as the lifeways of a person or group of peoples which relate to beliefs, values, patterns, and practices that are shared, learned, and passed from one generation to the next. Schim et al. (2007) define culture as a vast scope of social behaviors, attitudes, values, and shared symbols most individuals take for granted as the background of their life. Culture permeates everyday existence and impacts extraordinary moments. In short, culture can be described as the context in which one lives (S. M. Schim, personal communication, May, 2008).

Further exploration reveals culture is a dynamic concept which is learned, shared, and evolves in response to political realities and environmental, social, and economic changes (Schim et al., 2007). In its broadest definition, culture is not simply race or ethnicity; rather, culture encompasses a wide range of similarities and differences

between people and communities (Schim et al., 2007). In fact, people are an amalgamation of a complex set of cultures. Purnell (2002) lists nationality, color, gender, age, and religious affiliation as primary cultural characteristics and educational level, socioeconomic status, political beliefs, occupation, location of residence, marital status, physical characteristics, immigration status, and sexual orientation as secondary cultural characteristics. Schim et al. (2007) include subcultures, a concept similar to Purnell's secondary characteristics. Subcultures include communities of common interest (cancer survivors, Harley-Davidson motorcycle owners, learning disabled or similar, etc.) and communities with common needs (the homeless, mentally ill, diabetics, etc.). Culture may also include similarities and differences between socioeconomic classes, those with differing sexual orientations, or those of different genders (Schim, Doorenbos, & Borse, 2006a). In short, one's culture is the background to one's life.

Cultural Competence

Models

Many models, theories, or frameworks related to culture and cultural competence have been utilized in healthcare. Madeline Leininger is credited with developing the first of such theories in the 1970's (Welch, 2002). Numerous other models, theories, or frameworks have followed. Several commonly utilized and cited models or theories will be discussed below.

The theory of care diversity and universality.

Madeline Leininger is the founder of transcultural nursing. Her theory, the theory of cultural care diversity and universality, was derived from both nursing and anthropology (Welch, 2002). Leininger first related care to culture in the 1950's after

realizing these two significant concepts in nursing had never been linked (Leininger, 1997). The major premise of Leininger's theory is differences (diversities) and similarities (universalities or commonalities) exist which provide a body of transcultural nursing knowledge (Leininger, 1997). Leininger believes humanistic caring needs a broad cultural theoretical perspective to guide nursing and promote positive outcomes. The purpose of her theory is to find, document, decipher, and explain the predicted factors which influence and explain care as a cultural holistic practice. The theory's goal is to provide culturally congruent care to contribute to health (Leininger, 1997).

Culturally congruent nursing care involves taking appropriate actions which are related to culture care (culturally derived and supportive acts for another person), thus accommodating and restructuring care to meet client needs (Leininger, 1997). The sunrise model, which depicts the theory of cultural care diversity and universality, illustrates these concepts, showing culturally congruent care, cultural care maintenance, nursing actions, folk systems, professional healthcare systems, clients, holistic well-being, and numerous cultural factors are all interconnected. In short, nurses who value and practice culturally congruent care can effect positive healthcare changes for clients of various cultures (Leininger & McFarland, 2006).

The Giger and Davidhizar transcultural assessment model.

In 1988 Giger and Davidhizar developed a model to assist nursing students in providing care for culturally diverse clients (Giger & Davidhizar, 2002). The metaparadigm upon which their model is built includes: (a) culturally diverse and transcultural nursing, (b) culturally unique clients and providers, (c) culturally competent

nursing care, (d) environments which are culturally sensitive, and (e) health as defined by culturally specific behaviors (Giger & Davidhizar, 2008).

Transcultural nursing involves culturally competent nursing care centered on the client. Culturally diverse nursing care references the variance in nursing approaches which are needed to provide culturally competent care. Specifically, culturally diverse nursing care accounts for the six cultural phenomena which are evident within all cultures: communication, space, time, social organization, biological variations, and environmental control (Giger & Davidhizar, 2008). Cultural competence is a fluid and dynamic process in which meaningful and practical care-delivery strategies are activated based upon the cultural beliefs and behaviors of those receiving the care. Additionally, cultural competence implies a sophisticated high level of cognitive, psychomotor skills, and attitudes. Hence, cultural competence allows nurses to devise appropriate interventions, promoting optimal health regardless of culture (Giger & Davidhizar, 2008).

Giger and Davidhizar (2008) state all individuals, including clients and nurses are unique individuals, so nurses must avoid projecting their beliefs onto their clients. Diversity exists within and across cultural groups, so knowledge of general concepts relevant to cultural groups is a starting point for providing culturally competent care. Finally, culturally sensitive environments allow nurses to plan and use culturally relevant treatments for all. Culturally sensitive environments assess all six cultural phenomena when working with culturally diverse clients. Therefore, the Giger and Davidhizar transcultural assessment model was developed to allow for such assessment (Giger & Davidhizar, 2008).

Purnell model for cultural competence.

The Purnell model for cultural competence was first developed to help nurses and nursing students organize cultural assessment (Purnell, 2000). According to Purnell (2008) it now has many other purposes: (a) serve as a framework for all healthcare professionals to learn concepts of culture, (b) describe circumstances which affect cultural worldviews, (c) link central cultural relationships within one model, (d) facilitate the delivery of culturally competent healthcare, (e) provide a structure for the analysis of cultural data, and (f) assist in viewing individuals, families, or groups within their unique cultural environments. However, Purnell's model itself was designed for assessment, focusing mainly on 12 domains to include in cultural assessment: heritage, communication, family roles, workforce issues, biocultural ecology, high-risk behaviors, nutrition, pregnancy and childbearing, death rituals, spirituality, healthcare practices, and healthcare practitioner concepts (Purnell, 2000). The model does not actually guide cultural competence development because assessment is only one part of cultural competence; cultural competence is defined by Purnell (2000) as the adaptation of care in a manner consistent with the client's culture. Unfortunately, the model itself does not address interventions or adaptation of care.

Papadopoulos, Tilki and Taylor model for developing cultural competence.

The Papadopoulos, Tilki, and Taylor model was developed for use with students (Papadopoulos, Tilki, & Lees, 2004). According to Papadopoulos, Tilki, and Ayling (2008), cultural competence is the process in which one continuously develops and refines one's ability to provide effective healthcare taking into account people's cultural

beliefs, needs, and behaviors. The process involves blending cultural awareness, knowledge, and sensitivity and applying them to practice (Papadopoulos et al., 2008).

Cultural awareness, the first stage, focuses on self. It includes being self-aware, defining one's own culture, adhering to individual heritage, and decreasing ethnocentricity. The second stage, cultural knowledge, involves avoidance of stereotyping, having basic knowledge of health beliefs and behaviors of diverse groups, being knowledgeable of similarities and differences between groups, and understanding ethnohistory, psychological, sociological, and biological concepts. The third stage is cultural sensitivity, which involves empathy, communication skills, acceptance, trust, and respect. Finally, cultural competence is the synthesis and application of the first three stages (Papadopoulos et al., 2004). Cultural competence is reflected in assessment, diagnostic, and clinical skills (Papadopoulos et al., 2008).

The process of cultural competence in the delivery of healthcare services.

Campinha-Bacote's model, the process of cultural competence in the delivery of healthcare services, includes five constructs: cultural awareness, knowledge, skill, encounters, and desire. Campinha-Bacote (1999) defines cultural awareness as an intentional cognitive process in which providers appreciate and gain sensitivity to the values, beliefs, and practices of diverse cultures; cultural knowledge as an educational foundation of various world views which includes biocultural ecology and ethnic pharmacology; cultural skill as the ability to collect cultural information regarding health and performing a culturally specific physical assessment; cultural encounters as the way in which healthcare providers directly engage in cross-cultural encounters; and finally, cultural desire as the motivation to want to engage in the process of cultural competence.

Campinha-Bacote (2007) asserts the five constructs are related in an interdependent manner. Hence, providers must experience or address each of the constructs during their quests for cultural competence. Cultural competence therefore involves integrating cultural desire, awareness, knowledge, skills, and encounters (Campinha-Bacote, 2007). Campinha-Bacote (1999) defines cultural competence as the process by which healthcare providers continuously strive to achieve the ability to work effectively within clients' cultural contexts. One concern regarding the model is the cultural knowledge construct, which focuses on learning facts about various cultural groups, could lead to client stereotyping.

3-Dimensional puzzle model of culturally congruent care.

The 3-dimensional puzzle model of culturally congruent care, henceforth referred to as the 3-D model, has evolved from the Schim and Miller Cultural Competence Model which was developed in 1999 (Schim, Doorenbos, Miller, & Benkert, 2003). The 3-D model includes both a provider and client level which come together to form culturally congruent care (Schim et al., 2007). At this time the client level constructs have not been defined and therefore will not be discussed. Constructs of the provider level include the cultural competencies of cultural diversity, awareness, sensitivity, and competence behaviors. In short, provider cultural competence is having and using the cognitive, affective, and psychomotor skills necessary for facilitating culturally congruent care (Schim et al., 2007). This model will be further described in Chapter 3.

Cultural Instruments

A multitude of instruments which assess cultural competence have been developed and utilized. Numerous ones are specific to populations (such as nurses,

students, mental health professionals) or specialty areas of healthcare. Many cultural competence assessment instruments are described below.

Multicultural Sensitivity Scale.

The Multicultural Sensitivity Scale (MSS) was derived from a 52 item 5-point Likert-type scale which was developed by Ford in 1979 for use with teachers (Jibaja-Rusth, Kingery, Holocomb, Buckner, & Pruitt, 1994). Jibaja-Rusth et al. (1994) modified the scale for use with teachers of health professions. Face validity was confirmed by six experts and factor analysis with varimax rotation was used with a sample of 150 school nurses. Twenty-one items which loaded at a minimum of .44 on the factors were pooled to form the MSS which was then administered to 31 secondary health educators. Test-retest reliability was assessed and the internal consistency reliability (Cronbach's alpha) was calculated to be .90 (Jibaja-Rusth et al., 1994).

Multicultural Counseling Awareness Scale.

The Multicultural Counseling Awareness Scale (MCAS) was developed by Ponterotto and Casas in 1991 for use with counselors and students (Ponterotto, Gretchen, Utsey, Rieger, & Austin, 2002). The original 135 items were reduced to 70 items following focus group discussions and assessment of content validity. The remaining 70 items used a 7-point Likert-type scale and were piloted on 126 counseling professionals and students. Factor analysis was used and the scale reduced to its current form, which includes two subscales and a total of 45 items. The two subscales, knowledge/skills and awareness, have yielded test-retest reliability of .70 and .73, respectively, and coefficient alpha values of .78 to .93 and .67 to .83, respectively for the two subscales (Ponterotto et al., 2002).

Multicultural Case Conceptualization Ability.

The Multicultural Case Conceptualization Ability (MCCA) task was developed by Ladany, Inman, Constantine, and Hofheinz (1997) for use with healthcare providers. The MCCA utilizes a coding system to evaluate the extent to which racial factors are integrated into the conceptualization of the concerns with which clients present (Ladany et al., 1997). Specifically, the two conceptualizations evaluated include etiology of a presenting problem and treatment of the presenting problem. Scores range from zero to five and higher scores indicate greater differentiation (ability to form alternative interpretations of a client's problems) and integration (ability to form connections among different interpretations of problems). Only items found to have interrater agreement of at least 85% were included in the final tool (Ladany et al., 1997).

Cross-Cultural Adaptability Inventory.

The Cross-Cultural Adaptability Inventory (CCAI), a self-report inventory, was developed by Kelley and Meyers in 1995 for use in conjunction with training and research about individuals' ability to adapt when living in or traveling to other cultures (Kelley & Meyers, 2010). The CCAI responds to practical concerns expressed by culturally diverse individuals and the professionals who work with them (Kelley & Meyers, 2010). In fact, instrument development included both polling experts and a review of research (Capell, Veenstra, & Dean, 2007). These expert opinions guided identification of the most commonly cited skills and traits associated with cultural adaptability and served as a measure of construct validity (Capell et al., 2007).

The CCAI assesses four areas which are considered critical for effective cross-cultural interactions: emotional resilience, flexibility/openness, perceptual acuity, and

personal autonomy (Kelley & Meyers, 2010). It includes 50 items and has yielded reliabilities ranging from .68 to .9 in early studies (Davis & Finney, 2006). Factor analysis with principle components analysis was conducted, but several items had low correlations with the components they were said to represent or were found to be highly correlated with others (Davis & Finney, 2006). Furthermore, during development, items designed for one subscale were reassigned to other subscales with little support for the change (Davis & Finney, 2006). In 2006 Davis and Finney conducted confirmatory factor analysis with a sample of over 700 college students and found the four-factor structure was a poor fit as high correlations were found between factors (Davis & Finney, 2006).

Cultural Competence Assessment- Khanna, Cheyney, and Engle.

Khanna, Cheyney, and Engle (2009) developed an instrument for use in their study of healthcare professionals. While they acknowledged the name has been commonly used in cultural competence education, they named their instrument the Cultural Competence Assessment. Their instrument included 29 items designed to reflect the concepts covered in their training program, which was guided by the Institute of Medicine (IOM) and CLAS standards. The tool included three parts: demographic information, knowledge-related statements, and statements related to skills (Khanna et al., 2009). Reliability was not discussed, nor was further information presented regarding the instrument's development.

Cultural Attitude Scale.

The Cultural Attitude Scale (CAS) was developed by Bonaparte (1979) to measure nurses' attitudes toward culturally different patients. The CAS is a 34 item scale

which includes vignettes with four different cultural groups: Jewish, Hispanic, African American, and Caucasian. Each of the four vignettes is followed by multiple items which include statements drawn from literature and personal clinical experiences (Bonaparte, 1979). Face validity was confirmed by three nurses and principle factor analysis with varimax rotation was conducted on a sample of 300 nurses. Three factors were discovered: nursing care-patient interaction, cultural attitudes and beliefs, and cultural health attitudes and beliefs. All item statements loaded at a minimum value of .4 on one of the three factors. Internal consistency reliability for the three subscales was found to be .94, .95, and .77 respectively; the entire scale's reliability was not reported (Bonaparte, 1979).

Cultural Fitness Survey.

The Cultural Fitness Survey (CFS), developed by Rooda (1993), includes three sections: the Ethnic Attitude Scale (EAS), developed by Rooda; the CAS, developed by Bonaparte and discussed above; and eight demographic questions. The EAS addresses knowledge of diversity and includes questions related to culturally specific diseases and disorders, values, and family (Rooda, 1993). Three specific minority groups are addressed with approximately an equal number of items: African Americans, Hispanics, and Asian Americans. Three multicultural expert nurse educators reviewed the instrument for clarity, level of knowledge, and content appropriateness. Twenty-two items remained following this review and were pilot-tested on 32 registered nurses. Reliability was confirmed (*KR20* = .71) and the EAS was combined with the CAS and demographic questions to form the CFS for use with nurses (Rooda, 1993).

Transcultural Self-Efficacy Tool.

The Transcultural Self-Efficacy Tool (TSET) was designed to measure students' perception of their self-efficacy for performing transcultural nursing skills (Jeffreys & Smodlaka, 1998). Items were developed based upon literature review to be specific to transcultural nursing and appropriate for pre-licensure nursing students. Content validity was confirmed via expert review by six certified transcultural nurses; 13 items were deleted and numerous others changed based upon the review. Three subscales, cognitive, practical, and affective emerged. The tool was piloted on a sample of 357 nursing students. Split-half reliability was found to be between .7 and .93 for the entire TSET and each of its subscales. Internal consistency reliability was .97 for the entire scale and between .9 and .98 for the three subscales. Finally, test-retest reliability was confirmed with coefficients between .63 and .84 for the subscales (Jeffreys & Smodlaka, 1998).

Reliability studies were repeated with a sample of 1,260 nursing students. The split-half reliability was found to be .86 for the entire instrument and between .85 and .92 for its subscales while internal consistency was .98 for the entire TSET, .96 for the cognitive subscale, .97 for the practical subscale, and .96 for the affective subscale. Factor analysis was conducted via principle components analysis with a varimax rotation. A nine factor solution emerged with 70 items which loaded at a minimum value of .5 and explained 62% of the total variance. Internal consistency reliability of these nine factors ranged from .87 to .95 (Jeffreys & Smodlaka, 1998).

Cultural Self-Efficacy Scale.

The Cultural Self-Efficacy Scale (CSES) was developed by Bernal and Froman in 1987 to evaluate nurses' self-efficacy of caring for diverse cultural groups (Bernal &

Froman, 1993). Items were developed based upon transcultural nursing and anthropological literature (Bernal & Froman, 1987). Expert review was conducted by five public health nurses and a convenience sample of 190 was utilized to evaluate the original scale's 30 items (Bernal & Froman, 1987). Internal consistency reliability of the full original scale was found to be .97 (Bernal & Froman, 1987). In 1993 items were added to the scale to include 16 behavioral statements related to each of three cultural groups (African Americans, Latinos, and Southeast Asians) and 10 items to assess self-efficacy in all three groups, totaling 58 self-reported ratings. Principle factor analysis was conducted with a sample of 206 community health nurses and revealed four factors using a .4 factor loading value requirement. The four factors, general cultural skills, Black self-efficacy, Latino self-efficacy, and Southeast Asian self-efficacy, accounted for 90% of the total variance. Internal consistency reliability for the entire CSES was found to be .97 with values of .89, .99, .98, and .98 for the factors respectively (Bernal & Froman, 1993).

Lee Cultural Sensitivity Tool: Hispanic Version.

The Hispanic version of the Lee Cultural Sensitivity Tool was developed by Lee, Anderson, and Hill (2006) to measure nurses' knowledge of Hispanic health practices and beliefs. The tool contains 10 items with three answering options: agree, disagree, or do not know/no opinion. Scores range from zero to 10. While Lee et al. state content validity was established via reviewing literature related to Hispanic health beliefs and practices, no specific works are cited. The tool was piloted on a sample of seven nurses and its Cronbach's alpha was found to be .6 (Lee et al., 2006).

Cultural Awareness Scale.

The Cultural Awareness Scale (CAS) was developed by Rew, Becker, Cookston, Khosropour, and Martinez (2003) for use with nursing faculty and students. Thirty-seven items with a 7-point Likert-type scale were developed for five categories. The categories were identified via literature review to illustrate cultural awareness' multidimensional nature. The original pilot test of 72 nursing students and an unknown number of faculty yielded a CAS internal consistency reliability of .91 for the students and .82 for the faculty. Internal consistency reliability for the subscales ranged from .66 to .88 for the student subscales and from .56 to .87 for the faculty subscales (Rew et al., 2003). Expert review was then conducted by 10 nursing faculty and the context validity index was calculated to be .88; one item was removed and a few others reworded. The CAS was then completed by 118 additional students. Data from all samples were combined and factor analysis, using principle components analysis with varimax rotation, was completed using a .3 loading criteria. Five factors emerged: general educational experience, cognitive awareness, research issues, behaviors/comfort with interactions, and care/clinical issues. Internal consistency was found to be .82 for the entire scale and .85, .79, .94, .71, and .77, respectively, for the five subscales (Rew et al., 2003).

Multicultural Awareness- Knowledge-and Skills Survey.

The Multicultural Awareness- Knowledge- and Skills Survey (MAKSS) was developed by D'Andrea, Daniels, and Heck in 1990 for use with graduate level counseling students (D'Andrea, Daniels, & Heck, 1991). The survey was designed to obtain individuals' perceptions of their own multicultural counseling, knowledge, skills, and awareness level following multicultural counseling training. By matching survey

items to the training objectives for which they were designed to evaluate, content validity was established. The MAKSS was also compared to another instrument, the Multicultural Counseling Awareness Scale, to establish criterion related validity. Finally, factor analysis with principle axis factoring was completed using a loading value criterion of .3. Three factors emerged: awareness, knowledge, and skills. While not given for the full instrument, the internal consistency reliability of the three subscales was found to be .75, .9, and .96 respectively. The MAKSS includes 60 multiple choice Likert-type items and takes 20 to 25 minutes to complete (D'Andrea et al., 1991).

Cultural Competence Assessment Tool.

The Cultural Competence Assessment Tool (CCATool) is a self-assessment tool grounded in the Papadopoulos, Tilki, and Taylor model for developing cultural competence (Papadopoulos et al., 2004). The tool has four sections which have an equal number of items: cultural awareness, knowledge, sensitivity, and competent practice. The items use both a disagree/agree format and a visual analog scale from one to 10, with one indicating no awareness, knowledge, sensitivity, or competence behaviors, and 10 indicating a high level for each of these. Expert review and a pilot of both students and mental health professionals were included in its development. Test retest reliability and internal consistency reliability were assessed but not reported (Papadopoulos et al., 2004).

Multicultural Counseling Inventory.

The Multicultural Counseling Inventory (MCI) is a self-report inventory developed by Sodowsky, Taffe, Gutkin, and Wise (1994). It is based upon the cross-cultural counseling competencies developed by Sue, Bernier, Durran, Feinberg, Pedersen,

Smith, and Vasques-Nuttall (as cited in Sodowsky et al., 1994). The instrument was developed to measure counselors' competencies when working with culturally diverse or minority clients. The initial pool consisted of 87 items on a 4-point Likert-type scale which were tested with 604 counselors and psychologists. Factor analysis yielded a four-factor solution which accounted for 36% of the variance. The four factors were named multicultural counseling skills, multicultural awareness, multicultural counseling relationship, and multicultural counseling knowledge respectively. Forty items were kept which had satisfactory loading values on the four factors. Internal consistency reliability was .83, .83, .65, and .79 for the four respective subscales and .88 for the full scale. Confirmatory factor analysis with a sample of 300 counselors supported the four factors and all 40 items had factor loadings of at least .30. Internal consistency reliability with this sample was .81, .80, .67, .80 for the four respective subscales and .86 for the full scale (Sodowsky et al., 1994).

Unnamed Instrument.

Polacek and Martinez (2009) developed an unnamed instrument. The instrument was designed to collect information from employees about the cultural knowledge, beliefs, attitudes, and skills of themselves and the organizations for which they worked. The instrument contains 137 items based on a detailed literature review of factors which reflect cultural awareness. The items address three areas: cultural knowledge, cultural perceptions/perspectives, and the organization's cultural competence. One hundred and fifty-six employees, including managers, clinical staff, clerical staff, physicians, and tech support personnel completed the instrument. Factor analysis was then employed with a .45 loading inclusion criteria. Five factors were extracted: language skills,

communication skills, knowledge, awareness, and relationships (Polacek & Martinez, 2009). Internal consistency reliability was not reported.

Inventory for Assessing the Process of Cultural Competence Among Healthcare Professionals- Revised.

The Inventory for Assessing the Process of Cultural Competence Among Healthcare Professionals- Revised (IAPCC-R) is a self-report instrument developed by Campinha-Bacote to specifically fit her model of cultural competence. It includes 25 items, using a self-administered 4-point Likert scale (Campinha-Bacote, 2003). Five different response sets are utilized: strongly disagree to strongly agree, not knowledgeable to very knowledgeable, not aware to very aware, not involved to very involved, and not comfortable to very comfortable. Total scores range from 25-100, indicating culturally incompetent (score of 25-50), culturally aware (score of 51-74), culturally competent (score of 75-90), or culturally proficient (score of 91-100). Content validity was established by transcultural healthcare experts and sixteen studies have found an average internal consistency reliability of .83 (Transcultural CARE Associates, 2007). There are two major criticisms for this instrument. First, Campinha-Bacote (2003) states higher scores suggest greater cultural competence, yet the highest score range aligns with what she terms cultural proficiency. Furthermore, the five response sets require rapid shifts between varying levels which likely leads to undue confusion.

Cultural Competence Assessment- Schim, Doorenbos, Miller, and Benkert.

The Cultural Competence Assessment (CCA) is a 25 item self-report questionnaire with two subscales: the eight item cultural awareness and sensitivity (CAS) subscale and the 17 item cultural competence behaviors (CCB) subscale. The CCA was

originally developed by Schim et al. (2003) based upon the constructs which comprise the provider level of the current 3-D model. The instrument uses a 7-point Likert-type scale, is written at a fifth grade reading level (Schim et al., 2003), and takes about 20-30 minutes to complete (Doorenbos et al., 2005). Total scores range from 25 to 175 and average scores from one to seven; higher scores indicate greater cultural competence. Instrument development included expert review, field testing, a pilot test, and factor analysis with principle axis factoring. A two-factor solution was discovered and 25 items loaded between .42 and .77 on the cultural competence behaviors (CCB) and the cultural awareness and sensitivity (CAS) factors. CCA internal consistency reliability was .92, and was .93 and .75 for the CCB and CAS respectively. Criterion related validity was established by comparison to the IAPCC (Schim et al., 2003). Further studies have yielded CCA reliabilities of .91 and .89 (Doorenbos & Schim, 2004; Doorenbos et al., 2005), CCB reliability of .91, and CAS reliability of .75 (Doorenbos et al., 2005).

A short form of the Marlow-Crowne Social Desirability Scale (MCSDS) was added to the CCA after its initial development in response to criticism that self-report measures are not reliable due to social desirability. The 13 item form has a reliability of .76 (Reynolds, 1982). MCSDS scores have not been shown to correlate with CCA scores (S. M. Schim, personal communication, July 10, 2010).

Summary.

A plethora of instruments exist for measuring cultural competence or related concepts. However, as noted above, many only address one component of cultural competence such as cultural sensitivity or cultural awareness. Other instruments focus on a limited number of cultural groups or were designed for use with one specific

population. Furthermore, many instruments have limitations related to scoring, reliability, or validity. Finally, only three instruments reviewed were grounded in a cultural competence theory.

Research of Cultural Competence Training for Healthcare Professionals

Numerous studies have explored the effect of face-to-face, otherwise known as traditional, education on cultural competence levels. Few studies have explored online cultural competence educational interventions. Face-to-face and online cultural competence educational interventions for healthcare providers will be described.

Face-to-face educational interventions.

Pugh.

Pugh (2008) conducted a meta-analysis of educational delivery methods used in healthcare provider cultural competence education. Thirty studies of face-to-face educational interventions with varying lengths, study designs, and participants were included in the analysis. Specifically, studies in the meta-analysis had training lengths between one hour and four years in duration and included doctors, therapists, social workers, nurses, healthcare educators, and healthcare students. The meta-analysis revealed an overall effect size of .46 with a 95% confidence interval, indicating various educational methods moderately increase healthcare provider self-reported cultural competence level. Explicitly, the 12 studies with the greatest effect sizes utilized lecture, active learning, independent or self-directed learning, problem-based learning, and demonstration (Pugh, 2008). Limitations noted by Pugh include the various tools used to measure cultural competence in the studies and the inclusion of only English literature about studies conducted in the US.

Majumdar, Browne, Roberts, and Carpio.

Majumdar, Browne, Roberts, and Carpio (2004) conducted a study to determine the effect of cultural sensitivity training on healthcare provider knowledge and to ascertain the impact trained providers have on the health and satisfaction outcomes of minority clients. A randomized controlled trial which originally consisted of 114 nursing and home health providers and 133 patients was utilized. The experimental group of providers underwent 36 hours of cultural sensitivity training and were assessed with the Self-Assessment of Cultural Awareness questionnaire and the Rokeach Dogmatism Scale. Instruments utilized by or on the patients in the study included: the Expenditures of Health Care and Social Services, the Client Satisfaction Questionnaire, Client Health Outcomes, and the Physical and Mental Health Assessment Questionnaire. Following the training there was a significant increase in provider understanding of multiculturalism, cultural awareness, understanding of cultural differences, cultural beliefs, adopting health care literature, considering social circumstances, and considering culture to be important; no differences were found in the dogmatism scale. No statistically significant differences were noted between the control and experimental patient groups in client satisfaction, mental health, physical health, or activities of daily living. However, social resources and economic resources did have significant patient differences over time. In fact, the average total social and health expenditures dropped from $18,000 at baseline to $11,000 one and a half years after the provider training and study commencement (Majumdar et al., 2004).

The study, while innovative, had several limitations. Majumdar et al. (2004) cite difficulty maintaining the patient population due to death and illness, the potential for

strong emotional bonds between providers and patients, and loss of providers due to moving or termination as potential limitations. In fact, the 12 month study had 44% patient and 33% provider attrition. Additionally, the study was limited by its sample of providers and patients from two home healthcare agencies and one hospital and potential bias based upon financially compensating study participants. Furthermore, Majumdar et al. do not discuss educational or cultural theories. It is therefore assumed they did not use either to guide the training sessions.

Papadopoulos, Tilki, and Lees.

Papadopoulos et al. (2004) conducted a study of 35 mental health staff members using a pre- and post-test design. The educational intervention included eight sessions, two dedicated to each of the four areas of the Papadopoulos, Tilki, and Taylor model for developing cultural competence, offered over four months. The CCATool was used to measure cultural competence before and after the intervention. Before the intervention 24 staff were found to be culturally aware, 10 culturally safe, and one culturally competent. Eighteen staff completed the CCATool after the intervention; most remained culturally aware, four increased to culturally safe, and two moved down to culturally aware (Papadopoulos et al., 2004).

Papadopoulos et al. (2004) note the low CCATool response rate following the intervention limits the study findings. They also note conflicting views, prejudice, stereotypes, racism, and difficulty deciding what to cover in the sessions as being challenges. Other limitations include using a convenience sample, not utilizing a comparison group, and not using an educational theory to guide development of the intervention.

Williams.

In 2002 Williams conducted a study to evaluate the effectiveness of an educational program which was designed to enhance the cultural competence level of practicing social workers. The quasi-experimental mixed-methods study included a convenience sample of 48 addiction and mental health care social workers. While a comparison group was used, randomization was not.

The educational intervention utilized adult educational principles and included four three-hour sessions over consecutive weeks which were guided by review of the literature and four social work textbooks. The intervention focused on four assumptions of cultural competence in social work: (a) helping relationships are affected by the culture of the client and the practitioner; (b) formal social work education forms a foundation for culturally competent practice, but does not fully develop the skills needed for all cross-cultural situations; (c) cultural competence ideas and concepts are in development and discussion is needed to form guidelines for practice; and (d) race and ethnicity are crucial when discussing mental health cultural competence, but other identity issues should also be included (Williams, 2002). In general, the course provided opportunities to enhance skills relevant to interacting with culturally diverse individuals.

The MCI and the MCCA task were used to collect data about all participants before and after the time during which the educational intervention was offered. Participants in the intervention group had a superior gain in ability to integrate cultural concepts into case vignette responses/interventions. Significant differences were found only in the awareness subscale of the MCI. Additionally, eight participants completed a follow-up interview regarding their impression of the course and how its content had

been applied within their own practice. Qualitative analysis revealed four themes: shift in awareness, practices attributed to training, anticipated practices attributed to training, and development of culturally competent practice knowledge (Williams, 2002).

Williams (2002) cites the study was limited by its convenience sample which limits generalizability. An additional limitation is the lack of true cultural competence theoretical foundation for course development.

Rooda and Gay.

Rooda and Gay (1993) conducted a study of a workshop designed to enhance incorporation of cultural sensitivity into nursing practice and care. All 28 directors of nursing from two hospitals attended the seven hour, one day workshop. The workshop addressed the impact of culture on the healthcare practices of specific ethnic groups (limited to Asian, African, and Mexican-Americans) and on developing a learning sequence which could be utilized with staff. While no instrument was used to measure outcomes, participants did make positive comments about the workshop's relevance and value (Rooda & Gay, 1993).

This study was limited in numerous ways. First, the workshop was limited by time and resources (Rooda & Gay, 1993). Additionally, the study used a convenience sample of nursing directors, did not have a control group, nor was an instrument used to measure workshop outcomes. Furthermore, no educational or cultural theory was discussed or used to develop the workshop.

Lee, Anderson, and Hill.

In 2006 Lee et al. conducted a study to evaluate the effect of an educational program about Hispanic health practices and beliefs on the cultural sensitivity of nurses

who provide care to diverse patient populations (Lee et al., 2006). A one group pre- and post-test design was used with a convenience sample of seven RNs employed in one health department. The educational intervention lasted one and a half hours and was designed to increase cultural knowledge. While no further information was given about the intervention, Lee et al. do report holding the program at the health department and using visual aids during the presentation. A significant difference ($p = .018$) was found in the pre- and post-test Lee Cultural Sensitivity Tool scores with the mean score increasing from 5.4 to 9.7 (Lee et al., 2006).

While not specifically addressed by Lee et al. (2006), there were several study limitations. The study used a very small convenience sample from one location and did not use a control group. Additionally, little information was given about the program and no information was given about its development and whether or not cultural or educational theories were utilized. Furthermore, the program focused only on Hispanic clients.

Khanna, Cheyney, and Engle.

Khanna et al. (2009) conducted a study to ascertain whether a cultural competence training course produces a significant change in self-assessment of the knowledge and skills needed to care for patients from diverse cultural backgrounds. Sixty doctors and nurses from one area in Oregon chose to participate in the four hour cultural competence workshop. The workshop, based mainly on the CLAS and IOM standards, addressed cultural and linguistic competency, cultural health disparities, the connection between health beliefs and culture, and how cultural competency facilitates

effective communication. Participants received four continuing education units (CEUs) for completing the course (Khanna et al., 2009).

A post-then-pre-test evaluation methodology was used. Specifically, participants completed the CCA Khanna et al. (2009) developed only at the end of the training course. Questions were designed to assess two different time frames: before and after the training. One reason Khanna et al. cite for using this methodology is that a previous study by Rockwell and Harriet suggests post-then-pre-test methodology limits the problem of ideal reporting (social desirability) which is often associated with a pre- and post-test design. Statistically significant changes were noted in both knowledge and skills related to cultural competence (Khanna et al., 2009).

While not specifically addressed by Khanna et al. (2009), the study was limited in many ways. It used a convenience sample and did not use a control group. No specific cultural competence theory or educational theory was used to guide training development. Finally, while Khanna et al. defend their choice of using a post-then-pre-test design, their choice is somewhat unconventional and therefore questionable.

Schim, Doorenbos, and Borse.

Schim, Doorenbos, and Borse (2006b) examined change in cultural competence following a face-to-face educational intervention. The sample for their quasi-experimental, longitudinal, crossover designed study included 130 hospice workers (administrators, clergy, clerical support, nurses, nursing assistants, social workers, and volunteers) from eight different hospice agencies. The hospice workers were randomized into one of two groups. One group completed the CCA, followed by a one hour cultural competence training session which was modeled after the *End-of-Life Nursing Education*

Consortium Training Materials Module 5: Cultural Considerations in End-of-Life Care. The materials were congruent with the provider level of the 3-D model and included both cultural awareness and sensitivity components (Schim et al., 2006b). Interventions which reflect cultural competence behaviors were also discussed. After three to four months they took the CCA again, followed by a one hour ethics (control) session, finishing with completing the CCA one final time. The other group completed the CCA and training at the same intervals, but completed the ethics training prior to the cultural competence session. The study, utilizing repeated-measures multivariate analysis of covariance, found a significant increase ($p = .034$) in cultural competence following the cultural education sessions in both groups (Schim et al., 2006b).

Limitations of the study include the short educational intervention, the small randomized convenience sample, and not using an educational theory to guide development of the training sessions. Additionally, as is common with face-to-face educational interventions, Schim et al. (2006b) noted scheduling and travel presented significant challenges.

Smith.

Smith (1998) studied the effect of an eight and a half hour face-to-face educational intervention on the cultural competence of RNs living in one county in Alabama. The Giger and Davidhizar transcultural assessment model served as the theoretical foundation of the study which had a mixed between-within groups repeated measures quasi-experimental design. The study included 94 RNs who attended either an eight and a half hour culture school or a nursing informatics session. The culture school objectives included cultural competence nursing care concepts, identifying common

health beliefs and practices, communication, implementing culturally competent care plans, identifying cultural competence within past experiences, and identifying personal goals, strengths, and areas for improvement. RNs completing the culture school experienced a significant increase in cultural self-efficacy and cultural knowledge over their counterparts who completed the informatics course (Smith, 1998). The study was limited by all participants living in the same county and not using an educational theory to guide intervention development.

Brathwaite.

In 2004 Brathwaite conducted a study in Ontario, Canada to address the absence of a course that integrated theoretical knowledge with practical knowledge regarding cultural competence for public health nurses (Brathwaite, 2004). Brathwaite's work was based on Campinha-Bacote's model and used Campinha-Bacote's instrument, the IAPCC-R, to conduct a one-group repeated measure design study. The sample consisted of 76 public health RNs who completed a five week face-to-face course based on the Campinha-Bacote model and an additional booster session one month following the course. Each week in the five week course focused on one of Campinha-Bacote's components: cultural awareness, skill, knowledge, encounters, and desire. The booster session promoted discussion of nursing experiences and application of cultural competence concepts in practice. Adult and experiential learning theories were used to guide intervention development. The IAPCC was administered to each of the 76 participants two months prior to the five week course, immediately prior to the five week course, one week following the course, and three months after the course. Findings indicated mean scores for the IAPCC immediately prior to the course and one week after,

as well as the scores one week after the course and three months following the course, were both significantly different. Overall, the results illustrated a move in participants from being culturally aware to culturally competent or proficient (Brathwaite, 2004).

Study limitations include the threat of social desirability, meaning participants may have answered the IAPCC based on social awareness, and the limited number and diversity of participants (Brathwaite, 2005). Specifically, the study was limited by its convenience sample of public health nurses from one department in Ontario, Canada, and by not using a control group.

Lal.

In 2010 Lal conducted a study to evaluate the effect of an educational workshop on the cultural competence of acute care nurses. A convenience sample of 37 nurses was invited to participate in the study. Thirty-four nurses chose to participate in the quasi-experimental one group pre- and post-test design study which included a one and a half hour cultural competence intervention. The intervention was guided by a cultural competence teaching packet, designed by Campinha-Bacote, which utilized experiential exercises. Specifically, the workshop defined cultural competence and addressed each of the components of Campinha-Bacote's model of cultural competence. Twenty-five participants were culturally aware (as defined by the IAPCC-R) and 12 were culturally competent before the workshop, while 12 participants were culturally aware and 22 were found to be culturally competent following the workshop. Analysis with a paired t-test revealed a statistically significant change in pre-test and post-test IAPCC-R scores ($p <$ .001). The study was limited by its non-random small convenience sample (Lal, 2010).

Other potential limitations include not using an educational theory to guide development of the workshop and not using a control group.

Summary.

The above review evidences the ability of face-to-face educational interventions to enhance cultural competence or its components of cultural awareness, skills, knowledge, and sensitivity. However, most studies have been limited in several ways. First, all nine of the studies discussed used a convenience sample from one geographic area and only three had a control or comparison group. Furthermore, five studies were not guided by a cultural competence theory and only two of the nine used an educational theory to guide educational intervention development. Finally, one study did not use an instrument to measure change and the other eight used self-report instruments which can be biased based upon social desirability. Clearly further research is necessary.

Online continuing education for healthcare providers.

As face-to-face interventions are not always practical, online CE has been used to address various topics with healthcare providers. Few online cultural competence CE sources exist; some are socially interactive while others are socially isolated. Review of the literature reveals no studies which have compared socially interactive online education to socially isolated, neither related to cultural competence or other topics.

Online socially interactive cultural competence CE.

Hunter.

In 2008 Hunter conducted a quasi-experimental pre- and post-test design study of a two-credit graduate level cultural competence course at the University of Missouri. The course was offered in two formats (one per semester) over two consecutive semesters: (a)

a socially interactive online format, and (b) a control group traditional face-to-face course (Hunter & Krantz, 2010). Campinha-Bacote's cultural competence model and constructivist learning principles were used to guide course development. The course included four modules: cultural awareness, knowledge, skills, and encounters and included activities such as defining one's own culture, writing a cultural autobiography, designing and utilizing a cultural assessment tool, and creating a cultural encounter with a culture other than one's own (Hunter, 2008). Fifty-two and 24 students completed the online and face-to-face courses, respectively. Both courses significantly increased cultural competence, as measured by the IAPCC-R (Hunter, 2008). While Hunter does not specifically address limitations, potential limitations of the study include using a convenience sample from one location and using samples from two consecutive semesters.

Kelly and Papadopoulos.

In 2009 Kelly and Papadopoulos conducted a 150 hour socially interactive eight week online cultural competence course. The purpose of the course was to help healthcare practitioners develop skills and knowledge for working with ethnically diverse clients and to encourage cultural competence in healthcare. Five graduate students (one midwife in the United Kingdom, one psychology student in Ireland, and three nurses in Greece) completed the course. The course was guided by the Papadopoulos, Tilki, and Taylor model of cultural competence and included several learning activities: online lectures, e-discussions, self-assessment exercises, reflective journaling, and module evaluations/quizzes. Formative assessment included both peer and self-assessments,

while summative evaluation was in the format of reflective journaling; no cultural competence instrument was utilized (Kelly & Papadopoulos, 2009).

Kelly and Papadopoulos (2009) cite few study limitations. First, only five students were studied, all of which were female. Additionally, most students encountered technical difficulties during the course (Kelly & Papadopoulos, 2009). Furthermore, while students felt the course was beneficial, no instrument was used to measure cultural competence. Finally, an educational theory wasn't utilized.

Summary of online socially interactive cultural competence CE.

Online cultural competence education is effective. Unfortunately, online socially interactive cultural competence courses have only been evaluated with nurses in graduate courses. This limits generalizability to all nurses because level of educational attainment has been shown to directly impact cultural competence levels (Doorenbos & Schim, 2004; Schim, Doorenbos, & Borse, 2005).

Online socially isolated educational interventions.

Jones.

A study of socially isolated cultural competence training for RNs and licensed practical nurses (LPNs) was conducted by Jones (2009). The purpose of the descriptive quantitative study was to measure the degree to which cultural competence behaviors are exhibited by nurses after completing the training program. The sample consisted of 60 nurses working at one Texas hospital who were randomly assigned to either the control or treatment group. Written self-study packets about cultural competence with case studies of several culturally diverse clients and self-graded questions were either read online or in hard copy format by the 32 nurses in the treatment group. The nurses completed the

IAPCC-R after completing the self-study packet. Participants in the control group completed the IAPCC-R during the same time period as the participants in the treatment group. The self-study significantly increased cultural competence ($p < .01$) as measured by the IAPCC-R (Jones, 2009).

Jones (2009) cites numerous limitations to her study. First, participant responses may have been biased by social desirability or other extraneous factors which could not be controlled. Additionally, a convenience sample was utilized (Jones, 2009). Other limitations include using a post-test only design and not using an educational theory to guide intervention development. In fact, it could even be said while the intervention was accessible online, it was only online education in the most liberal sense, as a learning management system (LMS) was not used (Halstead & Billings, 2009).

Culturally competent nursing modules.

Publicly accessible, free online modules which award CEU credits upon successful post-test completion, entitled Culturally Competent Nursing Care: A Cornerstone for Caring, were developed by the Office of Minority Health (2007). The modules are organized by the CLAS standards and Campinha-Bacote's cultural competence model was also utilized (Office of Minority Health, 2007). The first module addresses principles of cultural competency, strategies for increasing cultural awareness, and skills applicable to delivering client-centered care; the second module addresses language access, effective communication strategies, and health literacy; and the third and final module supports advocacy for cultural competence within organizations (SRA International, 2009).

A two-year review of the modules was conducted in 2009 (SRA International, 2009). Analysis topics included: change in cultural competence knowledge, change in behavior, and changing practices in healthcare organizations. A control group of 27 participants completed an abbreviated version of the modules, a survey, and pre- and post-tests. Three different participant groups, with 27 participants in each group, were formed because the original plan to use control and participant groups of 60 was not feasible due to only 27 control group participants completing the modules. The report indicated nurses scored higher on the post-test in all groups, which is said to indicate the modules, whether in full or abbreviated form, significantly increased knowledge of cultural competence, knowledge of attitudes, and knowledge of cultural competence skills (SRA International, 2009). However, as the pre- and post-test evaluated knowledge, not attitudes and skills themselves, the study's findings are limited. The small sample size and the use of a control group which underwent an abbreviated form of the modules limits the study's validity and generalizability. The study was further limited by not using a valid and reliable instrument to measure cultural competence. Finally, nowhere was it stated that an educational theory was used to guide module development.

Cultural Competence for Today's Nurses.

One additional online publicly accessible socially isolated course which awards CEUs upon completion, entitled Cultural Competence for Today's Nurses, Part One: Culture and Women's Health (Gerace & Salimbene, n.d.), has been identified. However, the authors do not indicate an educational theory was used to develop the CE, no cultural

competence theory was utilized, material is mainly factual and knowledge based, and no studies have evaluated its efficacy at increasing cultural competence.

Summary.

Existing online cultural competence CE for nurses is socially isolated. While Jones' (2009) study and the Culturally Competent Nursing Modules utilized a cultural competence theory, no online socially isolated cultural competence CE has utilized an educational theory to guide intervention development. Furthermore, only Jones (2009) measured cultural competency with a valid and reliable cultural competence tool; no conclusive evidence supports the ability of the Culturally Competent Nursing Modules (Office of Minority Health, 2007) or the CE entitled Cultural Competence for Today's Nurses, Part One: Culture and Women's Health (Gerace & Salimbene, n.d.) to increase cultural competence levels.

Online Continuing Education

Much literature discusses online education. Theories or frameworks for developing online education will be discussed and the pros and cons of online education presented. The importance of social interaction in online learning will be supported followed by a review of best design practices for online courses. Finally, instruments measuring students' evaluations of online courses will be presented.

Online Educational Theories

While educational interventions show much promise for increasing the cultural competence of nurses, most studies have the major limitation of not using an educational theory to guide intervention development. Many studies have evidenced technology has minimal impact on student outcomes; rather, instructional design is the primary factor

(Johnson & Aragon, 2003). In fact, while distance "programs enhance access to continuing education for the health professional, increased access is often coupled with decreased quality in course design" (Sadera & Fisher, 2009, p. 157). Therefore, theory specific to online education should be foundational to developing online CE interventions. Four online educational frameworks or models will be described.

A framework for the use of constructivism online.

This analytical framework was first described by Bonk and Cunningham in 1998 (as cited in Weasenforth, Biesenbach-Lucas, & Meloni, 2002) and was revised and utilized by Weasenforth et al. (2002). It includes four sets of factors relevant to learning: cognitive and metacognitive, motivational and affective, developmental and social, and individual differences. The first group of factors, cognitive and metacognitive, address the nature of learning (learning is most effective when meaning is intentionally constructed from experience and information), goals of learning (learners create meaningful representations of knowledge with support and guidance), how knowledge is constructed (new information is linked with existing knowledge by learners in meaningful ways), strategic thinking (learners can use strategies to achieve complex learning), thinking about thinking (creativity and critical thinking are encouraged by higher-order strategies), and the context of learning (learning is impacted by the environmental factors of technology, instructional practices, and culture). The second set of factors, motivational and affective, address emotional and motivational influences on learning (motivation impacts what is learned and emotions impact motivation), the intrinsic motivation to learn (motivation is stimulated by novel but difficult tasks which are relevant to personal interest and choice), and how motivation effects effort (little is

learned without exertion of effort). The third set of factors, developmental and social, address developmental influences (learning is most effective when development is taken into account) and social factors influencing learning (social interactions and interpersonal relations impact learning). Finally, the fourth set of factors, individual differences, address individual differences for learning (learners have unique strategies and styles which are a function of their background), the impact of diversity on learning (learners have diverse backgrounds which must be taken into account), and assessment (high standards for learner assessment is most important).

Model of online learning.

The model of online learning is a blended model for online education (Anderson, 2008). The model itself depicts the relationship between the two major human actors of learners and teachers as well as the interaction of human actors and their relationship with course content. The model includes numerous types of interaction: student-to-student, student-to-teacher, student-to-content, teacher-to-teacher, teacher-to-content, and content-to-content. Each of these interactions will be described.

Student-to-student interaction is of paramount importance in both constructivist and connectivist theories (Anderson, 2008). Consequently, collaborative learning and student-led teams are appropriate educational strategies. Student-to-content interaction, which is depicted in the model as independent study, has long been a major part of education. Today the Internet supports both passive and active student-to-content interaction through virtual labs, computer-assisted learning modules, and immersion in micro-environments. Student-to-teacher interaction is referred to in the model as a community of inquiry. Student-to-teacher interaction can be supported either

synchronously or asynchronously through the use of audio, video, and text communications. Teacher-to-content interaction employs objectivist learning principles such as content modules or units, learning objects, and learning activities which are designed by the teacher. Thus, teachers can monitor, build, and update courses and activities. However, teacher-to-teacher interaction is also important as it encourages professional development and support. Content-to-content interaction is the final interaction described and is unique to this model. It is a developing mode of interaction in which programs link content with other information sources to automatically and continuously update and acquire new information (Anderson, 2008).

Interestingly enough, Anderson (2008) states "various forms of student interaction can be substituted for each other, depending upon costs, content, learning objectives, convenience, technology used, and time availability. The substitutions do not decrease the quality of learning that results" (p. 66). Anderson continues by saying meaningful learning can occur as long as at least one of the three forms of interaction (student-to-teacher, student-to-student, or student-to-content) is utilized at very high levels. He states the other two areas may even be eliminated (Anderson, 2008). This seems to present a dichotomy, as the model presented supports the use of all types of interaction, yet its developer supports the use of as little as one type of interaction within Web-based teaching and learning.

Framework for developing new e-learning programs.

An article by Booth, Carroll, Papaioannou, Sutton, and Wong (2009) presents a framework for developing new e-learning programs. The framework was developed following the review of 29 studies in which each explored workplace-based e-learning

(WBEL) in the United Kingdom. Review of the studies yielded several themes and sub-themes of WBEL, including: presentation and design, flexibility, peer communication, support, and knowledge validation. The sub-themes included learning control, applicability, attractiveness, usability, offline working, asynchronous engagement, learning interaction, peer support, moderated learning, formal support, and assessment (Booth et al., 2009). Each of these sub-themes will be explored in greater detail.

Flexibility is of paramount importance to e-learning (Booth et al., 2009). Learner control should be allowed; one option is self-regulated work pace with extra weeks built into courses as make-up time missed due to life events. Group-supported synchronous learning is another appropriate option. The second sub-theme, applicability, is providing a realistic learning context. The use of guest speakers, problem-based scenarios, and case studies are suggested to increase the applicability of e-learning. The third sub-theme, attractiveness, relates to the e-learning environment itself, as learners often resent superficial attempts at designing e-learning courses. Simply placing textual materials online does not constitute an online course. Rather, courses should be made less dependent on simple text by including PowerPoint presentations, podcast lectures, or other visually stimulating formats. The fourth area, usability, refers to ease of using e-learning technologies. Even low-tech applications with minimal difficulty can be challenging for novice online learners, so course developers should remove impediments and decrease the impact of technical difficulties in online courses. One specific suggestion regarding written directions is that they be very clear and easily accessible. The fifth area, offline working, refers to the paradox that online learners still often desire to have course materials in a portable format. This includes being able to access courses

from home, work, and other locations. Booth et al. (2009) suggest offering print materials, MP3 lecture files, and CD-ROM or USB stick course materials to support offline working. The sixth sub-theme, asynchronous engagement, refers to the ability to complete course work at any time during a course. Offering asynchronous options and having facilitators who are accessible via email for questions is advised. The seventh sub-theme, learner interaction, is an area of tension, as learners often desire shared learning experiences and feel pressure based on deadlines and limited time. Self-directed learning is proposed as an alternative. Furthermore, the eighth area, peer support, is imperative in conjunction with formal facilitator support and interaction, which is the ninth area. Formal support is also a key factor for student experiences, as prompt responses, support which is available outside of normal working hours, and technological support are all of mammoth importance. The final area, assessment, includes both formative and summative evaluation, as both are essential to keeping learners motivated. Two assessment methods are specifically recommended: quizzes and having learners apply principles to their own work setting (Booth et al., 2009).

The instructional strategy framework for online learning environments.

The instructional strategy framework for online learning environments, or the ISFOLE, by Johnson and Aragon (2003) supports social interaction in online education. The framework assumes learning is a complex process which can't be explained by a single learning theory. Rather, quality online learning environments should be built upon principles derived from behavioral, cognitive, and social learning theories (Johnson & Aragon, 2003). Within the model, powerful environments for on-line learning: "(1) address individual differences, (2) motivate the student, (3) avoid information overload,

(4) create a real-life context, (5) encourage social interaction, (6) provide hands-on activities, and (7) encourage student reflection" (Johnson & Aragon, 2003, p. 34). This model was utilized in this study and is further described in Chapter 3.

Benefits of Online Education

There are many positive aspects to online education. First and foremost, online education is effective (Billings, 2000; Cobb, 2004; Halstead & Billings, 2009; MacDonald & Walton, 2007; Pullen, 2006; Shachar & Neumann, 2003; Southernwood, 2008). And to this point, online education increases knowledge (Dunet, Reyes, Grossniklaus, Volansky, & Blanck, 2008; Huckstadt & Hayes, 2005; Schneiderman & Corbridge, 2009), enhances clinical practice (Pullen, 2006), increases the use of research in practice (Atack, 2003), and increases assessment skills related to questioning (Atack, 2003) and physical examination (Dunet et al., 2008). Additionally, students (Billings, 2000) and practicing nurses completing online CE increase their computer skills (Huckstadt & Hayes, 2005; Wilkinson, Forbes, Bloomfield, & Gee, 2004).

Many advantages of online education relate to its freedom from time or location limits. Online education is convenient (Ali, Hodson-Carlton, & Ryan, 2004; Atack, 2003; Billings, 2000; Huckstadt & Hayes, 2005), flexible (Ali et al., 2004; Southernwood, 2008), and easy to access from anywhere at any time (Huckstadt &Hayes, 2005; Ramsey & Clark, 2009). In fact, online education exposes learners to many viewpoints (Ramsey & Clark, 2009) and resources (Ali et al., 2004), facilitates life-long learning (Ramsey & Clark, 2009; Southernwood, 2008), and is not limited by space or location (Billings, 2000; Ramsey & Clark, 2009).

Web-based education has also been found to be satisfying (Billings, 2000; Cobb, 2004; Halstead & Billings, 2009), time saving (Huckstadt & Hayes, 2005), and economical or cost effective (Billings, 2000; Huckstadt & Hayes, 2005; Southernwood, 2008; Zhang, Zhao, Zhou, & Nunamaker, 2004). Furthermore, online environments foster autonomy, allow time for reflection and thoughtful writing (Ali et al., 2004; Song, Singleton, Hill, & Koh, 2004), provide a less threatening environment than traditional classrooms (Southernwood, 2008), and decrease bias because gender, race, and physical characteristics are not revealed (Pallof & Pratt, as cited in Yang & Cornelious, 2005). Finally, most providers who have completed online CE prefer and recommend it (Bernhardt, Runyan, Bou-Saada, & Felter, 2003). Clearly online education has many advantages.

Challenges of Online Education

While there are many advantages to online education, it is certainly not without limits or challenges. Many of the most common limitations relate to the use of computers and the Internet. For example, online learners must have at least basic computer proficiency (Cobb, 2004; Muilenburg & Berge, 2005; Ramsey & Clark, 2009; Shade & Barber, 2004; Song et al., 2004) and access to a computer in a private location (Atack, 2003; Wilkinson et al., 2004). High-speed Internet access is preferred (Muilenburg & Berge, 2005; Shade & Barber, 2004) and it is important to have access to technical support services because technical difficulties are common (Ali et al., 2004; Cobb, 2004; Ramsey & Clark, 2009; Song et al., 2004).

Online learners are most successful when they have certain characteristics. Successful online learners are self-motivated (Muilenburg & Berge, 2005; Ramsey &

Clark, 2009; Song et al., 2004), self-disciplined (Atack, 2003; Ramsey & Clark, 2009; Song et al., 2004), persistent (Morris & Finnegan, 2008), self-reliant (Morris & Finnegan, 2008), and can manage their own time effectively (Song et al., 2004). Likewise they are able to seek assistance when needed (Billings, 2000).

There are also disadvantages or risks for the teacher/facilitator and their institution. For example, online education must be designed appropriately, requires modification of traditional teaching style, and has a high initial set-up cost (Ramsey & Clark, 2009). It is also time consuming to set-up and run (Ramsey & Clark, 2009; Zhang et al., 2004). Similarly, faculty must regulate their time to ensure they do not become overcommitted to one course and new workload policies may need to be employed (Ramsey & Clark, 2009).

The final limitation of online learning is that learners often feel closed off from others. Many students report feeling socially isolated at times (Ali et al., 2004; Muilenburg & Berge, 2005; Southernwood, 2008) and perceiving a lack of community (Song et al., 2004). In fact, some online learners report the desire for face-to-face contact (Pullen, 2006) or at least more interaction with others (Wilkinson et al., 2004) and more feedback (Song et al., 2004; Zhang et al., 2004). Obviously social interaction is important in online education.

Social Interaction in Online Education

Review of the literature evidences the importance of social interaction within distance education. In fact, it has been said that social communication is essential for online CE to be successful (Guan, Tregonning, & Keenan, 2008). Specifically, a review of 14 studies of nursing distance education concluded learners perceive: (a) socialization

occurs via timely feedback and by interaction between students and faculty; (b) learning entails supporting the values and contributions of other learners; (c) faculty should be efficient at leading conversations and should provide support; and finally (d) communication is critical (Mancuso-Murphy, 2007). A meta-analysis of 51 studies, which included over 11,000 participants, explored factors which influence the outcomes of grades, student satisfaction, and student participation in distance education (Zhao et al., 2005). Findings indicated instructor involvement had the greatest impact on outcomes; when involvement is low, face-to-face education trumps distance education. However, when the instructor is moderately or highly-involved, the outcomes of distance education are better (Zhao et al., 2005). Another study found a positive correlation between students agreeing web courses were convenient and active learning, feedback, faculty interaction, interaction with peers, satisfaction, practicality, socialization, and connectedness (Billings, Connors, & Skiba, 2001). There is a significant positive correlation between classroom community, connectedness, and learning (Rovai, 2002). Students who receive individualized feedback perform better than those who do not and are more satisfied with the course in general (Gallien & Oomen-Early, 2008). Current research supports social interaction in distance education.

Best Design Practices for Online Education

Literature review reveals a plethora of information regarding best practices in online teaching and learning. Numerous topics, areas, and suggestions will be discussed in the following section. Specifically, page layout, content organization, text/fonts, color, and use of graphics will be described in further detail.

Page layout.

Page layout is an important aspect of learner usability. One part of page layout which greatly impacts usability is course navigation. Material should be linked from the course home page (Dunet et al., 2008; O'Neil, 2009) and learners should be able to access everything within the course using no more than three mouse clicks (O'Neil, 2009). Learners should be able to navigate pages and return to previously viewed pages with little effort (Kordel, 2008). Navigation is facilitated by giving each page a specific title (O'Neil, 2009), using gridlines to assist in formatting (Gillani, 2003), and ensuring course buttons and navigation tools work as expected (Kordel, 2008).

The actual layout of each page included in the course is also important. Ample white space, or empty space, should be included (Dunet et al., 2008; Gillani, 2003) and scale, contrast, and hierarchy used to make pages visually appealing and easy to follow (Gillani, 2003). Learners' attention should be directed to information and concepts which are critical or confusing (Dunet et al., 2008). This can be accomplished by using a bulleted format, which should be utilized whenever possible (Dunet et al., 2008), and by putting the most important information first (Buhmann & Johnson, 2009). Additionally, page length should be regulated, as Webpage length should fit the screen without scrolling (Buhmann & Johnson, 2009). Finally, consistency is key; the same things should be in the same place throughout the course site including: colors, fonts, headings, text, navigation, and etc. (Gillani, 2003; O'Neil, 2009).

Content organization.

Content organization is also of utmost importance to course design. Each course should have an introduction to familiarize learners with the course (Blood-Siegfried et al.,

2008). Course content should be presented as modules (Dunet et al., 2008; Gillani, 2003) which have separate introductions (Wilkinson et al., 2004), clearly defined objectives and expectations (Blood-Siegfried et al., 2008; Dykman & Davis, 2008), and are around one week in length (Dykman & Davis, 2008). Each module, or unit, typically begins with a written or recorded lecture which summarizes the concepts presented in the module. Other audiovisual materials are also commonly utilized to present information. Discussion questions or other teaching and learning activities are then completed by the learners. Specific timeframes, transparent assignments, and clear due dates are critical in online education, as they foster a sense of control in learners which allows them to feel more comfortable and increases their motivation (Dykman & Davis, 2008). Furthermore, it is suggested that courses start slow, with a lighter workload early in the course to allow students to become comfortable with online learning and the structure of the course (Dykman & Davis, 2008).

Guidelines are also provided for structuring modules. Instructional modules should be divided into subunits which have headings and subheadings for clarity (Blood-Siegfried et al., 2008). Material within modules should be chunked into small sections (O'Neil, 2009) which contain between five and nine bits of information (Cercone, 2008). It is important to limit main text, to the extent possible, only to key points or ideas, assimilating these for review in a format which can be easily downloaded or printed by learners (Dunet et al., 2008).

Text and fonts.

While discussing text style and font size may seem quite tedious, specific suggestions are given for their use in online courses. Sans serif fonts, such as Helvetica,

New York, Arial, or Veranda should be used for main text (Buhmann & Johnson, 2009; Gillani, 2003) while serif fonts such as New Century or Times New Roman should only be used, if used at all, for page titles and other large distinct text (Gillani, 2003). No more than three font styles should be utilized (O'Neil, 2009) and both upper and lower case letters should be utilized (Gillani, 2003). An adequately sized font, such as 10 or 12 point should be used for the body text, while a 12 or 14 point font is appropriate for headings and titles (Buhmann & Johnson, 2009). In general, bold should not be overused and, to avoid confusion with hyperlinks, text should not be blue (O'Neil, 2009). Furthermore, text should not be underlined since hyperlinks are commonly underlined (Blood-Siegfried et al., 2008; Buhmann & Johnson, 2009) and use of all uppercase letters should be avoided because it is commonly construed as yelling at the learner (Blood-Siegfried et al., 2008). Above all, consistency is key; each page within the course should have similar font and text styles (Gillani, 2003; O'Neil, 2009).

Use of color.

Color use within online courses is important because of visual appeal and the feelings different colors inspire. In general, no more than five plus or minus two colors should be used within a course and both dark and light colors should be utilized. Black or other dark text on a white or light background is easiest to read and pale blue or purple are commonly preferred background colors. Blue inspires calmness and suggests confidence and comfort. Conversely, red suggests danger or alertness while orange calls attention. Green suggests action or cleanliness and yellow suggests fun. White indicates purity and black suggests mystery (Gillani, 2003). Certainly color use impacts the feel, attitude, and atmosphere of an online course.

Graphics.

Graphics enhance online courses and add visual appeal to the course. However, consideration must be given when selecting graphics for use. Graphics should not be used solely for artistic or aesthetic appeal; rather, they should convey information or support concepts (Gillani, 2003). Cluttering course pages with extraneous graphics or images should be avoided (Dunet et al., 2008). Icons are appropriate and commonly used for navigation, but they should be simple, clear, and used consistently throughout a course (Gillani, 2003). Graphics Interchange Formatted (GIF) images are preferred for Webpage use and images often need to be compressed or reduced in size to allow for easy downloading (Gillani, 2003). Note it is important to be conscious of copyright law when selecting and utilizing graphics (Blood-Siegfried et al., 2008; Buhmann & Johnson, 2009).

Additional recommendations.

Four additional recommendations are evident in current literature. First, class size should be limited to allow for adequate time, student feedback, and to facilitate class discussions. Ideally, when new courses are being offered or new course instructors are utilized, class size should be limited to 15 to 20 students at most (Dykman & Davis, 2008). Experienced online educators teaching established online courses may be able to effectively teach a class of 25 or even 30 students (Dykman & Davis, 2008). Next, online courses should have an area to share personal information and have questions answered (Blood-Siegfried et al., 2008). In other words, discussion boards should have areas for interaction which do not focus on specific course objectives or content. Additionally, courses should include information about being an online learner (Blood-

Siegfried et al., 2008) and technical support should be available to learners. Ideally tech support is available 24 hours a day, seven days a week, as online learning occurs around the clock.

Teaching and Learning Strategies for Online Education

Many teaching and learning strategies are referenced in online educational literature. Several of these strategies will be discussed in detail. It is important to remember multi-modal strategies which include visual, textual, auditory, and/or interactive activities support the various learning styles and should therefore be utilized (Blood-Siegfried et al., 2008).

Case studies.

Case studies have been highly recommended for employment online (Conrad & Donaldson, 2004; Dunet et al., 2008; Johnson & Aragon, 2003; Ramsey & Clark, 2009). In fact, a survey of nursing faculty indicated 90% of educators believe case studies are the most effective online teaching approach (Christianson, Tiene, & Luft, 2002), Huckstadt and Hayes (2005) found 73 graduate level nurses participating in online CE enjoyed the case study approach, and Cobb (2003) found nearly 70% of nurses and over 60% of physicians believe CE should include case studies.

Case studies are authentic learning activities (Conrad & Donaldson, 2004) in which in-depth analyses of pragmatic situations are used to apply course content to real-life settings (Rowles & Russo, 2009). Case studies stimulate critical thinking and are highly appropriate for adult learners (Rowles & Russo, 2009). Johnson and Aragon (2003) purport student learning increases as the number of real-life examples and case

studies utilized increases. In fact, Dunet et al. (2008) conveys physicians and nurses enjoyed using case studies in online CE and found them to be engaging.

Conrad and Donaldson (2004) provide an example of a case study and give guidelines for developing strong case studies. Well-designed case studies have specific objectives and instructions and can be completed individually or in collaboration with peers (Conrad & Donaldson, 2004). It is helpful to tie up all of the loose ends at the end of a case study assignment by pooling the main points of the discussion and clarifying any areas of confusion (Conrad & Donaldson, 2004). Unequivocally case studies are appropriate for online education.

Reflective journaling.

Reflective journaling is another strategy which has many benefits and is highly referenced in the literature. Reflective journaling can either be a private journal in which students only share their thoughts with the facilitator or it can be used to stimulate discussion in a group setting (Bender, 2003). Many types of reflective journaling are suggested; in fact, no method is inherently better than others, because they each serve different purposes (Phipps, 2005). Types of reflective journaling frequently implemented in online education include: spiritual journals; diaries; memoirs; professional logs, or logs which record growth within a field of study; theory logs, or those which examine theoretical concepts and points; technical reflection of performance based upon evaluative criteria; reflection in action, which refers to thinking of better implementation strategies for what has been previously done or observed; deliberative reflection, or examining and comparing one's own opinions to the opinions of others to determine the

best possible solution within a situation; personal reflection of motives, worldview, ethics, and beliefs; and critical reflection (Phipps, 2005).

Journaling is an ideal activity for online education because it allows assimilation of multiple ideas, draws on student experiences, and applies course material to real-life situations (Bender, 2003). Critical incidence analysis, often incorporated into reflective journaling, asks students to provide a description and analysis of a particular situation they have experienced (Rowles & Russo, 2009). Finally, reflection prompts affective change, as it allows one's beliefs, actions, and understanding to be challenged. For many, reflection leads to changes in values and assumptions (Johnson & Aragon, 2003).

Multiple suggestions are given for the use of reflective journaling. First, the objectives and expectations for the journaling exercise should be made clear. This can help decrease student perception that reflective journaling is simply busy work. Second, thoughtful feedback should be given to guide development and may come from either faculty or from group discussion and peer feedback. Finally, reflective journals are typically graded as pass/fail (Rowles & Russo, 2009).

Games.

Games are an effective teaching strategy and learning tool in the online environment which increases student motivation (Conrad & Donaldson, 2004; Johnson & Aragon, 2003). In fact, games allow skills and knowledge to be gained and enhanced in a fun way (Conrad & Donaldson, 2004; Rowles & Russo, 2009) while leading to longer retention of material than by lecture alone (Rowles & Russo, 2009). Uniquely engaging, games are especially appropriate for adult learners who tend to take responsibility for their learning and often appreciate receiving prompt feedback (Rowles & Russo, 2009).

Designing games appropriately is crucial in online education. It is suggested that games should involve the student directly in decision making and allow them to learn from the outcomes. Specifically, games should include tasks which engage students and encourage active learning. As such, the game must provide an environment which is safe for exploration and allows for kind feedback (Conrad & Donaldson, 2004).

Virtual field trips.

Virtual field trips are an interactive strategy which is tailored to online learning needs. In fact, virtual field trips have been compared to simulation and are a beneficial active learning technique (Bender, 2003). Virtual field trips simulate visits to real locations and facilitate interactions with different places, geography, and persons (Conrad & Donaldson, 2004). Although they are often set-up by the course leader or facilitator, students can be encouraged to discover additional sites on their own (Conrad & Donaldson, 2004). Following site exploration, students can respond to various prompts including what they learned from their visit, whether or not they would suggest the site be used for future virtual fieldtrips, and what they would like to explore in person (Conrad & Donaldson, 2004).

Discussion.

Discussion has been used extensively in online courses and is supported by numerous sources (Bender, 2003; Halstead & Billings, 2009; O'Neil, 2009). Discussion is well suited for open-ended questions which reflect on the course content (O'Neil, 2009). Discussion also works well for facilitating peer-to-peer feedback and interaction when using case studies, problem-based learning, or reflective journaling. In fact, it has been suggested that effective online discussion facilitation encourages active learning,

collaborative learning, critical thinking, and reflection (Halstead & Billings, 2009). Simply stated, effective discussion feedback is honest, timely, respectful, relevant, empowering, and open (Halstead & Billings, 2009).

Lecture.

While traditional lecture has long been a staple of face-to-face classroom education, it has not been used extensively in online coursework. However, that is not to say it does not have a place in Web-based teaching and learning. In fact, lecture allows content to be presented in multiple formats online. For example, lectures can be written and posted as documents, audio streamed and synchronized with presentations such as PowerPoint, or presented as actual video footage, thus facilitating learning for visual and auditory learners (Johnson & Aragon, 2003). A more recent technology, podcasting, is another way to present lecture material online (Ramsey & Clark, 2009; Sadera & Fisher, 2009). While not often center stage, lecture has a place in online courses.

Summary.

Review of pertinent literature presents numerous teaching and learning strategies which are applicable to online education. Many of the strategies described support active learning, which promotes deeper understanding (Bangert, 2008). Different strategies may work better for some students than for others. It is therefore essential that online courses utilize more than one. Each strategy has a place within online teaching and learning.

Students' Evaluation of Online Education

Online course evaluation should include both objective areas, such as student completion, success, and grades as well as more subjective areas such as student

satisfaction and evaluation of the course itself. Five instruments have been commonly cited in the literature which measure learners' perceptions of teaching effectiveness, satisfaction, and learning environment. Each of these instruments will be described in detail.

Online Course Satisfaction Survey.

The Online Course Satisfaction Survey (OCSS) was developed in 2004 by Bolliger and Martindale to measure learner satisfaction in online courses. The Telecourse Evaluation Questionnaire (TEQ), constructed by Biner, was modified by Bolliger and Martindale to make it applicable for online courses (Bolliger & Martindale, 2004). A review of literature related to student satisfaction and course evaluation also impacted item development. The original OCSS contained 60 items: 42 used a Likert-type scale to address instructor, technology, course management, course Website, interactivity, and general issues; the other 18 items addressed demographic and general information related to the course. Three hundred and thirty graduate students participated in the pilot study. Confirmatory factor analysis, using varimax rotation, was performed. Four areas had eigenvalues greater than one; however, the scree plot indicated only three components existed. The three factors identified, named instructor, technology, and interactivity, explained 72% of the variance. Internal consistency reliability was found to be .99 for the entire scale, .98 for the instructor subscale, .93 for the technology subscale, .94 for the course management subscale, .96 for the course Web site subscale, .88 for the general issues subscale, and .83 for the interactivity subscale (Bolliger & Martindale, 2004). It is noteworthy that internal consistency reliability was calculated for six separate subscales after the factor analysis confirmed only three factors.

Distance Education Learning Environments Survey.

The Distance Education Learning Environments Survey (DELES) was developed by Walker and Fraser (2005) to measure the psychosocial aspects of learning environments in post-secondary distance education (Walker & Fraser, 2005). Review of existing instruments and current psychosocial learning environment literature guided the development of the DELES' 34 items. The original 48 items were piloted with 680 distance education students. Factor analysis was conducted and six factors emerged: (a) instructor support, (b) student interaction and collaboration, (c) personal relevance, (d) authentic learning, (e) active learning, and (f) student autonomy. These factors, referred to as learning environments, had 34 items with factor loading values of at least .54 which were retained. The reliability of the subscales was .87, .94, .92, .89, .75, and .79 respectively; scale internal consistency reliability was not reported (Walker & Fraser, 2005).

Distance Course Evaluation Instrument.

The Distance Course Evaluation Instrument (DCEI) was designed to address unique aspects of distance education while remaining consistent with instruments frequently used to evaluate on-campus college level courses (Roberts, Irani, Telg, & Lundy, 2005). Four hundred randomly selected distance education students were asked to list factors which they believed affected the quality of distance education. The data was then analyzed and 85 independent concepts or items were identified. Nine dimensions were identified and categorized as learner-instructor interaction, learner-content interaction, learner-learner interaction, course organization, facilitator, instructor, technical support, support services, and delivery methods. A panel of 15 experts then

reviewed the 85 items, divided into the nine dimensions, and ranked them on a 5-point Likert-type scale of not necessary to essential. Thirty-eight items having mean scores greater than 4.25 were included in the instrument which was then piloted with 194 students, refined, and tested on 112 students. Internal consistency reliability was found to be .95; subscale reliability was not reported (Roberts et al., 2005).

Online Learning Environment Survey.

The Online Learning Environment Survey (OLES) was developed by Trinidad, Aldridge, and Fraser (Trinidad, Aldridge, & Fraser, 2005). The tool was developed to obtain feedback on students' perceptions of online learning environments. The tool is unique because it evaluates both students' experienced and preferred learning environments. Four existing instruments were reviewed during development of the OLES and concepts or scales from each were included in the OLES. The original OLES version had 62 items with the two response scales of actual and preferred. A 5-point Likert-type scale of almost always to almost never was utilized and the tool was piloted on 325 students enrolled in one of 11 e-learning classes. Principle factor analysis, using oblique rotation, was conducted and 52 items had loading values of at least .30 on the eight scales which emerged (computer usage, teacher support, student interaction and collaboration, personal relevance, authentic learning, student autonomy, equity, asynchronicity, and enjoyment) were retained. Internal consistency reliability of the actual and preferred scales was found to be .89 and .90, .93 and .96, .93 and .94, .86 and .93, .89 and .95, .90 and .95, .96 and .97, and .87 and .89 for each of the subscales, respectively (Trinidad et al., 2005).

Student Evaluation of Online Teaching Effectiveness.

The Student Evaluation of Online Teaching Effectiveness (SEOTE) was developed by Bangert in 2004 to assess constructivist online teaching practices (Bangert, 2008). The SEOTE uses a six-point Likert-type scale which ranges from strongly agree to strongly disagree. Open-ended questions are also included to evaluate student perception of online teaching effectiveness. The original scale included 35 items designed to assess the constructivist teaching principles supported by Chickering and Gamson's Seven Principles of Effective Teaching. Content validity was established by online instructors and the 35 items were piloted on 24 graduate students. Internal consistency reliability was .94. Factor analysis was then conducted with 489 college students, using principle component analysis with oblique rotation. Four factors emerged: student-faculty interaction, active learning, time on task, and cooperation among students; 26 items loaded at least .40 on one factor. A second confirmatory factor analysis was conducted with 807 graduate and undergraduate college students enrolled in online courses. Twenty-three items were retained which loaded at least .40 on one factor. A final study of 403 students yielded internal consistency reliabilities of .94 for the student-faculty interaction subscale, .86 for the cooperation among students subscale, .82 for the time on task subscale, and .85 for the active learning subscale; total instrument internal consistency reliability was not reported (Bangert, 2008).

Summary

Literature review reveals numerous cultural competence theories and instruments which have been designed to measure cultural competence or its components. Research has shown face-to-face cultural competence CE for healthcare providers is effective, but

such research has been commonly limited by using a convenience sample from one geographic area, not using a control group, an educational theory, nor a cultural competence theory to guide intervention development. Research has shown online CE for healthcare providers to be effective. However, socially interactive online cultural competence CE has only been studied with graduate students and little research has been done on socially isolated online cultural competence CE. This is unfortunate because online education has many advantages. Online education must be designed following best design practices and should utilize teaching and learning strategies which are recommended for online use. One limitation of many online CE courses is not using an educational theory to guide course development. As social interaction has been proven to be important, online educational theories and frameworks supporting interaction were reviewed. Due to these findings, this study was designed to evaluate the effect of two different online CE interventions (socially interactive versus socially isolated) on the cultural competence level, as measured by the CCA, of women's health nurses providing care for childbearing women or newborns in the US.

CHAPTER 3

THEORETICAL FRAMEWORKS

Chapter 2 included a review of cultural competence theories, models, and frameworks. It also reviewed several frameworks or models of online education. This chapter will discuss the two theoretical foundations which underpin the study in greater detail.

3-Dimensional Puzzle Model of Culturally Congruent Care

The Schim and Miller cultural competence model (SMCCM), originally described in 1999, defined cultural competence as the integration of diversity experiences (or fact), awareness (or knowledge), and sensitivity (or attitude) into practice (Schim et al., 2003). The model had a stepwise progression, meaning individuals had to first have diverse experiences which then allowed them to gain knowledge and awareness of differences and similarities amongst groups and individuals. This, in turn, allowed sensitivity to develop. Finally, cultural competence behaviors could occur (Schim et al., 2007).

In 2004 the SMCCM was re-conceptualized as a puzzle with four pieces. The four pieces were the traits or competencies needed for a provider to be culturally competent (cultural sensitivity, diversity, awareness, and competence behaviors). This change demonstrated the interconnectedness of the four parts and reinforced that cultural competence is an ongoing process (Doorenbos & Schim, 2004), not an end point (Schim et al., 2005).

The model is currently described as a 3-dimensional model in which culturally congruent care is the result of nurses and clients working together with cultural respect and humility (Schim et al., 2006a). This current 3-D model includes two levels: a

provider level in which the cultural competencies a provider must have to participate in culturally congruent care continue to be represented by the puzzle model developed in 2004, and a client level. Hence, the 3-D model moves beyond sole focus on the provider to encompass the client as well. Unfortunately, at this time the constructs of the client level have yet to be delineated and therefore will not be discussed (Schim et al., 2007). See Figure 1 for a visual representation of the provider level of the 3-D model.

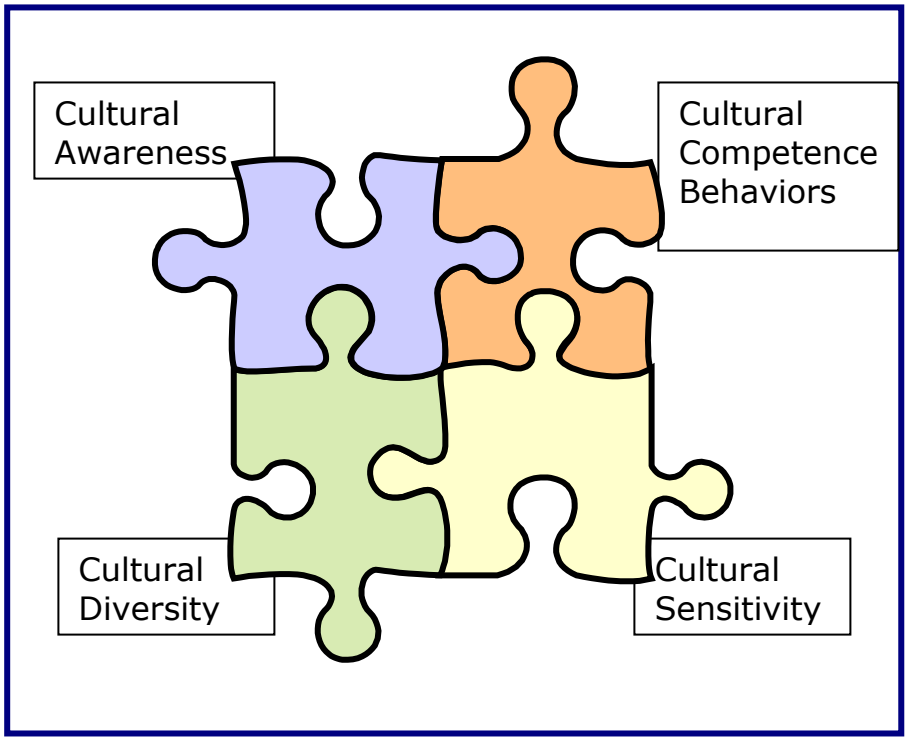


Figure 1. Provider level of the 3-Dimensional puzzle model of culturally congruent care. Adapted from "Culturally Congruent Care: Putting the Puzzle Together," by S. Schim, A. Doorenbos, R. Benkert, and J. Miller, 2007, *Journal of Transcultural Nursing, 18,* p. 105. Copyright 2007 by SAGE Publications.

Cultural Diversity

The first puzzle piece, cultural diversity, is a fact of life (Schim et al., 2007). The World is essentially becoming smaller as travel, the Internet, and technology improve.

However, cultural diversity experience is not equal for all; it varies in quantity and quality. Exposure to cultural realities, the magnitude of people encountered, and the strength of cross-cultural encounters varies amongst individuals (Schim et al., 2007). Ultimately, cultural diversity experience and the recognition of diverse groups with unique beliefs, values and customs forms a foundation upon which to build cultural competence (Doorenbos & Schim, 2004).

Cultural Awareness

The second part of the puzzle, cultural awareness, is a cognitive concept which implies there is not only a reality to contemplate, but also the ability to process knowledge (Schim et al., 2007). In healthcare, cultural awareness is having knowledge of the cultural expressions in which groups tend to be both similar and different (Doorenbos et al., 2005). Consequently, cultural awareness allows one to think globally about how cultural groups may be similar or different and is therefore defined as knowledge of areas in which large between-group differences frequently occur (Schim et al., 2007).

Awareness of variation in lifestyles, values, practices, and beliefs both within and between groups is essential to nursing assessment and intervention (Schim et al., 2006a). However, it is impossible to have knowledge of everyone. Simply memorizing facts about common differences between cultural groups is not advised because the variation within any group is likely to be large; hence, formulating general ideas often leads to stereotyping. Furthermore, formulating general ideas about culture based on knowledge gained from a few individuals or a small sample of individuals who share a common culture also often leads to stereotyping. Therefore, awareness of difference patterns is

highly valuable because awareness allows for assessment and dialogue between client and provider (Schim et al., 2007).

Cultural Sensitivity

The third piece of the puzzle, cultural sensitivity, is an affective construct which includes values, beliefs, and attitudes (Schim et al., 2007). Central to the concept of cultural sensitivity are an individual's attitudes about themselves and others, as well as their openness to new experiences and exposures. Cultural sensitivity's focus is approaching the client with humility and, rather than taking a position of knowledge, being a learner (Schim et al., 2007).

Unfortunately, much of Western culture is egocentric, placing high value on treating others as we ourselves would want to be treated. According to Hsieh (as cited in Schim et al., 2007), this is a cultural fallacy, as an individual's culture is used as the standard of comparison for all other cultures. "This admonishable perspective is even called 'the golden rule' in Western Christian cultures. When we approach others with an attitude of cultural humility, we can demonstrate cultural sensitivity by 'treating others as they would like to be treated' (Lester, 1998)" (Schim et al., 2007, p. 107).

Cultural Competence Behaviors

The fourth and final puzzle piece on the provider layer of the 3-D model is cultural competence behaviors, a behavioral construct of the actions taken in response to cultural diversity, awareness, and sensitivity. Cultural competency is an individual's ability to incorporate certain behaviors into practice (Schim et al., 2007). Cultural competence adapts and grows over time based upon diversity experiences, gaining sensitivity and awareness, acquiring new skills, and evolving abilities. Provider cultural

competence is having and using the cognitive, affective, and psychomotor skills necessary to facilitate cultural congruence between provider and client.

Following the 3-D model, a culturally competent women's health nurse would possess many attributes. For example, the nurse caring for a laboring woman from a different culture would be experiencing cultural diversity by interacting with the woman. The nurse, aware that pain and its management is a common area of cultural difference, could be culturally sensitive by realizing their view of pain may or may not be consistent with the client's view. The nurse would demonstrate cultural competence behaviors by completing a thorough assessment of cultural practices related to pain in childbearing and adapting their nursing care as needed, thus providing culturally competent care.

Instructional Strategy Framework for Online Learning Environments

Johnson and Aragon (2003) state online education frequently involves the simple conversion of face-to-face courses to an online setting, using traditional instructional methods such as recorded lectures, readings, and online tests. They refute this practice and have developed their own model for online learning entitled the ISFOLE. The ISFOLE assumes learning is a process which can't be explained by a singular learning theory; quality online learning should be built upon the principles of several learning theories.

Specifically, Johnson and Aragon (2003) purport online learning should utilize: behavioral learning theory elements such as positive reinforcement and repetition; cognitive learning elements such as assimilating new information with prior knowledge, limiting information volume, and addressing multiple senses; and elements of social learning such as group interaction, personal feedback, and peer assessment. Therefore,

powerful on-line learning environments: "(1) address individual differences, (2) motivate the student, (3) avoid information overload, (4) create a real-life context, (5) encourage social interaction, (6) provide hands-on activities, and (7) encourage student reflection" (Johnson & Aragon, 2003, p. 34). See Figure 2 for a visual representation of the model.

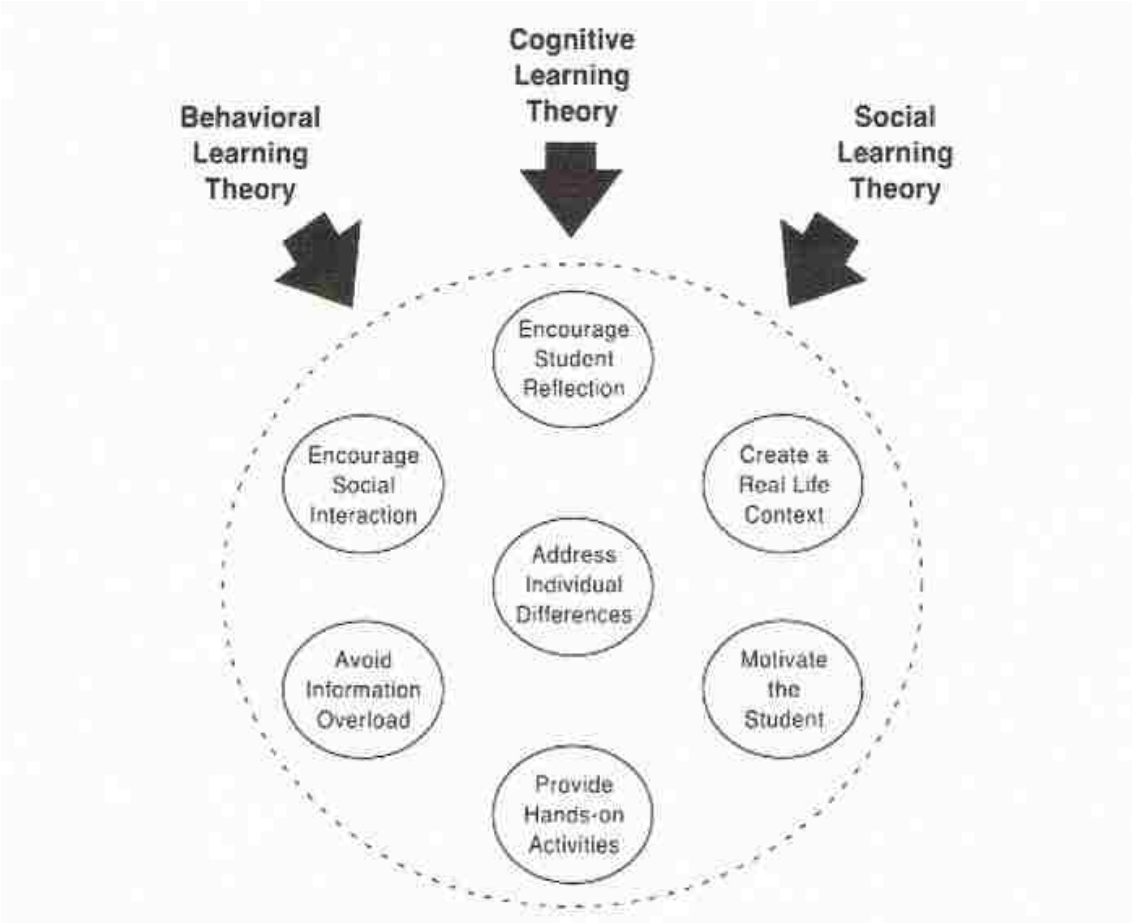


Figure 2. Copyright 2003 Wiley. Used with permission. From Johnson, S. D., and Aragon, S. R., An instructional strategy framework for online learning environments, *New Directions for Adult and Continuing Education, 100*, 31-43, Wiley Periodicals.

Individual Differences

According to Johnson and Aragon (2003), individual differences are student variations in skill, aptitude, and ability to process and apply information. Precisely,

differences exist in intelligence, preferred learning style, personality, prior knowledge, and cognitive style and control. Respect for individual differences is achieved by providing content in more than one format, encouraging active collaboration, and allowing students to have an individual locus of control such as accessing material in a different order or at a different time (Johnson & Aragon, 2003).

Student Motivation

Student motivation varies based on attention span, perceived relevance, confidence, and satisfaction. Therefore, facilitators must be able to acquire and hold student attention, so the environment should be engaging, participative, and relevant. Content should be pragmatic and relate to professional goals. Motivation can be enhanced by games, simulation, and multimedia use (Johnson & Aragon, 2003).

Avoidance of Memory or Information Overload

Memory overload occurs when one is exposed to too much information too quickly, thus limiting learning. Most individuals can handle around seven pieces of information at once; providing more information overloads short-term memory. For this reason content should be chunked into small segments for students to learn before accessing new information. Specifically, information overload can be avoided by curtailing the number of course activities, limiting the amount of content, using short lecture clips, organizing instruction by learning cycles, and providing a graphic course organizer (Johnson & Aragon, 2003).

Real Life Context of Learning

Learning is contextual and should therefore be pragmatic and resemble real life situations. Knowledge is produced and impacted by learning activities, the context in

which learning occurs, and culture. The three major premises of context are: learning is a social activity because it creates a group context, situational tools guide an individual's ability to learn, and thinking is augmented by environmental interaction. Contextual learning can be enhanced through the creation of virtual learning teams, case studies, and collaborative projects within the context of student work environments (Johnson & Aragon, 2003).

Social Interaction

Online learning should be socially interactive. Social learning theory includes elements of both behavioral and cognitive learning theory, suggesting individuals learn when interacting with others by imitation and reinforcement. Cognitive learning theory supports observation, as people can regulate their own behaviors by being cognizant of consequences. Therefore, social learning is manifested via socialization, mentoring, and social roles in which instructors and peers serve as role models. Social learning is supported by personal connections, utilizing peer feedback, interaction, and discussion (Johnson & Aragon, 2003).

Active Learning or Hands-on Activities

Active learning, referred to in the model as hands-on activities, is also imperative in the online learning environment. This is because cognitive learning theory asserts learning activities cannot be separated from cognition. Active learning in online learning environments commonly involves creativity, decision making, and problem solving. Specifically, active learning may be enhanced by the use of problem-based learning, synchronous sessions, projects, and applying skills (Johnson & Aragon, 2003).

Reflective Learning

The final principle of learning supported by the model is reflective learning. Reflective learning involves making new interpretations or revising existing beliefs related to the meaning of an experience. The reflective process allows for the review and challenge of one's ideas, understandings, and beliefs. This in turn can lead to a change in values and assumptions. Reflective learning may be facilitated by providing extensive feedback, one-minute papers, and reflective journaling (Johnson & Aragon, 2003).

Conceptual Definitions

The following conceptual definitions were used in this study: (a) socially isolated online education is education conducted via the Internet and a LMS which does not allow any interaction between course participants or with the course facilitator; (b) socially interactive online education is education conducted via the Internet and a LMS which encourages interaction between course participants and with the course facilitator; (c) CE is the additional education practicing licensed professionals need to acquire the new skills, knowledge, and attitudes needed to keep up with changes in nursing (Sadera & Fisher, 2009); (d) women's health nurses are nurses who specialize in caring for childbearing women and their families; and (e) cultural competence is having and using the cognitive, affective, and psychomotor skills necessary for facilitating culturally congruent nursing care.

Operational Definitions

The following operational definitions were used in this study: (a) socially interactive online courses are online courses in which all seven ISFOLE constructs (reflection, real-life context, motivation, individual differences, active learning,

avoidance of memory overload, and social interaction) are evident; (b) socially isolated online courses are online courses in which only six of the ISFOLE constructs are utilized; social interaction is not permitted; (c) CE is education licensed professionals receive CEUs for completion; (d) women's health nurses are RNs who work with childbearing women and/or newborns in the US; and (e) cultural competence is operationally defined by measurement with the Cultural Competence Assessment (CCA) instrument by Doorenbos et al. (2003).

Summary

In summation, provider cultural competence is having and using the knowledge, skills, and attitudes which are needed to facilitate culturally congruent care. Cultural competence can be increased by educational interventions; nurses learn from both socially isolated and socially interactive online learning. Furthermore, the cultural competency of nurses enrolled in graduate studies can be enhanced through socially interactive online education. This is supported by the ISFOLE which posits online education should promote social interaction. Hence, while both interventions should be effective, a socially interactive online CE intervention should increase the cultural competence level of women's health nurses more than a socially isolated online CE intervention.

Hypotheses

1. There will be a change in the cultural competence of women's health nurses in this study. Specifically, there will be a greater increase in the CCA scores of nurses completing the socially interactive intervention compared to those completing the

socially isolated interventions; both groups will have CCA score increases which differ significantly from the control group.

2. Among women's health nurses, CCA scores are related to demographic variables such as highest level of education completed and previous cultural diversity training.
3. CCA scores are positively correlated with the MCSDS scores of women's health nurses.

Assumptions

For the purpose of the study, the following assumptions were made:

1. Women's health nurses care for culturally diverse clients.
2. Women's health nurses are not culturally competent.
3. Participants respond truthfully to all questionnaires.
4. There is a relationship between the self-perceived cultural competence level and ability to provide culturally competent nursing care.
5. Lack of culturally competent nursing care has a negative impact on the health of childbearing women and their families, while increasing nursing cultural competence decreases health disparities.

CHAPTER 4

METHODOLOGY

This chapter describes the study methodology. Specifically, the design, sample, ethical considerations, procedures, and data collection are addressed. Planned data analysis is discussed and the variables, including the online courses, described in detail.

Design

The study utilized an experimental pre- and post-test design. Three randomly assigned groups were included: two experimental groups (socially isolated versus socially interactive online CE course) and one control group. This design was chosen because experimental studies offer greater control of extraneous influences, making causal inferences appropriate (Polit & Beck, 2008).

As in any study, validity was a primary concern. The internal validity threat of testing effect was decreased by using a control group, the threat of history minimized by using a simultaneous period between the pre- and post-test for all groups, and selection bias minimized by random assignment. Additionally, the short study period should have decreased the risk of maturation effects, mortality, and attrition (Polit & Beck, 2008). As an incentive, subjects completing either course were granted CEUs and those in the control group were given the chance to complete the socially isolated online cultural competence course for CEUs after the study's conclusion. External validity was enhanced by using random assignment and using power analysis to determine appropriate study sample size to increase the representativeness of the sample.

The original study design was to utilize a pilot study for the purpose of: determining sampling plan feasibility, intervention refinement, and to ensure the study

instruments translated well into an online environment. The planned pilot study was to utilize a random national sample of women's health nurses, accessed by purchasing a United States Postal Service mailing list of nurses belonging to AWHONN, and sending them a postcard invitation to participate in the study. However, due to a poor response rate of approximately 3%, the study design was altered to include a non-probability sample of randomly assigned women's health nurses.

Population and Sample

The target population for the study was all women's health nurses in the US. The accessible population consisted of approximately 22,600 (InFocus Marketing, 2011) members of AWHONN who care for childbearing women and/or their newborns in the US. The population was accessible through the state (section) leaders of AWHONN.

The study had many inclusion criteria. Only RNs who care for childbearing women and/or their newborns in the US met the inclusion criteria. Other inclusion criteria included having: an email address; access to a computer with speakers and high-speed Internet, or an Internet connection which is not dial-up; and the basic computer skills of turning on a computer, accessing the Internet, sending email, using a computer mouse, and typing.

A sample of 180 (60 per group) was planned for the study as determined via G*Power 3 (Faul, Erdfelder, Lang, & Buchner, 2010) using the repeated measures multivariate analysis of variance (MANOVA) with a within-between interaction statistical test, a medium *f* effect size of .25 (Faul et al., 2010), alpha of .05, and a power of .8 as suggested by Cohen (1988), Polit and Beck (2008), and C. Cross (personal communication, June 30, 2010). The medium effect size estimate was appropriate

considering effect sizes from previous studies: Cohen's $d = 0.7$ (Jones, 2009) and Cohen's $d = 0.4$ (Schim et al., 2006b). While MANOVA was not to be the statistical test used for data analysis, it yields a more conservative estimate of need and thus ensures adequate sample size and enhances study power (C. Cross, personal communication, June 30, 2010). An additional 15% was added to the G*Power 3 estimate to obtain the given sample size, as attrition was expected to be less than 15%. Multiple previous studies of cultural competence interventions had no attrition (Brathwaite, 2005; Kelly & Papadopoulos, 2009; Jones, 2009), while Schim et al. (2006b) had approximately 15% attrition, Smith (1998) had 11% attrition, and Williams (2002) had only 7.7% attrition.

An e-mail was sent to the each state's AWHONN section leaders (see Appendix A); follow-up phone calls were made approximately one week later to the leaders whose phone numbers were publicly available (see Appendix B). The e-mail requested that the leaders distribute information regarding the study to the AWHONN members in their state. A PDF and JPEG invitation was attached for convenience (see Appendix C). A brief description of the study, a Website address, and a password for the Website was included. Interested individuals were instructed to visit the Website, built by the investigator, to obtain further information about the study and register if they desired to do so. The Website described the purpose of the study, the background and significance, what participation entailed, and that CEUs would be granted upon completion of one of the online courses. All who registered via the secure encrypted form on the Website were randomly assigned to one of the three groups and e-mailed a Web Survey link to the informed consent form. See Appendices D, E, and F for the full participant informed consent form for each group.

Ethical Considerations

There were no anticipated negative effects of participating in the study and there were no adverse effects of not participating or of withdrawing from the study at any time. Potential subjects were informed their information would be confidential and findings only reported by groups. Anonymity was fostered, but the investigator, the University of Nevada, Las Vegas (UNLV) CE coordinator, and the Nevada State Board of Nursing (NSBON) had access to each subject's true identity for the purpose of granting CEUs. However, subjects were permitted to choose to use a temporary e-mail address for course registration and had the option of choosing and using a pseudonym in WebCampus of which only the investigator had knowledge. Informed consent was obtained for the study following UNLV Institutional Review Board (IRB) approval. See Appendix G for original IRB approval notice and Appendix H for modification approval.

Procedures and Data Collection

The independent variable (between-groups variable) for hypothesis one was online cultural competence CE courses and had three levels: control, socially isolated, and socially interactive. Both the socially isolated and socially interactive online courses included four modules, offered one per week, over four consecutive weeks. Each module was two and a half hours long on average, totaling 10 hours for each course. Both courses covered the same content with the same learning objectives. See Table 1 for full details including a list of objectives with corresponding content, learning activities/assessments for the socially interactive group, learning activities/assessments for the socially isolated group, 3-D model (CCA) constructs, and ISFOLE constructs for each module.

Table 1

Objectives, Learning Activities/Assessments, 3-D model (CCA) Constructs, and ISFOLE Constructs for Both Courses by Module

Module 1: Introduction to Culture and Cultural Competence

Course Objective Number	**1**	**2**
Actual Objective Subjects will:	describe the four components of the provider level of the 3-D model.	define words commonly associated with culture and cultural competence.
Content	- Introduction to the 3-D model and its constructs - Visual representation of 3-D model	- Culture - Cultural competence - Associated words
Corresponding 3-D model/CCA Construct(s)	- Cultural Diversity - Cultural Awareness - Cultural Sensitivity - Cultural Competence Behaviors	- Cultural Awareness
Learning Activities (LA) & Assessment Techniques (AT)- Socially Isolated	LA: Multimedia presentation and/or review written text. Drag-and-drop game. AT: Successful completion (defined as score of at least 80%) of fill-in-the-blank quiz	LA: Crossword puzzle game, review written text, and/or view multimedia presentation. AT: Successful completion of matching quiz
Learning Activities & Assessment Techniques- Socially Interactive	LA: Multimedia presentation and/or review written text. Drag-and-drop game. Discussion. AT: Discussion posting.	LA: Crossword puzzle game, review written text, and/or view multimedia presentation. AT: Successful completion of matching quiz.
Corresponding ISFOLE Construct(s)	- Motivation - Individual Differences - Social Learning for socially interactive group	- Motivation - Individual Differences

Module 2: Getting to Know Yourself

Course Objective Number	**3**	**4**
Actual Objective Subjects will:	reflect upon personal reactions to the views others have of	describe how a nurse's own culture could impact the care

	American culture.	they provide to childbearing women.
Content	- How American culture has been viewed - How it feels to be stereotyped	- Managing prejudices - Ways in which prejudices and personal culture/beliefs impact nursing care
Corresponding 3-D model/CCA Construct(s)	- Cultural Sensitivity	- Cultural Sensitivity
Learning Activities & Assessment Techniques-Socially Isolated	LA: Review written text and/or multimedia presentation (You Tube video) on the Internet. Reflective writing/journaling. AT: Submission of reflective writing/journal describing personal reaction to the written text and/or multimedia presentations viewed on the Internet.	LA: View multimedia presentation (You Tube video) on managing personal prejudices and/or review written text. Interpretations exercise. AT: Submission of interpretations exercise.
Learning Activities & Assessment Techniques-Socially Interactive	LA: Review written text and/or multimedia presentation (You Tube video) on the Internet. Reflective writing/journaling. AT: Discussion board posting detailing personal reaction to the written text and/or multimedia presentations viewed on the Internet.	LA: View multimedia presentation (You Tube video) on managing personal prejudices and/or review written text. Completion of interpretations exercise and discussion of exercise. AT: Discussion posting describing interpretations exercise results and response to one peer presenting at least one other way in which part of the interpretations exercise could be viewed.
Corresponding ISFOLE Construct(s)	- Reflective Learning - Social Learning for socially interactive group	- Reflective Learning - Social Learning for socially interactive group

Module 3: Getting to Know Others

Course Objective Number	**5**	**6**
Actual Objective Subjects will:	utilize resources to access both general information about different cultures and	recognize areas in which cultural groups often differ in general and with regard to

	information specific to childbearing.	childbearing.
Content	- Review of some cultural groups' general beliefs/practices. - Review of some cultural groups' practices/beliefs which are unique to childbearing.	- Common areas of general difference among cultural groups. - Common areas of difference among cultural groups which are specific to childbearing.
Corresponding 3-D model/CCA Construct(s)	- Cultural Diversity - Cultural Competence Behaviors	- Cultural awareness
Learning Activities (LA) & Assessment Techniques (AT)- Socially Isolated	LA: Multimedia presentation and Website review. AT: Successful completion of a short quiz about material presented on the Websites reviewed.	LA: Multimedia presentation, review of written text, and/or Website review. AT: Submission of a written description of the three areas of difference, with examples, which are most evident in your individual nursing practice.
Learning Activities & Assessment Techniques- Socially Interactive	LA: Multimedia presentation and Website search. Review of peers' discussion postings. AT: Find one additional Website related to cultural group(s) and post a description of the site which outlines its content.	LA: Multimedia presentation, review of written text, and/or Website search/review. Discussion. AT: Discussion board posting describing the two areas of difference, with examples, which are most evident in your individual nursing practice. Substantial response to one peer who discussed a different common area of difference.
Corresponding ISFOLE Construct(s)	- Motivation - Social Learning for socially interactive group	- Motivation - Individual Differences - Reflective Learning - Social Learning for socially interactive group

Module 4: Taking Action

Course Objective Number	**7**	**8**
Actual Objective Subjects will:	gain experience performing a cultural assessment on someone	analyze cross-cultural encounters focusing on

	of a different culture.	strengths and ways in which nursing practice could be improved when caring for childbearing women.
Content	- General cultural assessment questions - Cultural assessment questions specific to childbearing - Existing cultural assessment instruments/tools	- Cross-cultural nursing encounter analysis - Ways to improve nursing care in unique cross-cultural childbearing experiences
Corresponding 3-D model/CCA Construct(s)	- Cultural Competence Behaviors	- Cultural Awareness
Learning Activities (LA) & Assessment Techniques (AT)-Socially Isolated	LA: Application of skills through completing a cultural assessment of an individual (client, co-worker, etc.) who is of a different culture. AT: Submission of cultural assessment results.	LA: Review the two posted case study presentations about caring for a culturally diverse childbearing woman and reflect upon it. AT: Submission of a written description of what the nurse in each scenario did well and how nursing care could be improved in each scenario
Learning Activities & Assessment Techniques-Socially Interactive	LA: Application of skills through completing a cultural assessment of an individual (client, co-worker, another learner in the course, etc.) who is of a different culture. AT: Submission of cultural assessment results.	LA: Reflect upon a personal challenging experience working with a client from a different culture. Reflect upon a peer's experience caring for a client from a different culture. AT: Discussion board posting addressing what was done well and how care could be improved. Respond to at least one peer experience focusing on what was done well and how care could be improved
Corresponding ISFOLE Construct(s)	- Active Learning - Contextual Learning	- Active Learning - Reflective Learning - Contextual Learning - Social Learning for socially interactive group

As shown in Table 1, the two courses used several varying learning activities and assessment techniques. For example, the socially isolated course met objective eight by reviewing two different case study presentations related to the care of a culturally diverse childbearing woman, submitting a written description of what each nurse did well, and how nursing care could be improved in each scenario through the assessment area of WebCampus. The socially interactive group met the same objective by posting a written description on the discussion board of a challenging experience they have had working with a client from a different culture, relating what they did well and how their care could be improved. They then read and responded to at least one peer experience focusing on what their peer did well and how care could be improved. Hence, both groups analyzed two case studies reflecting upon strengths and weaknesses.

Several measures were taken to maintain the socially isolated nature of the socially isolated group. First, the socially isolated course was designed such that subjects could not proceed to the subsequent module or the CCA post-test until: (a) the required activities/assessment techniques for the previous module were completed, and (b) it was the week in which the next module was scheduled to be available. This was done to ensure all required activities/assessments were completed without requiring the investigator to audit progression. Several WebCampus features were also disabled. Specifically, participants in the socially isolated group did not have access to the chat, discussion board, or e-mail functions. In addition, appropriate questions related to WebCampus were directed to the IT Help Desk. Individualized feedback was not provided by the investigator. Rather, feedback was automatically provided for quizzes via the assessment manager in WebCampus and for writing assignments via

announcement postings of general sample answers which opened at the end of the module. Therefore, participants in the socially isolated group were not in direct contact with each other and had minimal contact with the investigator.

Best design practices for online courses were employed for both courses. Each followed recommended design principles for page layout, content organization, text/fonts, color use, and graphics as presented in Chapter 2 (see Appendix I for table of recommended design principles). Both courses were reviewed by three on-line education experts, one of whom had extensive experience with cultural competence, and by an additional on-line educator who was a state AWHONN leader and certified in in-patient obstetrical nursing. Revisions were made to both courses based upon the feedback obtained from these experts. The courses were offered via UNLV's WebCampus and were approved by Campus Computing Services.

The dependent variable, level of cultural competence, was operationally defined by measurement with the CCA as designed by Schim et al. (2003). Permission to utilize the CCA was obtained (see Appendix J). The actual CCA was not modified, as it was designed to assess cultural competence as conceptually defined by the SMCCM which is equivalent to the provider level of the 3-D model. See Appendix K for the full list of CCA items.

A short form, including 13 items, of the MCSDS was added to the CCA after its initial development in response to criticism that self-report measures are not reliable due to social desirability. MCSDS scores have been said to not correlate with CCA scores (S. Schim, personal communication, July 10, 2010). However, as there was no specific published data, the MCSDS short form was used in the study to assess social desirability.

Random grouping ensured the groups were comparable at baseline, but MCSDS scores could have been used as a covariate if shown to significantly impact the dependent variable (C. Cross, personal communication, July 19, 2010). See Appendix K to review the 13 MCSDS items.

Demographic data was also collected to describe the sample. Specifically, age, region of US residence, years of nursing experience, nursing areas of work, years worked in specialty area, how majority of nursing time is spent, race/ethnicity, highest level of education completed, number of years of nursing practice, whether or not original nursing training was completed in the US, previous cultural diversity training and type, previously completed online education or training, comfort level using a computer, and the location of computer/internet access were included. Previous studies have indicated age, race, years of nursing experience, and ethnicity do not impact CCA scores, but previous cultural training and educational level do impact CCA (Doorenbos & Schim, 2004) as well as CAS and CCB scores (Schim et al., 2005). Additionally, online education and comfort level using a computer has been shown to impact completion of online CE (Shade & Barber, 2004) and nurses completing online CE have reported it is easier to learn at home than at work (Atack, 2003). While the primary purpose of collecting this data was to describe the sample, data could have served as covariates if found to significantly impact the dependent variable (C. Cross, personal communication, July 9, 2010). See Appendix K for a full list of demographic items.

Subjects were recruited and informed consent obtained as previously discussed. Subjects in all groups were asked to complete the CCA, MCSDS, and demographic questions at the beginning of the study period. The control group completed them via an

online survey and the two experimental groups via the assessment tool in WebCampus. Experimental and control group subjects were permitted to leave any or all items blank. All groups were asked to complete the CCA again at the end of the four week period during which the courses were active. Once again, subjects were permitted to leave any or all items blank. Results were maintained by the investigator and subjects were asked to enter the e-mail address with which they registered for the course to permit matching of pre- and post-test responses. Those completing a course received 10 CEUs from the UNLV School of Nursing. After the study concluded, control group subjects had the chance to complete the socially isolated online cultural competence CE course for CEUs.

Subjects in the experimental groups were asked to complete a course evaluation at the end of the course, via the survey assessment option in WebCampus, to provide their opinions and give feedback to guide future course revisions as appropriate. The course evaluation addressed all parts of the ISFOLE, course design, and satisfaction using a 5-point Likert-type scale of strongly disagree to strongly agree. For example, "The course content was engaging" addressed motivation and "I would recommend this course to others" addressed satisfaction. Technical issues and suggestions were addressed by open response items such as "What was your favorite part of the course?"

The investigator developed the course evaluation tool and its items, as the literature review provided in Chapter 2 revealed no single existing, applicable tool. More specifically, no one existing tool was identified which addressed all of the above areas and was applicable to both socially interactive and socially isolated courses. Subjects were permitted to leave any or all course evaluation items blank. See Appendix L for a full listing of course evaluation items.

The investigator designed and conducted the courses and downloaded the CCA results, MCSDS results, demographic data, and course evaluations. Electronic data was maintained on an encrypted external computer drive by the investigator, who had sole access. The external drive will be secured in the office of Dr. Lori Candela and destroyed three years after the study's completion. Subjects' names, state of nursing licensure, and nursing license numbers were maintained by the investigator and submitted as requested to the UNLV CE Coordinator, who may in turn be asked to submit them to the NSBON, for the purpose of CEU records.

Data Analysis

Data analysis was completed using SPSS version 17.0. While data from Likert scales is truly ordinal, CCA and MCSDS data were treated as interval level for statistical purposes (Polit & Beck, 2008). Only subjects with pre- and post-test data were utilized in the analysis of hypothesis one.

Pre- and post-test designs are typically analyzed in one of three ways: one-way analysis of variance (ANOVA) on gain scores, analysis of covariance (ANCOVA) using pretest scores as the covariate, or via a mixed model repeated measures ANOVA (RM-ANOVA) with a between-groups variable (Dimitrov & Rumrill, 2003; Girden, 1992). RM-ANOVA with a between-groups variable was planned for use in this study because it is strongly suggested when there are repeated measures (Garson, 2009). The repeated measures test reduces error by controlling some of the variation between individuals, increasing power and decreasing the number of subjects needed (Munro, 2005) while providing better analysis because the trend from pre to post is analyzed (C. Cross, personal communication, June 30, 2010). ANCOVA using pretest scores as a covariate

was not planned for use due to potential power loss from the decreased degrees of freedom (Dimitrov & Rumrill, 2003), because the regression slopes of each pre- to post-test relationship must be homogenous, which is often not true with a control group (Gliner, Morgan, & Harmon, 2003), and because it would take either a large pre- to post-test change or a larger sample to get significant results (C. Cross, personal communication, June 30, 2010). The gain scores approach was not planned for use because it increases systematic bias which can lead to false results (C. Cross, personal communication, June 30, 2010).

Hypotheses two and three were analyzed using correlation statistics. Specifically, hypothesis two utilized Spearman's rho as highest level of education attained and previous cultural diversity training provide ordinal data. Hypothesis three was analyzed using Pearson's r, as both CCA and MCSDS scores are summed data which therefore approximate interval level data (Polit & Beck, 2008).

Descriptive statistics were included to depict the MCSDS, course evaluation, and demographic data. This basic data is included in the following chapter to provide information to the reader and increase study replication potential. Internal consistency reliability of the CCA scores for this sample was conducted using a Cronbach alpha reliability coefficient; in this study the CCA had a Cronbach alpha coefficient of .88, indicating good internal consistency reliability.

CHAPTER 5

FINDINGS OF THE STUDY

This chapter presents the findings of the study. Demographic information about the sample is presented. The results of the three hypotheses are also presented. The sixth and final chapter will provide a discussion of these results.

Response and Attrition Rates

The 249 individuals who registered for the study on the informational Website were randomly assigned to the three groups (socially interactive, socially isolated, and control) and sent a link to an online survey to complete the informed consent. Of those who registered for the study, 190 visited the Website and provided informed consent to participate in the study: 61 from group 1 (socially interactive online CE course group), 63 from group 2 (socially isolated online CE course group), and 66 from group 3 (control group). There were 133 individuals who completed the pre-test CCA items in the Week 1 Survey during the first week of the study; one did not complete the MCSDS or demographic items. In total, 77 participants from groups 1 and 2 completed the Week 1 Survey, the first task of both online courses. In spite of announcements for the start of each module, prompt e-mail or phone responses to questions or concerns, announcements regarding WebCampus maintenance, and granting requests for additional time to complete individual modules, only 21 individuals completed the socially interactive course and only 23 completed the socially isolated course. Thus, 93 participants completed the CCA items of both the Week 1 Survey pre-test and the Week 4 Survey post-test.

Demographic Data

As previously stated, 132 participants answered the demographic questions included in the Week 1 Survey. Twenty-three reported living in the northeast, 43 in the southeast, 13 in the midwest, 3 in the southwest, and 50 in the western region of the US. While the majority of participants were White/Caucasian/European American (82%), 5% reported being Black/African American/Negro, 5% reported being Asian, 4% Hispanic/Latino, and 2% American Indian/Alaska Native. The mean participant age was 47; participants reported having 21.5 years of nursing experience on average, and 17.4 years on average in their specialty area. Only three (2%) of participants completed their original nursing training outside of the US. The majority of participants reported their highest degree was a bachelor's degree (55%), 30% reported their highest degree was a graduate or professional degree, 14% held an associate's degree as their highest degree, and only 2% held a diploma as their highest degree. Participants reported working in many areas of the specialty, with most reporting working with in-patient intrapartal women (61%) or in-patient mothers and infants (46%). Most participants spend the majority of their work time providing direct patient care (67%), while 17% work mostly in education/academia, and 15% in a management role. The vast majority of participants (83%) had previous cultural diversity training with most having had one (32%) or two (21%) types of previous diversity training. Most participants (83%) reported feeling very comfortable when using a computer, 89% had undergone previous online education or training, and 67% had access to a computer with high-speed internet and speakers at both work and home. See Table 2 for full demographic and descriptive details of the 132 participants who completed the Week 1 Survey pre-test and the 93 participants who

finished the study by completing both the Week 1 Survey pre-test and the Week 4 Survey post-test.

Table 2

Demographic and Descriptive Information

Characteristic	Completed Pre-test Only (N=132)			Completed Pre- and Post-tests (N=93)		
	M	***SD***	**Range**	***M***	***SD***	**Range**
Age in Years	47	1.14	24-72	47	1.18	24-72
Years of Nursing Experience	21.5	12.47	1-49	22.13	13.21	1-49
Years in Specialty Area	17.37	10.77	0.5-43	17	10.85	0.5-37
Pre-Test CCA Score	5.38	0.65	3.68-6.68	5.37	0.67	3.68-6.56
Self-Reported Level of Cultural Competence	4.11	0.78	1-5	4.02	0.85	1-5
MCSDS Score	7.87	2.35	2-12	7.88	2.21	2-11
Number of Ethnic/Racial Groups Encountered	5.17	1.38	1-8	5.1	1.42	1-8
Number of Special Populations Encountered	4.56	1.42	1-7	4.49	1.48	1-7

	Completed Pre-test Only		Completed Pre and Post-tests	
	n	**%**	***n***	**%**
Area of Current US Residence				
Northeast	23	17.4	17	18.3
Midwest	13	9.9	12	12.9
Southeast	43	32.6	32	34.4
Southwest	3	2.3	2	2.2
West	50	37.9	30	32.2
Current Work Area Does/Does Not Include Antepartal (in-patient)				
Does	38	28.8	22	23.7
Does Not	94	71.2	71	76.3
Current Work Area Does/Does Not Include Intrapartal/L&D (in-patient)				
Does	81	61.4	54	58.1
Does Not	51	38.6	39	41.9
Current Work Area Does/Does Not Include Postpartal (in-patient)				
Does	43	32.6	30	32.3
Does Not	89	67.4	63	67.7

Current Work Area Does/Does Not Include Mother/Infant (in-patient)	61	46.2	45	48.4
Does	71	53.8	48	51.6
Does Not				
Current Work Area Does/Does Not Include Nursery/NICU (in-patient)				
Does	36	27.3	23	24.7
Does Not	96	72.7	70	75.3
Current Work Area Does/Does Not Include Out-patient/Ambulatory Care				
Does	9	6.8	4	4.3
Does Not	123	93.2	89	95.7
Current Work Area Does/Does Not Include Community Health				
Does	9	6.8	4	4.3
Does Not	123	93.2	89	95.7
Current Work Area Does/Does Not Include Other				
Does	22	16.7	16	17.2
Does Not	110	83.3	77	82.8
How Majority of Work Time is Spent				
Direct Patient Care	88	66.7	66	71
Management	20	15.2	13	14
Education/Academia	22	16.7	14	15.1
Other	2	1.5	0	0
Ethnicity				
Hispanic/Latino	5	3.8	3	3.2
White/Caucasian/European American	108	81.8	79	84.9
Black/African American/Negro	7	5.3	5	5.4
American Indian/Alaska Native	2	1.5	0	0
Asian	7	5.3	5	5.4
Native Hawaiian/Pacific Islander	0	0	0	0
Arab American/Middle Eastern	0	0	0	0
Other	3	2.3	1	1.1
Highest Level of Education Completed				
Diploma	3	2.3	3	3.2
Associate Degree	18	13.6	13	14
Bachelor's Degree	72	54.5	50	53.8
Graduate or Professional Degree	39	29.5	27	29
Previously Participated in Cultural Diversity Training				
Yes	109	82.6	77	82.8
No	23	17.4	16	17.2
Number of Types of Previous Diversity Training				
0	23	17.4	16	17.2
1	42	31.8	26	28
2	28	21.2	23	24.7
3	19	14.4	16	17.2

4	12	9.1	8	8.6
5	6	4.5	3	3.2
6	1	0.8	1	1.1
7	1	0.8	0	0
Previously Completed Any Education or Training Online				
No	15	11.4	11	11.8
Yes	117	88.6	82	88.2
Comfort Level When Using a Computer				
Not At All	0	0	0	0
Somewhat	23	17.4	14	15.1
Very	109	82.6	79	84.9
Location of Access to Computer With High-speed Internet and Speakers				
Home Only	28	21.2	22	23.7
Home and Work	89	67.4	61	65.6
Home and Other	0	0	0	0
Home, Work, and Other	4	3	2	2.2
Other Only	1	0.8	0	0
Work Only	8	6.1	6	6.5
Work and Other	1	0.8	1	1.1

* = $p < .05$

Hypothesis One

The first hypothesis addressed the effect of the two different online cultural competence continuing education courses on the cultural competence level of women's health nurses. CCA scores were calculated from the Week 1 Survey at the beginning of the study (pre-test) for the participants in the three groups and again at the end of the study from the Week 4 Survey (post-test). Unfortunately, the 93 participants who completed the study were not divided equally amongst the three study groups. Therefore, the 21 participants in group 1 and 22 participants in group 2 who completed the course/study were used for analysis. To balance the design, 22 participants were randomly selected from group 3 for inclusion in the analysis.

It was planned that a RM-ANOVA with a between-groups variable would be used to assess the impact of the two different interventions (socially interactive course, socially isolated course) on CCA scores. The assumptions of normal distribution, homogeneity of variances, and homogeneity of inter-correlations were met by group for the individuals who completed the study. The interaction effect, of primary interest, was not significant, Wilks Lambda = 0.91, F (2, 62) = 3.00, p = .06, observed power = .56. A main effect was noted for time, Wilks Lambda = 0.87, F (1, 62) = 9.34, p = .003, observed power = .85. This suggests a change in CCA scores from pre- to post-test. The main effect for group was not significant, F (2, 62) = 1.67, p = .2, observed power = .34. This insignificant finding suggests no difference in the effectiveness of the two online courses. However, non-significant results are commonly found due to insufficient power when group size is small (Pallant, 2007, Stevens, 2002).

Hypothesis one was therefore evaluated by ANCOVA on post-test CCA scores using pre-test CCA scores as a covariate. ANCOVA is more powerful than RM-ANOVA with a between-groups variable when there is a large effect size and homogeneity of regression slopes (Gliner et al., 2003). A one-way between groups ANCOVA was conducted to compare the effectiveness of the two interventions (socially isolated course, socially interactive course) at increasing cultural competence. Preliminary checks assured the assumptions of normality, linearity, homogeneity of variances, homogeneity of regression slopes, and reliable measurement of the covariates. After adjusting for pre-test CCA scores, a significant difference was found between the three groups (socially interactive, socially isolated, and control) on post-test CCA scores, F (2, 61) = 5.20, p = .008, observed power = .81, partial η^2 = .146, indicating a large effect size. Pairwise

comparisons with a Bonferroni correction indicated that after controlling for pre-test CCA scores, the socially isolated group (M = 5.85) scored significantly higher (p = .006) on the post-test CCA than the control group (M = 5.36). No other significant comparisons were identified, indicating that after controlling for pre-test CCA scores the socially interactive group did not score significantly higher on the post-test than the control group and the socially interactive group did not score significantly higher than the socially isolated group.

Hypothesis Two

Hypothesis two related CCA scores to demographic data such as highest level of education completed and previous cultural diversity training obtained from the Week 1 Survey (n = 132). The relationship between cultural competence (as measured by the CCA) and highest level of education completed was investigated using Spearman rank order correlation. Preliminary analysis identified the three participants whose highest degree earned was a diploma to be outliers. However, as Spearman rank order correlation is non-parametric, it can be used when there are outliers (Polit, 2010). No significant correlation was found between CCA scores and highest level of education attained (r_s = -.024, n = 132, p = .786). A Kruskal-Wallis test confirmed this finding (χ^2 = .83, p = .842).

Hypothesis two also explored the relationship between cultural competence (as measured by the CCA) and previous diversity training. Preliminary analysis revealed previous training as a yes/no question was skewed (skewness = -1.74). However, non-parametric statistics can be used when data is skewed (Polit, 2010). No relationship was found between CCA scores and previous diversity training as a yes/no question using

Spearman rank order correlation (r_s = .021, n = 132, p = .814). A Mann-Whitney U test confirmed this finding (U = 1214, p = .813). However, a small significant positive correlation was found between number of types of previous cultural diversity training and CCA scores (r_s = .173, n = 132, p = .047), indicating having more types of previous cultural diversity training was associated with higher CCA scores at baseline.

Hypothesis Three

The third and final hypothesis sought to support that cultural competence (as measured by the CCA) is positively correlated with social desirability (as measured by the MCSDS). The assumptions of related pairs, independent observations, normality, and linearity were met, so the Pearson product-moment correlation coefficient was used. A small positive correlation was noted between pre-test CCA and MCSDS scores (r = .219, n = 132, p = .012) with higher MCSDS scores being associated with higher CCA scores.

Attrition

As evidenced previously, both experimental groups (groups 1 and 2) had high attrition rates. Specifically, 42% of participants who completed the Week 1 Survey pre-test to begin the socially interactive course did not complete the course/study and 44% of participants who completed the Week 1 Survey pre-test to begin the socially isolated course did not complete the course/study. To explore this attrition, Chi-square tests of independence were conducted to evaluate the relationship between course/study completion (yes/no) and: (a) areas of specialty in which the participants currently work, (b) how majority of work time is spent, (c) ethnicity, (d) level of educational attainment, (e) location of original nursing training, (f) previous diversity training (yes/no), (g) number of types of previous diversity training, (h) previous online education/training, (i)

comfort level using a computer, (j) location of computer with high-speed internet and speakers access, (k) self-reported cultural competence level, and (l) area of current US residence. The likelihood ratio (LR) was used when expected cell frequency was less than five. Independent t-tests were used to assess differences between those who completed the course/study (yes/no) for the following continuous variables: (a) age, (b) years of nursing experience, (c) years in specialty area of nursing, (d) pre-test CCA scores, (e) MCSDS scores, (f) number of ethnic/racial groups encountered at work in the past 12 months, and (g) the number of special population groups encountered at work in the past 12 months. Three significant relationships were found. While the relationship between course/study completion and area of current US residence violated the Chi-square assumption for minimum expected cell frequency, the LR (4, $n = 77$) = 12.41, p = .015, Cramer's V = .387, indicating a significant medium effect size. Another significant relationship was found between course/study completion and self-reported pre-test level of cultural competence for which the Chi-square test of independence violated the minimum expected cell frequency. However, the LR (4, $n = 77$) = 10.20, p = .037, Cramer's V = .314, indicating a medium effect size. The final significant relationship was found between course/study completion and ethnicity. While the minimum expected cell frequency assumption for the Chi-square test was violated, the LR (5, $n = 77$) = 12.12, p = .033, Cramer's V = .346, indicating a medium effect size. See Table 3 for full details.

Table 3

Comparison of Participant Completion and Non-Completion of Courses/Study

Characteristic	Non-Completers		Completers		Statistic
	M	***SD***	***M***	***SD***	
Age in Years	45.91	1.02	47.23	1.11	t = -0.54
Years of Nursing Experience	19.18	11.12	21.95	12.85	t = -0.99
Years in Specialty Area	16.62	10.15	17.16	10.51	t = -0.23
Pre-test CCA Score	5.67	0.61	5.4	0.7	t = -0.20
MCSDS Score	7.62	2.65	8.12	2.08	t = -0.92
Number of Racial/Ethnic Groups Encountered	5.38	1.39	5.02	1.3	t = 1.17
Number of Special Population Groups Encountered	4.76	1.23	4.33	1.36	t = 1.44

Characteristic	Non-Completers		Completers		Statistic
	N	***%***	***N***	***%***	
Area of Current US Residence					
Northeast	4	5.2	10	13	LR=12.41*
Midwest	1	1.3	7	9.1	
Southeast	8	10.4	16	20.8	
Southwest	1	1.3	0	0	
West	19	24.7	11	14.3	
Self-Reported Level of Cultural Competence					
Very Incompetent	0	0	1	1.3	LR=10.20*
Somewhat Incompetent	0	0	6	7.8	
Neither Competent Nor Incompetent	2	2.6	1	1.3	
Somewhat Competent	20	26	26	33.8	
Very Competent	12	15.6	9	11.7	
Current Work Area Does/Does Not Include Antepartal (in-patient)					
Does	12	15.6	10	13	$\chi^2 = 1.72$
Does Not	21	27.3	34	44.2	
Current Work Area Does/Does Not Include Intrapartal/L&D (in-patient)					
Does	21	27.3	23	29.9	$\chi^2 = 0.99$
Does Not	12	15.6	21	27.3	
Current Work Area Does/Does Not Include Postpartal (in-patient)					
Does	12	15.6	14	18.2	$\chi^2 = 0.17$
Does Not	21	27.3	30	39	

Current Work Area Does/Does Not Include Mother/Infant (in-patient)					
Does	13	16.9	20	26	$\chi^2 = 0.28$
Does Not	20	26	24	31.2	
Current Work Area Does/Does Not Include Nursery/NICU (in-patient)					
Does	11	14.3	13	16.9	$\chi^2 = 0.123$
Does Not	22	28.6	31	40.3	
Current Work Area Does/Does Not Include Out-patient/Ambulatory Care					
Does	4	5.2	2	2.6	LR = 1.5
Does Not	29	37.7	42	54.5	
Current Work Area Does/Does Not Include Community Health					
Does	5	6.5	2	2.6	LR = 2.57
Does Not	28	36.4	42	54.5	
Current Work Area Does/Does Not Include Other					
Does	5	6.5	10	13	$\chi^2 = 0.69$
Does Not	28	36.4	34	44.2	
How Majority of Work Time is Spent					
Direct Patient Care	19	24.7	28	36.4	
Education/Academia	6	7.8	9	11.7	LR = 2.15
Management	7	9.1	7	9.1	
Other	1	1.3	0	0	
Ethnicity					
Hispanic/Latino	2	2.6	1	1.3	LR=12.12*
White/Caucasian/European American	26	33.8	38	49.4	
Black/African American/Negro	0	0	4	5.2	
American Indian/Alaska Native	2	2.6	0	0	
Asian	2	2.6	0	0	
Native Hawaiian/Pacific Islander	0	0	0	0	
Arab American/Middle Eastern	0	0	0	0	
Other	1	1.3	1	1.3	
Highest Level of Education Completed					
Diploma	0	0	1	1.3	LR = 1.93
Associate Degree	5	6.5	6	7.8	
Bachelor Degree	21	27.3	24	31.2	
Graduate or Professional Degree	7	9.1	13	16.9	
Previously Participated in Cultural Diversity Training					
Yes	29	37.7	38	49.4	LR = 0.04
No	4	5.2	6	7.8	
Number of Types of Previous Diversity Training					
0	4	5.2	6	7.8	LR= 6.18
1	16	20.8	14	18.2	

2	4	5.2	12	15.6	
3	3	3.9	7	9.1	
4	4	5.2	4	5.2	
5	1	1.3	1	1.3	
6	0	0	0	0	
7	1	1.3	0	0	
Previously Completed Any Education or Training Online					
No	3	3.9	7	9.1	LR = 0.80
Yes	30	39	37	48.1	
Comfort Level When Using a Computer					
Not At All	0	0	0	0	$\chi^2 = 1.43$
Somewhat	8	10.4	6	7.83	
Very	25	32.5	38	49.4	
Location of Computer With High-speed Internet and Speakers Access					
Home Only	6	7.8	11	14.3	LR = 5.72
Home and Work	22	28.6	29	37.7	
Home and Other	0	0	0	0	
Home, Work, and Other	2	2.6	0	0	
Other Only	1	1.3	0	0	
Work Only	2	2.6	4	5.2	
Work and Other	0	0	0	0	

* = $p < .05$

In addition to these findings, 11 participants (33% of those who withdrew after completing the Week 1 Survey and beginning the study/course) e-mailed the investigator and offered explanations as to why they were withdrawing from the course/study. All 11 participants indicated they were withdrawing due to time, technology/computer trouble, or both. Specifically, five cited only time as a reason, three cited only computer/technology issues, one indicated both time constraints and not wanting to change computer settings, one cited time and up-coming vacation, and one cited poor technology skills which resulted in the course taking too much time. While this information was not solicited, it provides insight into reasons why participants withdrew.

Summary

This fifth chapter presented the findings for the study. Demographic and descriptive information was given for the 132 participants who completed the Week 1 Survey pre-test and for the 93 participants who completed both the Week 1 Survey pre-test and the Week 4 Survey post-test. Data analysis results were detailed for each of the three study hypotheses. Hypothesis one was partially supported using ANCOVA with pre-test CCA scores as a covariate. Specifically, after controlling for pre-test scores, the post-test CCA scores for group 2 (socially isolated intervention) were found to be significantly different from group 3 (control); no other significant differences were identified. Hypothesis two was partially supported and partially rejected, as a significant correlation was found between CCA scores and number of types of previous diversity training, but not between CCA scores and highest level of education completed. Hypothesis three was supported by statistically significant findings. Finally, the attrition rate was explored and relationships were found between completion of the course/study (yes/no) and: (a) area of residence in the US, (b) ethnicity, and (c) self-reported cultural competence level. The sixth and final chapter will further explore these findings and their implications.

CHAPTER 6

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This sixth and final chapter includes an overview of the study. Study findings and limitations are discussed. Implications for nursing and nursing education are also highlighted and recommendations for future research provided.

Brief Overview of Study

The purpose of this study was to evaluate the effect of two online CE interventions on the cultural competence of nurses who care for childbearing women and/or newborns. It was anticipated there would be a greater increase in the cultural competence of the women's health nurses in the socially interactive online CE course compared to those in the socially isolated course, and both groups would have significant increases in cultural competence compared to the control group. It was also anticipated educational level and previous cultural diversity training would be related to cultural competence, and that social desirability would be positively correlated with cultural competence.

The framework for the study included two existing models: the 3-dimensional puzzle model of culturally congruent care and the ISFOLE. Review of the literature revealed numerous theories and tools which have been used to describe and measure cultural competence, and face-to-face CE interventions have successfully increased the cultural competence of healthcare professionals. As face-to-face CE isn't always practical, online CE has been used with various topics for healthcare providers, but few online cultural competence CE sources exist for nurses. Two socially interactive graduate courses and one self-study course were identified. Two socially isolated

publically accessible courses were also noted (Gerace & Salimbene, n.d.; Office of Minority Health, 2007); unfortunately, neither uses an educational theory, only one employs a cultural competence theory, the material is mainly factual, and no conclusive evidence supports their effectiveness. A comprehensive review of the literature revealed no studies which have compared socially interactive online CE to socially isolated.

This study used an experimental pre- and post-test design with a control group and two different four-week, 10 hour, online cultural competence interventions: a socially interactive CE course and a socially isolated one. Demographic data was collected, the MCSDS used to measure social desirability, and the CCA used to measure cultural competence. Course evaluation questions were asked of those who completed a course.

Discussion of the Findings

The findings of the study are interpreted in this section. First, participants' demographic information is compared to nurses and AWHONN members in the US. Next, the three hypotheses are discussed individually with conclusions and possible explanations provided. Finally, attrition and course evaluation data is briefly described and discussed.

Demographic Information

Study participants were asked to complete a demographic questionnaire as part of the Week 1 Survey pre-test. See Appendix K for a full list of demographic questions and Table 2 for detailed demographic findings. This section will compare the demographic information for this study's sample to the entire population of AWHONN members as reported by InFocus Marketing (2011), and to all nurses in the US as described by the US Department of Health and Human Services, Health Resources and Services

Administration (Health Resources and Services Administration [HRSA], 2010), to the extent possible.

The US has approximately 3,063,000 licensed RNs (HRSA, 2010). Approximately 22,600 of these nurses are members of AWHONN (InFocus Marketing, 2011), indicating they specialize in women's health, obstetric, and neonatal nursing in the US. About 4,700 AWHONN members (21%) live in the northeast section of the US, 4,700 (21%) in the midwest, 5,500 (24%) in the southeast, 3,300 (15%) in the southwest, and 4,400 (19%) in the west. Individuals in this study's sample who completed the Week 1 Survey pre-test (n = 132) lived primarily in the west (38%), southeast (33%), northeast (17%), midwest (10%), and southwest (2%). Of those who completed the study (n = 93), about 34% lived in the southeast, 32% in the west, 18% in the northeast, 13% in the midwest, and 2% in the southwest. Therefore, while the study represented the entire US, in general the west and southeast were overrepresented, the northeast slightly underrepresented, and the midwest and southwest underrepresented. One potential explanation for this discrepancy is related to the sampling method. Each state's AWHONN leaders were contacted and asked to distribute information about the study to members in their state. Unfortunately, there is no way to know how many state leaders acted upon this request, as a response to the request to distribute information about the study was never received from many states. However, leaders from seven states responded to the investigator via e-mail or phone that they would not distribute the information to members; reasons offered included not enough time to do it, being out on extended leave for illness, and members in the state do not like to receive e-mail communications. Therefore, members in all states were not afforded the opportunity to

participate, impacting the distribution of participants across the US. For example, two of the four states in the southwest region, the least represented area in the study population, stated they would not be distributing the information to members in their state.

Participants were also asked about their age and ethnicity. The average age of an RN in the US is 47 years old (HRSA, 2010). The average age of participants in this study was also 47 years old, matching the national average. In the US, approximately 5% of RNs self-identify as being Black or African American; 6% as Asian, Native Hawaiian, or Pacific Islander; 4% Hispanic or Latino; and only 0.3% as American Indian or Alaska Native (HRSA). While this demographic information is not available for AWHONN members, the pre-test completers (n = 132) in this study aligned well with national averages: 5% self-reported being Black or African American, 5% Asian, 4% Hispanic, 2% American Indian or Alaska Native, and 82% White or Caucasian. Those who completed the study (n = 93) also represented the US RN demographics well, with the exception that the American Indian or Native Alaskan population was not represented. The ethnic composition or average age of women's health nurses in the US is not known.

There are two other demographic items for which this study's sample can be compared to the population of US nurses. The first is highest level of education completed. According to the latest national HRSA survey of RNs (HRSA, 2010), the majority of RNs in the US hold bachelor degrees (37%), followed by associate degrees (36%), diplomas (14%), and master's degrees or higher (13%). Nurses with graduate or bachelor's degrees were overrepresented in this study's sample, while diploma and associate degree nurses were underrepresented. There could be several reasons for this. First, nurses with higher nursing degrees complete more CE per year than those with

lower nursing degrees (Kubsch, Henniges, Lorenzoni, Eckardt, & Oleniczak, 2003) and there is a significant relationship between highest academic degree and participation in CE (Beatty, 2001). Advanced practice nurses often need CE to maintain their certification or for licensure (Nalle, Wyatt, & Myers, 2010). Furthermore, professional association membership, such as membership in AWHONN, has a significant relationship with CE; Smith (2004) found nurses belonging to one association accumulate on average 10 hours more of CE per year than those not belonging to an association. Finally, nurses with higher degrees may have a greater understanding of research and place more emphasis on it than those with less formal education. Therefore, associate degree and diploma nurses may have been underrepresented in this study because of the accessible population (AWHONN members) or because the study explored CE.

The other area which can be compared is the country of initial nursing training. In the US, approximately 5% of RNs completed their initial nursing training abroad (HRSA, 2010). In this study 2% of participants completed their initial training abroad. Unfortunately, data about location of initial nursing training does not exist for women's health nurses in the US.

The final demographic item for which participants in this study can be compared to the entire AWHONN membership is how the majority of work time is spent. Individuals in this study's sample who completed the Week 1 Survey pre-test (n = 132) primarily spent their work time in direct patient care (67%), followed by education/academia (17%), management (15%), and in other areas (2%). Of those who completed the study (n = 93), the majority primarily spent their work time in direct patient care (71%), followed by education/academia (15%), and management (14%).

These percentages are fairly consistent with AWHONN members nationally. The majority of AWHONN members in the US primarily spend their work time in direct patient care (61%), followed by 19% in management, 18% in education/academia, and only 2% in other areas (InFocus Marketing, 2011).

Hypothesis One

Hypothesis one stated there would be a change in the cultural competence of the women's health nurses included in the study. Specifically, it was thought there would be a greater increase in the CCA scores of nurses completing the socially interactive intervention compared to those completing the socially isolated intervention and that both groups would have CCA score increases which differed significantly from the control group. ANCOVA analysis using pre-test CCA scores as a covariate revealed a significant difference between the three groups (socially interactive, socially isolated, and control) on post-test CCA scores. Pairwise comparisons with a Bonferroni correction indicated that after controlling for pre-test CCA scores, the socially isolated group scored significantly higher on the post-test CCA than the control group. No other significant comparisons were identified, indicating that after controlling for pre-test CCA scores the socially interactive group did not score significantly higher on the post-test than the control group and the socially interactive group did not score significantly higher than the socially isolated group.

In accord with the findings of this study, several previous studies of healthcare professionals have revealed significant changes from socially isolated online CE courses. Many isolated courses have been shown to increase knowledge about various topics other than cultural competence. Specifically, significant knowledge increases have been noted

in staff nurses (Schneiderman & Corbridge, 2009), healthcare providers (MacDonald & Walton, 2007), and physicians (Casebeer et al., 2004; Pelayo, Cebrian, Areosa, Agra, Izquierdo, & Buendia, 2011). Research has also shown socially isolated online CE courses can impact the practice (as evidenced by self-report of change or intent to change) of nurses (Arnella, Yox, Eckstein, & Ousley, 2010), doctors and nurses (Dunet et al., 2008), and physicians (Casebeer et al., 2004; Casebeer et al., 2008). Finally, MacDonald & Walton (2007) found socially isolated online CE increased the skills of healthcare providers. This study confirms socially isolated online CE can increase cultural competence and therefore, cultural awareness (knowledge), sensitivity (attitude), and competence behaviors (skills and actions).

Contrary to hypothesis one, the socially interactive online CE course in this study did not result in significantly greater increases in cultural competence than the socially isolated online CE course. The socially interactive course also did not result in a significantly greater cultural competence increase than the absence of an intervention (control group). These findings indicate socially interactive online CE courses are not more effective than socially isolated courses. In fact, the socially interactive course was not significantly more effective than not completing a course at all. There could be several explanations for these findings.

Social interaction has been shown to be important in online education. A review of 14 studies of nursing distance education concluded learning entails values and contributions of other learners, communication, interaction, and faculty support (Mancuso-Murphy, 2007). A meta-analysis of 51 studies revealed instructor involvement has a great impact on student outcomes (Zhao et al., 2005). There has also been a

positive correlation between classroom community, connectedness, and learning (Rovai, 2002). Finally, students who receive personal feedback perform better and are more satisfied than those who receive collective feedback (Gallien & Oomen-Early, 2008). While each of these studies supports social interaction, each of them explored the impact of social interaction in formal college for-credit coursework. Therefore, social interaction may not be as important in online CE as it is in formal online college coursework. In fact, this study lends support to Anderson's (2008) stance that the forms of student interaction within an online course (student-content, student-student, and student-instructor) can be substituted for one another, or even eliminated, as long as one of the three is included at a very high level.

Another explanation for the socially interactive group's findings is related to expectations about online CE. Few studies have been conducted of socially interactive online CE for healthcare providers (Huckstadt & Hayes, 2005; Luconi, 2008; Pullen, 2006; Spice, Palacios, Biondo, & Hagen, 2011) and review of the literature revealed no socially interactive online CE cultural competence courses which were socially interactive. The course evaluation comments for this study and from the socially interactive study Spice et al. (2011) conducted indicated the course was not what some participants expected. Therefore, participant expectations of online CE and attitude toward interaction in online CE may have impacted the outcome of the two courses.

A third potential explanation for the findings of the socially interactive group in this study is related to course length. The formal college courses previously described were all significantly longer than the 10 hour course utilized in this study. Other studies have also found longer socially interactive interventions increase knowledge. Huckstadt

& Hayes (2005) found a socially interactive course which could be taken for one to three college credit hours or for CEUs led to a significant change in the knowledge level of advanced practice nurses and graduate nursing students about back pain and dermatology. Ferguson and DeFelice (2010) conducted a study of graduate students and found those who took a semester-long course perceived they learned more than students who took an equivalent five-week summer course. Luconi (2008) found a nine month CE course increased the knowledge of eight doctors. Furthermore, Spice et al. (2011) found the 10 physician residents who took a course which took an estimated 48-72 hours to complete felt their knowledge and motivation had increased. Finally, Pena-Shaff, Altman, and Stephenson (2005) found students in interactive online courses are cautious of and anxious about what they post early in a course, not becoming comfortable with online discussions until late in the semester. It is therefore possible that only socially interactive CE courses that are longer in length lead to significant changes in participant knowledge, skills, and attitudes.

A final potential explanation for this study's findings is related to autonomy. Autonomy in nursing includes having the freedom to make decisions, control over professional practice, self-regulation, independence, and accountability (Gagnon, Bakker, Montgomery, & Palkovits, 2010). Similarly, time management, self-motivation (Beaudoin, Kurtz, & Eden, 2009; Stanford-Bowers, 2008), self-discipline (Stanford-Bowers, 2008), self-reliance, and high internal locus of control (Morris & Finnegan, 2008) have all been shown to impact online course success. As obstetrical nurses are highly autonomous (Kramer et al., 2007), and belonging to professional nursing organizations increases autonomy (Guerrieri, 2010), it is not surprising that the mean

CCA score of the nurses in both the socially interactive and isolated online courses increased (from $M = 5.38$ to $M = 5.62$ and from $M = 5.42$ to $M = 5.87$ respectively) while the mean score of the random sample of nurses from the control group did not ($M = 5.34$ both times). Furthermore, the group in the socially isolated course, which requires more autonomous learning than the socially interactive course, increased their cultural competence level significantly when compared to the control group, but the socially interactive group did not. Hence, the findings of hypothesis one could be related to autonomy.

Hypothesis Two

Hypothesis two stated that among women's health nurses, CCA scores are related to demographic variables such as highest level of education completed or previous cultural diversity training. Highest level of education completed and previous cultural diversity training as a yes/no question were not correlated with CCA scores. However, number of types of previous cultural diversity training was correlated with CCA scores.

Two previous studies have suggested CCA scores are related to highest level of education completed (Doorenbos & Schim, 2004; Schim et al., 2005). Additionally, one study has indicated a significant relationship between education and CAS scores (Schim et al., 2006a). This study did not confirm this relationship. This is likely due to differences in the samples evaluated. Schim et al. (2006a) studied hospice nurses and their sample differed in level of educational completion from the current study; none of their nurses held a nursing diploma as their highest degree, their sample had many more associate degree prepared nurses compared to this study (49% versus 14% respectively), fewer bachelor's prepared nurses (29% versus 54% respectively), and fewer graduate

degrees (21% versus 29%). Furthermore, in the Doorenbos and Schim (2004) study of hospice providers, the sample was only 40% nurses, and nearly 20% of their sample had not completed any education after high school. Schim et al. (2005) studied hospital providers, mainly nurses; but clerical workers, nutritionists, and therapists were also included. Once again, a substantial portion of the sample (17%) held only a high school degree. These differences in level of educational attainment and profession likely explain the divergent findings in this study.

Previous studies have also suggested a relationship between previous cultural diversity training (yes versus no) and CCA scores (Doorenbos & Schim, 2004; Doorenbos et al., 2005; Schim et al., 2005). This relationship was not confirmed in the current study. However, 83% of the participants in the current study reported having completed previous cultural diversity training compared to 73% and 41% in the studies by Doorenbos and Schim (2004), and by Schim et al. (2005), respectively. As cultural competence training becomes more common and more professionals have been exposed to some previous training, the simple yes/no question may become obsolete. This study found a significant positive correlation between number of types of previous cultural diversity training and CCA scores, indicating having exposure to more types of training leads to greater cultural competence. Unfortunately, these findings cannot be compared because previous studies have not reported the number of types of previous diversity training completed. However, existing studies have indicated that having any previous training is directly related to having greater cultural competence. Thus it is logical to presume having more types of previous diversity training, and therefore having had more

repetition and opportunities to assimilate new information with old (Vandeveer, 2009), leads to greater cultural competence scores.

Hypothesis Three

Hypothesis three stated MCSDS scores would be positively correlated with the CCA scores of women's health nurses. Although it has been stated CCA scores do not correlate with MCSDS scores (S. Schim, personal communication, July 10, 2010), no specific published data supports this claim. In this study, MCSDS scores had a small positive correlation with CCA scores. This finding aligns with one of the most common criticisms about self-report scales: their validity and accuracy is often threatened by social desirability, especially when true responses could reveal socially unacceptable or embarrassing data (Polit & Beck, 2008). Interestingly enough, in this study no significant correlation was found between post-test CCA scores and MCSDS scores or between MCSDS scores and change in CCA scores from pre- to post-test.

Attrition Findings

This study had substantial attrition rates of 44% and 42% after having begun the course from the socially isolated and socially interactive online CE courses respectively. Only one previous study was identified which explored the relationship between demographic variables and attrition from online nursing CE courses. Atack and Rankin (2002), who reported 16% attrition from an online course, found no significant difference between nurses who completed the course and nurses who withdrew in respect to: age, education, marital status, hours worked, shifts worked, or previous online education. In this study, only the region of US residence, ethnicity, and self-reported level of cultural competence had significant relationships with course/study completion. Unsolicited

explanations from about one-third of the participants who withdrew from this study revealed time and technology issues were common reasons for withdrawing. This is consistent with the study by Atack and Rankin, in which qualitative findings revealed technical problems, workload, and missing traditional face-to-face learning were common reasons for nurses to withdraw from an online CE course.

Course Evaluation Findings

Participants in group 1 (socially interactive course) and group 2 (socially isolated course) were asked to complete course evaluation questions designed by the researcher. See Appendix L for a full list of questions and Appendix M for responses. Questions for which there was a discrepancy of greater than 10% of participants for the two courses answering "agree" or "strongly agree" will be discussed here.

The first area of discrepancy between the responses of participants in the two courses was the amount of interaction with others enrolled in the course. While 81% of participants in the socially interactive course agreed or strongly agreed the amount of interaction with others in the course was appropriate, only 23% of participants in the socially isolated course felt the same. Social interaction within coursework is supported by the ISFOLE (Johnson & Aragon, 2003) and by social learning theory. Similarly, Rovai (2002) found students who feel less socially isolated in an online course have greater satisfaction. Billings et al. (2001) found social isolation from faculty and students is negatively correlated with student satisfaction, indicating online learners prefer to interact with other online learners during coursework.

The second area of discrepancy in the responses of the two groups was the amount of instructor involvement. While 90% of the socially interactive group agreed or

strongly agreed the amount of instructor involvement was appropriate, only 59% of those in the socially isolated course felt the same. This is consistent with the findings of several previous studies which have suggested instructor interaction is important to online learners. Billings et al. (2001) found social isolation from faculty and peers is negatively correlated with satisfaction. Bollinger and Martindale (2004) purport the instructor is the largest predictor for student satisfaction in online courses and that satisfaction is positively correlated with instructor performance, availability, and response times. Finally, Gallien and Oomen-Early (2008) found students who receive personalized feedback (such as the participants in this study's socially interactive course) are more satisfied than students who are given only collective feedback (such as the socially isolated group participants in this study).

The final area of discrepancy in the responses of the two groups was with regard to the length of each module. While 100% of the socially isolated group agreed or strongly agreed the length of each module was appropriate, only 81% of the socially interactive group felt the same. While the WebCampus system tracking function shows participants in the socially isolated course spent on average 41 more minutes in the course than those in the socially interactive course, this data does not account for idle time or time participants were logged into the course but not actively working on course materials. Unfortunately, there are no previous studies against which to judge this finding, as no previous work has compared socially isolated to socially interactive online CE or coursework.

Recommendations for Nursing and Nursing Education

The findings of this study reveal several concepts important to nursing and nursing education. These findings have led to several recommendations which will be described in the following paragraphs.

The major finding of this study is that socially isolated online cultural competence CE for women's health nurses effectively increases cultural competence level. As socially interactive online cultural competence CE is not more effective than socially isolated, but likely more expensive due to instructor time requirements, CE providers should consider further utilizing socially isolated asynchronous delivery methods. However, many nurses do not have the technology skills needed to be successful in online education. Therefore, nurses often need to be taught computer skills, Internet skills, and how to use asynchronous online course (Sweeney, Saarmann, Flagg, & Seidman, 2008). In fact, marketing should include information about how to enroll in and use the course (Sweeney et al.).

This study also reveals the number of types of previous cultural diversity training to be positively correlated with cultural competence scores. Therefore, exposing nurses to more types of cultural diversity training is of utmost importance. Continuing to include cultural competence in nursing education as a separate course or as a thread through the curriculum is only a first step. Cultural competence education should be incorporated into face-to-face seminars, workshops, and in other formats of CE offerings such as journal articles and socially isolated on-line modules. Employers must also support cultural competence CE by sponsoring programs for employees and making cultural competence CE a priority, if not mandatory. Employers should offer work or

educational time to complete cultural competence CE. If online CE is available, employers have a duty to provide computers with the needed technology in a quiet location for employee use.

CCA findings and communication via the online CE courses also provide insight as to what employers and nursing areas can do to enhance cultural competence. The CCA item which addresses having resource books and other reference materials available to help learn about people from other cultures had a mean score of "sometimes" across all three groups. Therefore, employers should ensure all nursing areas have reference materials and resources available with content specific to culture and that particular area of nursing. For example, books such as *Caring for Patients from Different Cultures*, by Geri-Ann Galanti (2008), and nursing journals such as *The American Journal of Maternal/Child Nursing* or *Nursing for Women's Health* provide information about culture and obstetrical nursing. Many course participants also stated they had never completed a comprehensive cultural assessment or their workplace did not have or use a cultural assessment tool. Therefore, nursing units and facilities should adopt client cultural assessment instruments which are relevant to their client population.

The final significant finding is that MCSDS scores had a small positive correlation with the CCA scores of the participants in this study. While it is said this has not been true in previous studies (S. Schim, personal communication, July 10, 2010), it is suggested the short form of the MCSDS continue to be used when assessing cultural competence level with the CCA. If MCSDS scores are found to be correlated with CCA scores within other populations, MCSDS scores could serve as a covariate for CCA score analysis.

Study Limitations

As with any research study, this study was not without limitations. Several limitations related to the sampling method were noted. Other limitations related to inclusion criteria, timing, and attrition were also noted. Each of these will be discussed.

One of the major limitations which impacts ability to generalize study findings stems from the use of a non-probability sample limited to AWHONN members. While no other accessible population of women's health nurses was identifiable, studying only AWHONN members inhibits generalizability to all women's health nurses. It is possible that women's health nurses in the US who belong to the national nursing specialty organization differ from women's health nurses who do not. As membership in professional organizations impact the amount of CE nurses complete (Smith, 2004), and part of AWHONN's mission includes research and education (AWHONN, 2011), it is conceivable AWHONN members differ from other women's health nurses in relation to learning, changing, and growing as professionals.

Another limitation was that the entire desired sample was not accessible to the researcher. While it is not known exactly how many state's AWHONN leaders distributed information about the study to the members in their state, it is known the leaders from seven states did not disseminate the information. This likely led to the discrepancy in number of participants from each of the five regions in the US.

The technology inclusion criteria are another limitation which inhibits generalizability. As the study was conducted solely in the on-line environment, participation was limited to those with existing computer skills and access to specific equipment. It is improbable that all women's health nurses have an e-mail address,

access to a computer with speakers and high-speed Internet, and basic computer skills. Therefore, these requirements for participation limit ability to generalize findings to all women's health nurses.

Yet another limitation is that the study was conducted during a set time period. The online CE courses ran from mid-April to mid-May, encompassing holidays such as Easter, Passover, and Mother's Day which many in the US observe. This time of year is also inclusive of spring break for many students and the end of the semester for many universities. While all causes of attrition are not known, time requirements and vacations were reported by some participants who chose to withdraw from the study. These are also reflected in the responses to the course evaluation question which addressed things about the course which participants would like to see changed.

Finally, the high attrition rate is of concern. While 190 individuals submitted informed consent to participate, only 132 completed the Week 1 Survey and 93 completed the entire study. While attrition was explored between those who completed the Week 1 Survey and completed the entire study, no information is available for the attrition between informed consent and completing the Week 1 Survey to begin the study. Furthermore, due to unequal group size following attrition, a random sample of participants from the control group was used in the analysis of hypothesis one.

Each of the above limitations could potentially decrease the representativeness of the sample, therefore limiting the ability to generalize study findings to all women's health nurses. These limitations have led to the following recommendations for future research.

Recommendations for Future Research

Based on the findings of this study, the following are suggestions for further research:

1. Replicate the study using a larger probability sample size of women's health nurses in every state to enhance ability to generalize findings to all women's health nurses in the US.
2. Duplicate the study with women's health nurses who are not AWHONN members, thus enhancing generalizability to all women's health nurses.
3. Execute the study at a different time of year to explore the effect time of year has on attrition.
4. Alter the study to explore the effect of online cultural competence CE on the cultural competence level of nurses in other specialty areas.
5. Investigate the effect longer duration socially interactive online CE courses have on cultural competence or other subjects/topics.
6. Compare socially isolated online CE to socially interactive online CE in subject areas other than cultural competence.
7. Modify the demographic question regarding highest level of education completed to include doctorate level education, thus better aligning with nursing degrees. This could change the findings about the relationship between highest level of education completed and cultural competence.

Summary

This final chapter presented a summary of the study and its findings. Major findings demonstrated socially isolated online cultural competence CE for women's

health nurses is significantly more effective than not having online cultural competence CE. However, socially interactive online cultural competence CE is not significantly more effective than not having any cultural competence online CE; and socially interactive online cultural competence CE is not more effective than having socially isolated online cultural competence CE. Other major findings indicate both MCSDS scores and number of previous types of cultural diversity training have small positive correlations with pre-test CCA scores. Based on these findings suggestions were given for nursing and nursing education, study limitations were described, and recommendations for future research provided.

In light of the significant health disparities minority women experience, enhancing the cultural competence of nurses who care for childbearing women and/or their newborns is of great importance. Enhancing the cultural competence of women's health nurses may allow diverse women and newborns to receive improved care, thus lessening health disparities. Therefore, cultural competence CE should be completed by all women's health nurses. In light of its advantages, socially isolated online cultural competence CE should be utilized.

APPENDIX A

E-MAIL TO AWHONN STATE LEADERS

Dear State AWHONN Leader,

I am an AWHONN member currently pursuing my PhD in Nursing. I am writing to request that you send the following information to the AWHONN members in your state on my behalf.

I am conducting a study of on-line cultural competence continuing education courses for nurses who work with childbearing women and their families. Nurses who complete the research study will be granted ten free continuing education units (CEUs). For more information, please visit the following Website: http://complabs.nevada.edu/~heitzler . To register, submit the form on the Website by March 28, 2011. Use the following password to enter the Website: 10FreeCEUs

As you are aware, the importance of cultural competence continues to grow. In fact, AWHONN's Mission, Vision, & Values include promoting the cultural competence of nurses who provide care to women and newborns. I would greatly appreciate your assistance distributing information about my study to AWHONN members in your state. While passing along this e-mail is perhaps the easiest way to distribute the information, I am attaching both a PDF file and a JPEG file for your convenience. Nurses who would like to participate must visit the above Website and register by March 28, 2011.

Thank you,

Ella Heitzler, PhD(c), WHNP, RNC-OB, Student Investigator
Doctoral Student, University of Nevada, Las Vegas
AWHONN Member

Lori Candela, EdD, RN, Principal Investigator
University of Nevada, Las Vegas

APPENDIX B

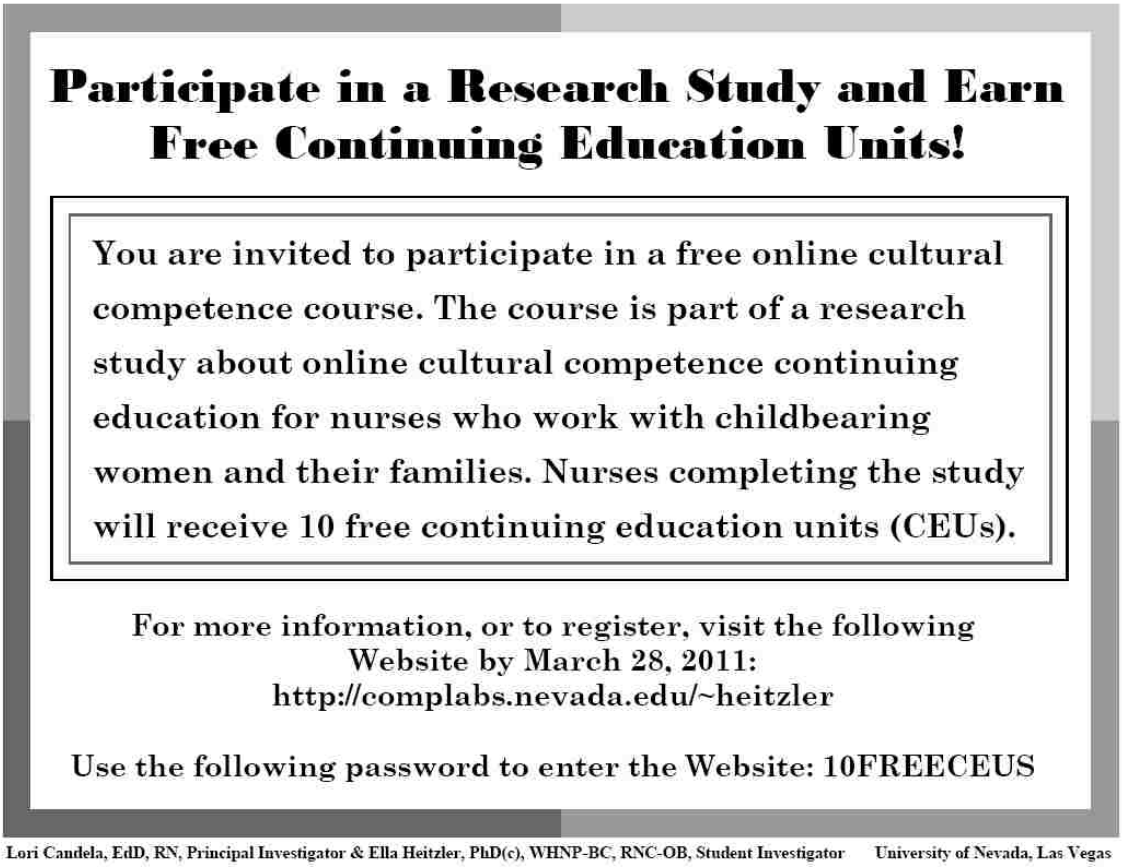
FOLLOW-UP PHONE CALL TO AWHONN STATE LEADERS

Hello [insert name],

My name is Ella Heitzler. I am a student investigator calling on behalf of myself and Dr. Lori Candela, principal investigator, from the University of Nevada, Las Vegas. I am calling to follow-up on the e-mail sent to you last week. The e-mail asked you to send information about a cultural competence online continuing education study to the AWHONN members in your state. I wanted to be sure you received the e-mail and give you an opportunity to ask any questions you may have.

APPENDIX C

PDF AND JPEG INVITATION



APPENDIX D

INFORMED CONSENT FORM FOR GROUP 1

INFORMED CONSENT

Department of Nursing

TITLE OF STUDY: Enhancing the Cultural Competence of Women's Health Nurses via Online Continuing Education

INVESTIGATOR(S): Lori Candela, Ed.D., R.N. (Principal Investigator) and Ella Heitzler, Ph.D.(c), R.N.C.-O.B. (Doctoral Student Investigator)

CONTACT PHONE NUMBER: Lori Candela (702-895-2443); Ella Heitzler (804-627-5383)

Purpose of the Study

You are invited to participate in a research study. The purpose of the study is to evaluate the effect of two different online continuing education courses on the cultural competence level of nurses who care for childbearing women and/or their newborns in the United States. The relationship between social desirability and self-reported level of cultural competence will also be explored, as will the relationship between selected demographic variables and level of cultural competence.

Participants

You are being asked to participate in the study because you are a registered nurse who provides care to childbearing women and/or their newborns in the United States.

Procedures

You have been randomly assigned to group one. Your online cultural competence course will run from April 11, 2011 to May 8, 2011. You will be contacted via e-mail and given information about how to access the course. You will be asked to complete a survey which includes demographic information, questions related to cultural competence, and questions regarding how you think, feel, and act in general. You will begin the cultural competence online course during the same week in which you complete this survey. The course will consist of four modules and will be offered over four consecutive weeks. Each module will only be available during its assigned week and will take about 2-3

hours to complete; you may complete each module anytime during the assigned week at your convenience. During the fourth week, after finishing the fourth module, you will be asked to complete a survey similar to the one you completed the first week. You will also be asked to answer questions about your experience in the course for the purpose of guiding course revisions. You will not be required to respond to any item on the survey(s) to which you do not wish to respond. Upon completing the course and accessing the surveys you will receive a certificate via e-mail attachment for 10 continuing education units. You must complete all modules/activities and access the two surveys in order to receive the continuing education units; no partial credit or hours will be awarded.

Benefits of Participation

There may be direct benefits to you as a participant in this study. As a nurse, you may become more knowledgeable about culturally competent care of childbearing women. You may notice a change in your attitude toward culturally diverse clients and your nursing assessment and intervention skills may increase. You will gain exposure to learning in an online environment which could enhance your computer skills.

Overall, your participation might lead to the provision of more culturally competent adequate care, thus decreasing health disparities and improving outcomes for diverse childbearing women and their newborns. We hope to learn more about online continuing education methodologies and whether or not they can increase the cultural competence level of nurses who care for diverse childbearing women.

Risks of Participation

There are risks involved in all research studies. This study is thought to include only minimal risks. The study includes exploration of diverse cultures, personal attitudes/beliefs about diverse cultures, cultural competence behaviors, and activities such as cultural assessment. Therefore, you may be uncomfortable when answering some questions. However, you may choose to not answer any survey item(s). You may also be uncomfortable during course activities or be concerned your answers will be released to the public or your peers. Therefore, you may use any active e-mail account and may opt to use a pseudonym within the online course so only the investigator will have knowledge of your true identity. Please e-mail the investigator (Ella Heitzler) at heitzler@unlv.nevada.edu by April 3, 2011 if you wish to use a different e-mail account or a pseudonym for the online course.

Cost /Compensation

There is no financial cost to you to participate in this study. The study will take approximately 11 hours of your time. You will be compensated for your time by receiving 10 free continuing education units sponsored by the University of Nevada, Las Vegas School of Nursing upon your completion of one of the online cultural competence courses and accessing all surveys. The continuing education units certificate will be sent to you electronically via the e-mail address you provided when you registered for the

study. You are not required to submit your nursing license number/state if you do not wish to receive continuing education units.

Contact Information

If you have any questions or concerns about the study, you may contact Lori Candela at **702-895-2443** or Ella Heitzler at **804-627-5383.** For questions regarding the rights of research subjects, any complaints or comments regarding the manner in which the study is being conducted you may contact **the UNLV Office of Research Integrity – Human Subjects at 702-895-2794 or toll free at 877-895-2794 or via email at IRB@unlv.edu.**

Voluntary Participation

Your participation in this study is voluntary. You may refuse to participate in this study or in any part of it. You may withdraw at any time without negative consequences. You are encouraged to ask any questions you may have before the study begins.

Confidentiality

The information gathered in this study will be kept completely confidential. Your name will not be included in any publications related to the study. Study results will only be reported for the group as a whole; no single individual will be referred to or identified in any presentation or written work. Should you choose to accept the continuing education units, the University of Nevada, Las Vegas continuing education coordinator and the Nevada State Board of Nursing will have access to your legal name and nursing license number/state. Electronic data will be maintained on an encrypted external computer drive to which only the investigator will have access. After three years, all data will be destroyed.

Participant Consent:

By entering your legal name and clicking "I consent" you acknowledge you have read the above information, consent to participate in the study, are at least 18 years of age, and are aware you can withdraw at any time without penalty. You may print a copy of this document for your records if you so choose.

APPENDIX E

INFORMED CONSENT FORM FOR GROUP 2

INFORMED CONSENT

Department of Nursing

TITLE OF STUDY: Enhancing the Cultural Competence of Women's Health Nurses via Online Continuing Education

INVESTIGATOR(S): Lori Candela, Ed.D., R.N. (Principal Investigator) and Ella Heitzler, Pd.D.(c), R.N.C.-O.B. (Doctoral Student Investigator)

CONTACT PHONE NUMBER: Lori Candela (702-895-2443); Ella Heitzler (804-627-5383)

Purpose of the Study

You are invited to participate in a research study. The purpose of the study is to evaluate the effect of two different online continuing education courses on the cultural competence level of nurses who care for childbearing women and/or their newborns in the United States. The relationship between social desirability and self-reported level of cultural competence will also be explored, as will the relationship between selected demographic variables and level of cultural competence.

Participants

You are being asked to participate in the study because you are a registered nurse who provides care to childbearing women and/or their newborns in the United States.

Procedures

You have been randomly assigned to group two. Your online cultural competence course will run from April 11, 2011 to May 8, 2011. You will be contacted via e-mail and given information about how to access the course. You will be asked to complete a survey which includes demographic information, questions related to cultural competence, and questions regarding how you think, feel, and act in general. You will begin the cultural competence online course during the same week in which you complete this survey. The course will consist of four modules and will be offered over four consecutive weeks. Each module will only be available during its assigned week and will take about 2-3

hours to complete; you may complete each module anytime during the assigned week at your convenience. During the fourth week, after finishing the fourth module, you will be asked to complete a survey similar to the one you completed the first week. You will also be asked to answer questions about your experience in the course for the purpose of guiding course revisions. You will not be required to respond to any item on the survey(s) to which you do not wish to respond. Upon completing the course and accessing the surveys you will receive a certificate via e-mail attachment for 10 continuing education units. You must complete all modules/activities and access the two surveys in order to receive the continuing education units; no partial credit or hours will be awarded.

Benefits of Participation

There may be direct benefits to you as a participant in this study. As a nurse, you may become more knowledgeable about culturally competent care of childbearing women. You may notice a change in your attitude toward culturally diverse clients and your nursing assessment and intervention skills may increase. You will gain exposure to learning in an online environment which could enhance your computer skills.

Overall, your participation might lead to the provision of more culturally competent adequate care, thus decreasing health disparities and improving outcomes for diverse childbearing women and their newborns. We hope to learn more about online continuing education methodologies and whether or not they can increase the cultural competence level of nurses who care for diverse childbearing women.

Risks of Participation

There are risks involved in all research studies. This study is thought to include only minimal risks. The study includes exploration of diverse cultures, personal attitudes/beliefs about diverse cultures, cultural competence behaviors, and activities such as cultural assessment. Therefore, you may be uncomfortable when answering some questions. However, you may choose to not answer any survey item(s). You may also be uncomfortable during course activities or be concerned your answers will be released to the public or your peers. Therefore, you may use any active e-mail account and may opt to use a pseudonym within the online course so only the investigator will have knowledge of your true identity. Please e-mail the investigator (Ella Heitzler) at heitzler@unlv.nevada.edu by April 3, 2011 if you wish to use a different e-mail account or a pseudonym for the online course.

Cost /Compensation

There is no financial cost to you to participate in this study. The study will take approximately 11 hours of your time. You will be compensated for your time by receiving 10 free continuing education units sponsored by the University of Nevada, Las Vegas School of Nursing upon your completion of one of the online cultural competence courses and accessing all surveys. The continuing education units certificate will be sent to you electronically via the e-mail address you provided when you registered for the

study. You are not required to submit your nursing license number/state if you do not wish to receive continuing education units.

Contact Information

If you have any questions or concerns about the study, you may contact Lori Candela at **702-895-2443** or Ella Heitzler at **804-627-5383.** For questions regarding the rights of research subjects, any complaints or comments regarding the manner in which the study is being conducted you may contact **the UNLV Office of Research Integrity – Human Subjects at 702-895-2794 or toll free at 877-895-2794 or via email at IRB@unlv.edu.**

Voluntary Participation

Your participation in this study is voluntary. You may refuse to participate in this study or in any part of it. You may withdraw at any time without negative consequences. You are encouraged to ask any questions you may have before the study begins.

Confidentiality

The information gathered in this study will be kept completely confidential. Your name will not be included in any publications related to the study. Study results will only be reported for the group as a whole; no single individual will be referred to or identified in any presentation or written work. Should you choose to accept the continuing education units, the University of Nevada, Las Vegas continuing education coordinator and the Nevada State Board of Nursing will have access to your legal name and nursing license number/state. Electronic data will be maintained on an encrypted external computer drive to which only the investigator will have access. After three years, all data will be destroyed.

Participant Consent:

By entering your legal name and clicking "I consent" you acknowledge you have read the above information, consent to participate in the study, are at least 18 years of age, and are aware you can withdraw at any time without penalty. You may print a copy of this document for your records if you so choose.

APPENDIX F

INFORMED CONSENT FORM FOR GROUP 3

INFORMED CONSENT

Department of Nursing

TITLE OF STUDY: Enhancing the Cultural Competence of Women's Health Nurses via Online Continuing Education

INVESTIGATOR(S): Lori Candela, Ed.D., R.N. (Principal Investigator) and Ella Heitzler, Ph.D.(c), R.N.C.-O.B. (Doctoral Student Investigator)

CONTACT PHONE NUMBER: Lori Candela (702-895-2443); Ella Heitzler (804-627-5383)

Purpose of the Study

You are invited to participate in a research study. The purpose of the study is to evaluate the effect of two different online continuing education courses on the cultural competence level of nurses who care for childbearing women and/or their newborns in the United States. The relationship between social desirability and self-reported level of cultural competence will also be explored, as will the relationship between selected demographic variables and level of cultural competence.

Participants

You are being asked to participate in the study because you are a registered nurse who provides care to childbearing women and/or their newborns in the United States.

Procedures

You have been randomly assigned to group three, the control group. You will be e-mailed an online survey Web link and asked to complete two surveys including demographic information and questions related to cultural competence and how you think, feel, and act in general. One survey will be accessible during the week of April 11, 2011 and the other four weeks later during the week of May 2, 2011. You will not be required to respond to any item(s) on the surveys to which you do not wish to respond. You will not complete an online course immediately; rather, you will be contacted during the week of May 16, 2011 via the e-mail address you supplied and given the opportunity to begin an online

course approximately 2 weeks after you complete the second survey. Upon completing the course you will be asked to complete a course evaluation survey. After accessing the course evaluation you will receive a certificate via e-mail attachment for 10 continuing education units. You must complete all modules/activities and access the surveys in order to receive the continuing education units; no partial credit or hours will be awarded.

Benefits of Participation

There may be direct benefits to you as a participant in this study. As a nurse, you may become more knowledgeable about culturally competent care of childbearing women. You may notice a change in your attitude toward culturally diverse clients and your nursing assessment and intervention skills may increase. You will also have the opportunity to gain exposure to learning in an online environment which could enhance your computer skills.

Overall, your participation might lead to the provision of more culturally competent adequate care, thus decreasing health disparities and improving outcomes for diverse childbearing women and their newborns. We hope to learn more about online continuing education methodologies and whether or not they can increase the cultural competence level of nurses who care for diverse childbearing women.

Risks of Participation

There are risks involved in all research studies. This study is thought to include only minimal risks. The study includes exploration of diverse cultures, personal attitudes/beliefs about diverse cultures, cultural competence behaviors, and activities such as cultural assessment. Therefore, you may be uncomfortable when answering some questions. However, you may choose to not answer any survey item(s). You may also be uncomfortable during course activities or be concerned your answers will be released to the public or your peers. Therefore, you may use any active e-mail account and may opt to use a pseudonym within the online course so only the investigator will have knowledge of your true identity. Please e-mail the investigator (Ella Heitzler) at heitzler@unlv.nevada.edu by May 8, 2011 if you wish to use a different e-mail account or a pseudonym for the online course.

Cost /Compensation

There is no financial cost to you to participate in this study. The study will take approximately 11 hours of your time. You will be compensated for your time by receiving 10 free continuing education units sponsored by the University of Nevada, Las Vegas School of Nursing upon your completion of one of the online cultural competence courses and accessing all surveys. The continuing education units certificate will be sent to you electronically via the e-mail address you provided when you registered for the study. You are not required to submit your nursing license number/state if you do not wish to receive continuing education units.

Contact Information

If you have any questions or concerns about the study, you may contact Lori Candela at **702-895-2443** or Ella Heitzler at **804-627-5383.** For questions regarding the rights of research subjects, any complaints or comments regarding the manner in which the study is being conducted you may contact **the UNLV Office of Research Integrity – Human Subjects at 702-895-2794 or toll free at 877-895-2794 or via email at IRB@unlv.edu.**

Voluntary Participation

Your participation in this study is voluntary. You may refuse to participate in this study or in any part of it. You may withdraw at any time without negative consequences. You are encouraged to ask any questions you may have before the study begins.

Confidentiality

The information gathered in this study will be kept completely confidential. Your name will not be included in any publications related to the study. Study results will only be reported for the group as a whole; no single individual will be referred to or identified in any presentation or written work. Should you choose to accept the continuing education units, the University of Nevada, Las Vegas continuing education coordinator and the Nevada State Board of Nursing will have access to your legal name and nursing license number/state. Electronic data will be maintained on an encrypted external computer drive to which only the investigator will have access. After three years, all data will be destroyed.

Participant Consent:

By entering your legal name and clicking "I consent" you acknowledge you have read the above information, consent to participate in the study, are at least 18 years of age, and are aware you can withdraw at any time without penalty. You may print a copy of this document for your records if you so choose.

APPENDIX G

ORIGINAL IRB APPROVAL

UNLV
UNIVERSITY OF NEVADA LAS VEGAS

Biomedical IRB – Expedited Review
Approval Notice

NOTICE TO ALL RESEARCHERS:

Please be aware that a protocol violation (e.g., failure to submit a modification for any change) of an IRB approved protocol may result in mandatory remedial education, additional audits, re-consenting subjects, researcher probation, suspension of any research protocol at issue, suspension of additional existing research protocols, invalidation of all research conducted under the research protocol at issue, and further appropriate consequences as determined by the IRB and the Institutional Officer.

DATE: December 8, 2010

TO: **Dr. Lori Candela**, Physiological Nursing

FROM: Office of Research Integrity - Human Subjects

RE: Notification of IRB Action by /Charles Rasmussen/ Dr. Charles Rasmussen, Co-Chair
Protocol Title: **Enhancing the Cultural Competence of Wonmen's Health Nurses via Online Continuing Education**
Protocol #: 1011-3651
Expiration Date:December 7, 2011

This memorandum is notification that the project referenced above has been reviewed and approved by the UNLV Social/Behavioral Institutional Review Board (IRB) as indicated in Federal regulatory statutes 45 CFR 46 and UNLV Human Research Policies and Procedures.

The protocol is approved for a period of one year and expires December 7, 2011. If the above-referenced project has not been completed by this date you must request renewal by submitting a Continuing Review Request form 30 days before the expiration date.

PLEASE NOTE:
Upon approval, the research team is responsible for conducting the research as stated in the protocol most recently reviewed and approved by the IRB, which shall include using the most recently submitted Informed Consent/Assent forms and recruitment materials. The official versions of these forms are indicated by footer which contains approval and expiration dates.

Should there be *any* change to the protocol, it will be necessary to submit a **Modification Form** through ORI - Human Subjects. No changes may be made to the existing protocol until modifications have been approved by the IRB. Modified versions of protocol materials must be used upon review and approval. Unanticipated problems, deviations to protocols, and adverse events must be reported to the ORI – HS within 10 days of occurrence.

If you have questions or require any assistance, please contact the Office of Research Integrity - Human Subjects at IRB@unlv.edu or call 895-2794.

Office of Research Integrity - Human Subjects
4505 Maryland Parkway • Box 451047 • Las Vegas, Nevada 89154-1047
(702) 895-2794 • FAX: (702) 895-0805

APPENDIX H

IRB MODIFICATION APPROVAL

UNLV
UNIVERSITY OF NEVADA LAS VEGAS

Biomedical IRB – Expedited Review
Modification Approved

NOTICE TO ALL RESEARCHERS:

Please be aware that a protocol violation (e.g., failure to submit a modification for any change) of an IRB approved protocol may result in mandatory remedial education, additional audits, re-consenting subjects, researcher probation, suspension of any research protocol at issue, suspension of additional existing research protocols, invalidation of all research conducted under the research protocol at issue, and further appropriate consequences as determined by the IRB and the Institutional Officer.

DATE: February 14, 2011

TO: **Dr. Lori Candela**, Nursing

FROM: Office of Research Integrity – Human Subjects

RE: Notification of IRB Action by /Charles Rasmussen/ Dr. Charles Rasmussen, Co-Chair
Protocol Title: **Enhancing the Cultural Competence of Women's Health Nurses via Online Continuing Education**
Protocol #: 1011-3651
Expiration Date:December 7, 2011

The modification of the protocol named above has been reviewed and approved.

Modifications reviewed for this action include:

- Change of recruitment method to sending an email to each state's AWHONN leader to ask them to send/distribute the study invitation to members in their state.
- Informed Consent revised to allow for the date change and participant changes.
- Population changed to any nurses who care for childbearing women and their newborns will be included.
- Pilot study was removed due to recruitment change.
- Number of subjects decreased.
- Additional demographic questions added to the survey.

This IRB action will not reset your expiration date for this protocol. The current expiration date for this protocol is December 7, 2011.

PLEASE NOTE:
Upon approval, the research team is responsible for conducting the research as stated in the protocol most recently reviewed and approved by the IRB, which shall include using the most recently submitted Informed Consent/Assent forms and recruitment materials. The official versions of these forms are indicated by footer which contains approval and expiration dates.

Should there be *any* change to the protocol, it will be necessary to submit a **Modification Form** through ORI - Human Subjects. No changes may be made to the existing protocol until modifications have been approved by the IRB. Modified versions of protocol materials must be used upon review and approval. Unanticipated problems, deviations to protocols, and adverse events must be reported to the ORI – HS within 10 days of occurrence. Should the use of human subjects described in this protocol continue beyond December 7, 2011, it would be necessary to submit a **Continuing Review Request Form** 3*0 days* before the expiration date. If you have questions or require any assistance, please contact the Office of Research Integrity - Human Subjects at IRB@unlv.edu or call 895-2794.

Office of Research Integrity – Human Subjects
4505 Maryland Parkway • Box 451047 • Las Vegas, Nevada 89154-1047
(702) 895-2794 • FAX: (702) 895-0805

APPENDIX I

RECOMMENDED ONLINE COURSE DESIGN PRINCIPLES

Design/Layout Element	**Description of Recommendations/Specific Suggestions from the Literature**
Page Layout	1. Material linked from the home page (Dunet, Reyes, Grossniklaus, Volansky, & Blanck, 2008; O'Neil, 2009). 2. Information "chunked" together for ease of navigation (O'Neil, 2009). 3. Three click rule: able to access course content using no more than three clicks of the mouse (O'Neil, 2009). 4. The same things are in the same place throughout the course site including: colors, fonts, headings, text, navigation, and etc. Consistency is key (Gillani, 2003; O'Neil, 2009). 5. Each page has a specific title (O'Neil, 2009). 6. Scale, contrast, and hierarchy used to make pages attractive and easy to follow (Gillani, 2003). 7. Attention directed to information and concepts which are critical or may be confusing (Dunet et al., 2008). 8. Ample white space (empty space) (Dunet et al., 2008; Gillani, 2003). 9. Bulleted format used when possible (Dunet et al., 2008). 10. Page length regulated (Buhmann & Johnson, 2009). 11. Most important information is presented first (Buhmann & Johnson, 2009).
Content	1. Course has introduction (Blood-Siegfried et al., 2008). 2. Material separated into small sections (Dunet et al., 2008). 3. Modular format used (Dunet et al., 2008; Gillani, 2003). 4. Each module has a separate introduction (Wilkinson, Forbes, Bloomfield, & Gee., 2004). 5. Each module has clearly defined objectives (Blood-Siegfried et al., 2008; Dykman & Davis, 2008). 6. Each module begins with a written or recorded "lecture" which summarizes module contents (Dykman & Davis, 2008). 7. Audiovisual materials used to present information (Dykman & Davis, 2008). 8. Key points and ideas reviewed in a format which can be downloaded or easily printed off (Dunet et al., 2008). 9. Main text limited to key points (Dunet et al., 2008). 10. Specific timeframes/due dates are given (Dykman & Davis, 2008). 11. Course starts slow with a lighter workload (Dykman & Davis, 2008).
Text/Fonts	1. Consistent texts and fonts (Gillani, 2003; O'Neil, 2009). 2. Bold used sparingly (O'Neil, 2009). 3. Blue text not used; suggests a hyperlink (O'Neil, 2009). 4. Text not underlined; underlining looks like a hyperlink (Buhmann & Johnson, 2009). 5. Text aligns to the left while headings/titles may be centered (Buhmann & Johnson, 2009). 6. No more than three fonts (O'Neil, 2009).

	7. Serif fonts may be used for page titles. Sans serif fonts used for information/main text (Gillani, 2003). Veranda is a sans serif font which was designed specifically for online viewing (Buhmann & Johnson, 2009). Two types of fonts: serif and sans serif. Serif fonts have flags or decorations at the end of each stroke (such as Times or New Century) while sans serif do not (Helvetica, New York, Chicago, Arial). 8. Both upper and lowercase letters used (Gillani, 2003). 9. 10 or 12 point font for the body text, 8 for footer, and 12 or 14 for headings (Buhmann & Johnson, 2009).
Use of Color	1. No more than five plus or minus two colors (three to seven colors maximum) used within the course (Gillani, 2003). 2. Both dark and light colors used (Gillani, 2003). 3. Black text preferred (Gillani, 2003). 4. Background color is light blue or purple (Gillani, 2003). 5. Color theory: blue inspires calmness and suggests confidence and comfort. Red suggests danger or alertness while orange calls attention. Green suggests actions or cleanliness, yellow suggests fun, white suggests purity, and black suggests mystery (Gillani, 2003).
Graphics	1. Images compressed or reduced in size so easy to download (Gillani, 2003). 2. GIF formatted images are the most ideal (Gillani, 2003). 3. All images/graphics should convey information instead of being art. Avoid cluttering with extraneous graphics (Dunet et al., 2008, Gillani, 2003). 4. Simple, clear, consistent icons are used for navigation use (Gillani, 2003). 5. Be conscious of copyright law (Buhmann & Johnson, 2009).
Additional Recommendations	1. Class size limited to 15 to 20 students for new educators and 25 to 30 for experienced (Dykman & Davis, 2008).

APPENDIX J

PERMISSION TO USE CCA

Re: Request

Saturday, October 9, 2010 7:57 AM

From:
"Stephanie Myers Schim" <s.schim@wayne.edu>
To:
"Ella Heitzler"

I responded to your request on October 7, but it appears you may have not gotten my message. Let me try again...

Dear Ella -
You formally have my permission to use the CCA instrument in you dissertation research. You may modify the demographic questions as needed to work with your population as needed.
I am attaching the most recent MS Word version of the instrument for your use. If you have additional questions as you procede with your work, please do not hesitate to contact me.

Stephanie Myers Schim, PhD, RN, PHCNS-BC
Associate Professor
Family, Community, and Mental Health Nursing
Wayne State University
240 Cohn Building
(313) 577-4034
s.schim@wayne.edu

From: "Ella Heitzler"
To: "s schim" <s.schim@wayne.edu>
Sent: Friday, October 8, 2010 3:51:53 PM
Subject: Request

Hello Dr. Schim,

As you are aware, I am preparing for my dissertation and would like to use the CCA instrument in my work as well as the 3-D Puzzle Model of Culturally Congruent Care. While we have previously discussed my use of the instrument and model, I would like to formally ask for permission to use them for my dissertation about online cultural competence continuing education for nurses.

Also, when we spoke last in July, you were having computer difficulties and had just ordered a copy of the most recent version of the CCA from your library. Would you please forward it to me so I use the most recent version?

Thank you,
Ella Heitzler

APPENDIX K

CCA, MCSDS, AND DEMOGRAPHIC ITEMS

1. In the past 12 months, which of the following racial/ethnic groups have you encountered among your clients and their families or within the health care environment or workplace? *Mark 'X' for all that apply.*
   - ❑ Hispanic/Latino (including Mexican, Mexican American, Chicano, Puerto Rican, Cuban, other Spanish)
   - ❑ White/Caucasian/European American
   - ❑ Black/African American/Negro
   - ❑ American Indian/Alaska Native
   - ❑ Asian (Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, or other Asian)
   - ❑ Native Hawaiian/Pacific Islander
   - ❑ Arab American/Middle eastern
   - ❑ Other (specify) _____

2. In your current environment what percentage of the total population is made up of people from these racial/ethnic groups? *Write in percents to add to 100%*
   - ____ Hispanic/Latino (including Mexican, Mexican American, Chicano, Puerto Rican, Cuban, other Spanish)
   - ____ White/Caucasian/European American
   - ____ Black/African American/Negro
   - ____ American Indian/Alaska Native
   - ____ Asian (Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, or other Asian)
   - ____ Native Hawaiian/Pacific Islander
   - ____ Arab American/Middle Eastern
   - ____ All other groups combined

   100 % = TOTAL

3. In the past 12 months which of the following special population groups have you encountered among your clients and their families or within the health care environment or workplace? *Mark 'X' for all that apply.*
   - ❑ Mentally or emotionally Ill
   - ❑ Physically Challenged/Disabled
   - ❑ Homeless/Housing Insecure
   - ❑ Substance Abusers/Alcoholics
   - ❑ Gay, Lesbian, Bisexual, or Transgender
   - ❑ Different religious/spiritual backgrounds
   - ❑ Other (specify)

     _____

4. In your current environment what percentage of the total population is made up of people from these special population groups? *Write in percents; may not total 100%*

____ Mentally or emotionally Ill
____ Physically Challenged/Disabled
____ Homeless/Housing Insecure
____ Substance Abusers/Alcoholics
____ Gay, Lesbian, Bisexual, or Transgender
____ Different religious/spiritual backgrounds

5. Overall, how competent do you feel working with people who are from cultures different than your own?

Very competent	Somewhat competent	Neither competent nor incompetent	Somewhat Incompetent	Very Incompetent
❑	❑	❑	❑	❑

[CCA Items- CAS Subscale]

6. Race is the most important factor in determining a person's culture.

Strongly Agree	Agree	Somewhat Agree	Neutral	Somewhat Disagree	Disagree	Strongly Disagree	No Opinion
❑	❑	❑	❑	❑	❑	❑	❑

7. People with a common cultural background think and act alike.

Strongly Agree	Agree	Somewhat Agree	Neutral	Somewhat Disagree	Disagree	Strongly Disagree	No Opinion
❑	❑	❑	❑	❑	❑	❑	❑

8. Many aspects of culture influence health and health care.

Strongly Agree	Agree	Somewhat Agree	Neutral	Somewhat Disagree	Disagree	Strongly Disagree	No Opinion
❑	❑	❑	❑	❑	❑	❑	❑

9. Aspects of cultural diversity need to be assessed for each individual, group, and organization.

Strongly Agree	Agree	Somewhat Agree	Neutral	Somewhat Disagree	Disagree	Strongly Disagree	No Opinion
❑	❑	❑	❑	❑	❑	❑	❑

10. If I know about a person's culture, I don't need to assess their personal preferences for health services.

Strongly Agree	Agree	Somewhat Agree	Neutral	Somewhat Disagree	Disagree	Strongly Disagree	No Opinion

❑ ❑ ❑ ❑ ❑ ❑ ❑ ❑

11. Spiritually and religious beliefs are important aspects of many cultural groups.

Strongly Agree	Agree	Somewhat Agree	Neutral	Somewhat Disagree	Disagree	Strongly Disagree	No Opinion
❑	❑	❑	❑	❑	❑	❑	❑

12. Individual people may identify with more than one cultural group.

Strongly Agree	Agree	Somewhat Agree	Neutral	Somewhat Disagree	Disagree	Strongly Disagree	No Opinion
❑	❑	❑	❑	❑	❑	❑	❑

13. Language barriers are the only difficulties for recent immigrants to the United Sates.

Strongly Agree	Agree	Somewhat Agree	Neutral	Somewhat Disagree	Disagree	Strongly Disagree	No Opinion
❑	❑	❑	❑	❑	❑	❑	❑

14. I believe that everyone should be treated with respect no matter what their cultural heritage.

Strongly Agree	Agree	Somewhat Agree	Neutral	Somewhat Disagree	Disagree	Strongly Disagree	No Opinion
❑	❑	❑	❑	❑	❑	❑	❑

15. I understand that people from different cultures may define the concept of “health care” in different ways.

Strongly Agree	Agree	Somewhat Agree	Neutral	Somewhat Disagree	Disagree	Strongly Disagree	No Opinion
❑	❑	❑	❑	❑	❑	❑	❑

16. I think that knowing about different cultural groups helps direct my work with individuals, families, groups, and organizations.

Strongly Agree	Agree	Somewhat Agree	Neutral	Somewhat Disagree	Disagree	Strongly Disagree	No Opinion
❑	❑	❑	❑	❑	❑	❑	❑

[CCA Items- CCB Subscale]

17. I include cultural assessment when I do individual or organizational evaluations.

Always	Very Often	Somewhat Often	Often	Sometimes	Few Times	Never	Not sure
❑	❑	❑	❑	❑	❑	❑	❑

18. I seek information on cultural needs when I identify new people in my work or school.

Always	Very Often	Somewhat Often	Often	Sometimes	Few Times	Never	Not sure
❑	❑	❑	❑	❑	❑	❑	❑

19. I have resource books and other materials available to help me learn about people from different cultures.

Always	Very Often	Somewhat Often	Often	Sometimes	Few Times	Never	Not sure
❑	❑	❑	❑	❑	❑	❑	❑

20. I use a variety of sources to learn about the cultural heritage of other people.

Always	Very Often	Somewhat Often	Often	Sometimes	Few Times	Never	Not sure
❑	❑	❑	❑	❑	❑	❑	❑

21. I ask people to tell me about their own explanations of health and illness.

Always	Very Often	Somewhat Often	Often	Sometimes	Few Times	Never	Not sure
❑	❑	❑	❑	❑	❑	❑	❑

22. I ask people to tell me about their expectations for health services.

Always	Very Often	Somewhat Often	Often	Sometimes	Few Times	Never	Not sure
❑	❑	❑	❑	❑	❑	❑	❑

23. I avoid using generalizations to stereotype groups of people.

Always	Very Often	Somewhat Often	Often	Sometimes	Few Times	Never	Not sure
❑	❑	❑	❑	❑	❑	❑	❑

24. I recognize potential barriers to service that might be encountered by different people.

Always	Very Often	Somewhat Often	Often	Sometimes	Few Times	Never	Not sure
❑	❑	❑	❑	❑	❑	❑	❑

25. I remove obstacles for people of different cultures when I identify barriers to services.

Always	Very Often	Somewhat Often	Often	Sometimes	Few Times	Never	Not sure
❑	❑	❑	❑	❑	❑	❑	❑

26. I remove obstacles for people of different cultures when people identify barriers to me.

Always	Very Often	Somewhat Often	Often	Sometimes	Few Times	Never	Not sure
❑	❑	❑	❑	❑	❑	❑	❑

27. I welcome feedback from clients about how I relate to people from different cultures.

Always	Very Often	Somewhat Often	Often	Sometimes	Few Times	Never	Not sure
❑	❑	❑	❑	❑	❑	❑	❑

28. I find ways to adapt my services to individual and group cultural preferences.

Always	Very Often	Somewhat Often	Often	Sometimes	Few Times	Never	Not sure
❑	❑	❑	❑	❑	❑	❑	❑

29. I document cultural assessments if I provide direct client services.

Always	Very Often	Somewhat Often	Often	Sometimes	Few Times	Never	Not sure
❑	❑	❑	❑	❑	❑	❑	❑

30. I document the adaptations I make with clients if I provide direct client services.

Always	Very Often	Somewhat Often	Often	Sometimes	Few Times	Never	Not sure
❑	❑	❑	❑	❑	❑	❑	❑

[MCSDS Items]

31. It is sometimes hard for me to go on with my work if I am not encouraged.

True	False
❑	❑

32. I sometimes feel resentful when I don't get my way.

True	False
❑	❑

33. On a few occasions, I have given up doing something because I thought too little of my ability.

True ❑ False ❑

34. There have been times when I felt like rebelling against people in authority even though I knew they were right.

True ❑ False ❑

35. No matter who I'm talking to, I'm always a good listener.

True ❑ False ❑

36. There have been occasions when I took advantage of someone.

True ❑ False ❑

37. I'm always willing to admit it when I make a mistake.

True ❑ False ❑

38. I sometimes try to get even rather than forgive and forget.

True ❑ False ❑

39. I am always courteous, even to people who are disagreeable.

True ❑ False ❑

40. I have never been irked when people expressed ideas very different from my own.

True ❑ False ❑

41. There have been times when I was quite jealous of the good fortune others.

True ❑ False ❑

42. I am sometimes irritated by people who ask favors of me.

True ❑ False ❑

43. I have never deliberately said something to hurt someone's feelings.

True ❑ False ❑

[Demographic Items]

44. In what year were you born? ☐

45. In what part of the US do you live?
- ❑ Northeast (CT, DE, ME, MD, MA, NH, NJ, NY, PA, RI, VT)
- ❑ Midwest (IL, IN, IA, KS, MI, MN, MO, NE, ND, OH, SD, WI)
- ❑ Southeast (AL, AR, FL, GA, KY, LA, MS, NC, SC, TN, VA, WV)
- ❑ Southwest (AZ, NM, TX, OK)
- ❑ West (AK, CA, CO, HI, ID, MT, NV, OR, UT, WA, WY)

46. For how many years have you been a practicing nurse? ☐

47. In what area do you currently work? *(Choose one or more)*
- ❑ Antepartal (In-patient)
- ❑ Intrapartal/L&D (In-patient)
- ❑ Postpartal (In-patient)
- ❑ Mother/Infant (In-patient)
- ❑ Nursery/NICU (In-patient)
- ❑ Out-patient/Ambulatory Care
- ❑ Community Health
- ❑ Other

48. For how many years have you worked in your specialty area? ☐

49. How do you spend the majority of your time?
- ❑ Direct patient care
- ❑ Management
- ❑ Education/Academia
- ❑ Other

50. Using the categories below, what do you consider yourself? *(Choose one or more)*
- ❑ Hispanic/Latino (including Mexican, Mexican American, Chicano, Puerto Rican, Cuban, other Spanish)
- ❑ White/Caucasian/European American

- ❑ Black/African American/Negro
- ❑ American Indian/Alaska Native
- ❑ Asian (Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, or other Asian)
- ❑ Native Hawaiian/Pacific Islander
- ❑ Arab American/Middle eastern
- ❑ Other (specify) _____

51. If you chose more than one category when answering number 7 above, which do you consider to be your main category?
    - ❑ Hispanic/Latino (including Mexican, Mexican American, Chicano, Puerto Rican, Cuban, other Spanish)
    - ❑ White/Caucasian/European American
    - ❑ Black/African American/Negro
    - ❑ American Indian/Alaska Native
    - ❑ Asian (Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, or other Asian)
    - ❑ Native Hawaiian/Pacific Islander
    - ❑ Arab American/Middle eastern
    - ❑ Other (specify) _____

52. What is your highest level of education completed?
    - ❑ Less than high school
    - ❑ Diploma
    - ❑ High school or GED
    - ❑ Associate degree
    - ❑ Bachelors degree
    - ❑ Graduate or professional degree

53. Was your original nursing training completed in the United States?
    - ❑ Yes
    - ❑ No

54. Have you ever participated in cultural diversity training?
    - ❑ Yes
    - ❑ No

55. If you have had prior diversity training, which option below best describes it? *(Choose one or more)*
    - ❑ Separate college course for credit
    - ❑ Content covered in a college course
    - ❑ Professional Conference or Seminar
    - ❑ Employer Sponsored Program
    - ❑ On-line (computer assisted) Education
    - ❑ Continuing Education Offering
    - ❑ Other diversity training types (Specify) _____

56. Have you ever completed any education or training online?
    - ❑ Yes

❑ No

57. How comfortable are you when using a computer?
    ❑ Very
    ❑ Somewhat
    ❑ Not at all

58. Where do you have access to a computer with high-speed Internet and speakers? *(Choose one or more)*
    ❑ Home
    ❑ Work
    ❑ Other

APPENDIX L

COURSE EVALUATION ITEMS

1. The course encouraged me to reflect upon my previous experiences.

strongly disagree disagree neither agree nor disagree agree strongly agree

2. The course content was relevant to my job.

strongly disagree disagree neither agree nor disagree agree strongly agree

3. Concepts and material from the course will be incorporated into my nursing practice.

strongly disagree disagree neither agree nor disagree agree strongly agree

4. The content was interesting.

strongly disagree disagree neither agree nor disagree agree strongly agree

5. The learning activities fostered my growth.

strongly disagree disagree neither agree nor disagree agree strongly agree

6. The content was offered in multiple ways which promoted my learning.

strongly disagree disagree neither agree nor disagree agree strongly agree

7. The amount of content in the course was appropriate.

strongly disagree disagree neither agree nor disagree agree strongly agree

8. The amount of interaction with others enrolled in the course was appropriate.

strongly disagree disagree neither agree nor disagree agree strongly agree

9. The amount of instructor involvement and interaction was appropriate.

strongly disagree disagree neither agree nor disagree agree strongly agree

9. Material was presented in a visually appealing way.

strongly disagree disagree neither agree nor disagree agree strongly agree

10. Overall, the course was set up in a way that was easy to use.

strongly disagree disagree neither agree nor disagree agree strongly agree

11. The length of each module was appropriate.

strongly disagree disagree neither agree nor disagree agree strongly agree

12. The length of the total course was appropriate.

strongly disagree disagree neither agree nor disagree agree strongly agree

13. The course objectives were clear.

strongly disagree disagree neither agree nor disagree agree strongly agree

14. Overall, I was satisfied with the course.

strongly disagree disagree neither agree nor disagree agree strongly agree

15. I would recommend this course to others.

strongly disagree disagree neither agree nor disagree agree strongly agree

16. What was your favorite part of the course?

17. What aspects of the course would you like to see changed or revised?

18. What technical issues did you encounter? How were they resolved?

APPENDIX M

TABLE OF COURSE EVALUATION FINDINGS BY COURSE

Course Evaluation Responses by Course

Course Evaluation Question	**Socially Interactive**		**Socially Isolated**	
	% A or SA	**mode**	***% A or SA***	**mode**
Course encouraged reflection	100	SA	100	SA
Course content relevant	100	SA	100	SA
Content was interesting	100	SA	91	SA/A
Learning activities fostered growth	90	SA	86	SA
Content offered in multiple ways	95	A	91	SA
Amount of course content appropriate	81	SA	86	A
Amount of interaction with others appropriate	81	A	23	N
Amount of instructor interaction appropriate	90	A	59	A
Material visually appealing	81	A	91	A
Course easy to use	90	A	95	A
Module length appropriate	81	SA	100	A
Course length appropriate	81	SA	91	A
Course objectives clear	95	SA	95	SA
Overall satisfied with course	95	SA	90	A
Would recommend course to others	81	SA	82	A
Course concepts will be incorporated into nursing practice	100	SA	95	SA

Note. A= agree and SA= strongly agree, SA/A=equal number of agree and strongly agree responses, N=neither agree nor disagree.

APPENDIX N

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Request for Permission

2 messages

Ella Heitzler <heitzler@unlv.nevada.edu> **Tue, Sep 28, 2010 at 3:07 PM**
To: sjohnson@illinois.edu
Bcc: ella_thomasrn@yahoo.com

Dear Dr. Johnson,

I am a PhD student at the University of Nevada , Las Vegas , School of Nursing . I am preparing for my dissertation and would like to use the Instructional Strategy Framework for Online Learning Environments and its associated figure you published in New Directions for Adult and Continuing Education in 2003. I will be exploring online continuing education interventions for nurses. May I have your permission to use your framework in my dissertation? Thank you in advance for your consideration.

Sincerely,
Ella Heitzler

Johnson, Scott D <sjohnson@illinois.edu> **Tue, Sep 28, 2010 at 3:10 PM**
To: Ella Heitzler <heitzler@unlv.nevada.edu>

Certainly. Good luck with your research.
Scott

Scott D. Johnson | CIO

Associate Dean and Director,
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College of Education

Professor, Human Resource Education

University of Illinois at Urbana-Champaign
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APPENDIX O

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Publication: Journal of Transcultural Nursing

Publisher: Sage Publications

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