Using a Virtual Community to Enhance Cultural Awareness

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Abstract

Purpose: Cultural competence is an expectation of professional practice, yet effectively teaching this concept to nursing students is challenging. The purpose of this study was to assess the use of a virtual community as a teaching application to foster cultural awareness among nursing students. **Method:** This correlational study involved the collection of two surveys from 342 first-semester students from five baccalaureate nursing programs that used *The Neighborhood* virtual community during one semester. Descriptive and comparative analyses were performed. **Findings and Conclusions:** Results suggest that use of the virtual community may have contributed to cultural awareness among student participants. There was a significant correlation between frequency of use and cultural awareness. Virtual communities may represent a useful teaching application for cultural competence in nursing education. Further research is needed to specifically test cultural competence education strategies using a virtual community platform.

Keywords

baccalaureate programs, correlational design, factoral design

Issues associated with health care delivery in the United States have been central to political debates and agendas, policy, economic projections, news, and conversations across the nation for the past decade. One of the most critical of issues is health care disparities. Among the multiple factors contributing to disparities is the lack of a diverse and culturally competent health care workforce. The Institute of Medicine (2002) identifies a close linkage between cultural competence and quality of care; thus, it is considered an issue across all health care systems. Health professions education can address health care disparities by infusing diverse graduates into the workforce and improving the cultural competence of its graduates (Calvillo et al., 2009).

Delivering culturally competent care is a fundamental expectation of the professional nurse (American Nurses Association, 2010) and a necessary component within nursing education curricula (American Association of Colleges of Nursing, 2008). Cultural competence has been defined as the knowledge, skills, and attitudes needed to provide quality care to diverse populations (California Endowment, 2003). Nursing faculty understand the need to integrate culture into the curriculum; however, relatively few possess expertise in developing successful cultural teaching strategies or a curriculum plan (Mixer, 2008). Thus, there is an ongoing need to develop and research pedagogical applications that effectively translate cultural learning in nursing school to culturally competent care in professional nursing practice.

The virtual community is an emerging pedagogy in nursing education that has been shown to increase student engagement and links to the learning preferences of underrepresented minority students (Giddens, Fogg, & Carlson-Sabelli, 2010; Giddens, Shuster, & Roerigh, 2010). It has also been postulated to be an effective application for cultural education (Giddens, 2008). The purpose of this article is to present our research findings related to use of a virtual community teaching application as a mechanism to enhance *cultural awareness* (a construct of cultural competence) among nursing students.

Review of the Literature

A literature review was conducted to learn about current approaches to teaching culture in nursing education. We selected 16 recently published articles that describe teaching and learning approaches. The three themes that emerged include dedicated culture courses and/or assignments, integrated approaches for culture content, and emerging pedagogy

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for culture education. Additionally, a model of cultural competence and related discussion about cultural awareness as a component of cultural competence are explored.

Dedicated Courses and Assignments

Dedicated courses within a nursing curriculum or specific learning activities within a course are the common methods by which culture is taught (Lipson & DeSantis, 2007). For example, Munoz, DoBroka, and Mohammad (2009) evaluated the benefit of a 7-week pilot multidisciplinary course created to provide cultural awareness, knowledge, skills, encounters, and desires among students. Although the researchers reported growth in acquisition of cultural knowledge, skills, and desire, time limitations resulted in an inability to address all the questions raised by students on critical issues. Sanner, Baldwin, Cannella, Charles, and Parker (2010) assessed the effectiveness of a 3-hour cultural diversity forum, which included a keynote presentation, shared meal, and small-group interactions. Although the forum positively affected students' openness to diversity, it was uncertain whether the experience added to the students' cultural understanding and competency (Sanner et al., 2010).

Service-learning and immersion experiences are common approaches for teaching culture. Amerson (2010) evaluated the effectiveness of service-learning projects in a community health course. Significant increases in the cognitive, practical, and affective dimensions of perceived cultural competence were reported among all students after completing the service-learning project; no differences were noted among students who completed local projects compared with those participating in an international experience. Amerson concluded that the service-learning experiences enhanced cultural awareness because of the exposure to real-life health issues from a different perspective. Similar findings related to service-learning or immersion experiences have also been reported previously (Kollar & Ailinger, 2002; Mixer, 2008; St. Clair & McKenry, 1999). Although immersion and service-learning provide culturally enriching learning experiences, drawbacks include cost, access, and questionable long-term benefits. Such obstacles limit their adoption in nursing curricula on a large scale.

Integrated Approach

Teaching culture in an integrated approach across the curriculum is the most frequently cited and desired approach reported in the nursing literature (Calvillo et al., 2009; Gebru & Willmam, 2010; Hughes & Hood, 2007; Lipson & DeSantis, 2007; Liu, Mao, & Barnes-Willis, 2008; Sargent, Sedlack, & Martsolf, 2005). Calvillo et al. (2009) suggested that nursing curricula focus on the acquisition of knowledge, skills, and attitudes of cultural competence, which is best attained "through a series of cumulative educational processes" (p. 138). The careful planning of content in didactic courses with opportunities to apply this information in clinical practice is specifically recommended (Calvillo et al., 2009; Sargent et al., 2005). Without specifically planned learning activities, cultural competency in an integrated approach is easily diluted or lost in the midst of other competing variables within the curriculum. Unfortunately, the lack of content expertise or dedication among faculty can threaten the instructional quality or consistency of even the most well-thought-out plan.

Lipson and DeSantis (2007) reported that many nursing programs use a culture theory or model for an integrated curriculum approach, including the Purnell Model for Cultural Competence, Giger and Davidhizar Transcultural Assessment Model, and the Campinha-Bacote Cultural Competence in Delivery of Healthcare Services model. Gebru and Willman (2010) described a successful instructive/didactic model based on Leininger's Culture Care theory applied over a 3-year nursing program. Despite the presence of cultural models, Mixer (2008) reported that most faculty who report teaching culture care do not use an organizing framework.

In an attempt to determine the best approach for teaching cultural competence, Kardong-Edgren and Campinha-Bacote (2008) compared four nursing curricula. Two programs based their approach on a transcultural model or theory, one program integrated culture throughout the curriculum without a specific theoretical approach, and one program offered a two-credit culture class. The researchers found no statistically significant differences in students' cultural competence regardless of the approach used. It was suggested that advances in technology would bring forward new ideas for cultural teaching (Kardong-Edgren & Campinha-Bacote, 2008).

Emerging Pedagogy for Culture Education

New pedagogical approaches that show promise for teaching cultural content are simulation and virtual experiences. Rutledge et al. (2008) described an integrated simulation approach for cultural education. The process includes the use of a virtual hospital that features culturally focused cases involving videotaped encounters with virtual patients. The program allows students to conduct a health history by typing in a question and obtaining prerecorded videotaped responses. In addition, students participate in high-performance simulation based on the same cases previously described. Outcomes reported by the authors are limited to faculty and student feedback about the learning process. A conceptually similar commercial product, *Virtual Clinical Excursions*, is a software series featuring a virtual hospital and ethnically diverse virtual patients. The primary learning objective is for students to have computer-based clinical experiences (Tashiro, Long, & Sullins, 2005); it is unclear what the intent or impact has been related to cultural education.

Another emerging teaching tool that could be useful for cultural education is the virtual community. A virtual community is an online teaching application that features fictional characters in a community setting. Nursing students

learn about concepts through the context of the character stories within the virtual community. Virtual communities are unique in that students learn about health care issues through the diverse perspectives and lived experiences of the characters, and the character stories evolve over time. Three virtual communities (*The Neighborhood*, *Stillwell*, and *Mirror Lake*) are described in the nursing literature (Curran, Elfrink, & Mays, 2009; Giddens, 2007; Walsh, 2011). Although it has been postulated that a virtual community can enhance culture education in nursing (Giddens, 2008), no research has been conducted evaluating this potential to date.

Cultural Awareness and Cultural Competence

Because the outcome measure for this study focuses on *cultural awareness*, it is important to distinguish this concept from the larger perspective of cultural competence. Campinha-Bacote (2003) identifies five constructs within her model of cultural competence: awareness, knowledge, skill, encounters, and desire. Cultural awareness is a process of self-examination of one's own culture and biases toward other cultures, as well as becoming aware of racism. The process of developing a knowledge base about culturally diverse groups is referred to as *cultural knowledge.* The construct of *cultural skill* involves the development of skills needed to conduct a culturally based assessment, including history, examination, and preferences. The process of cultural interactions with individuals from culturally diverse backgrounds is referred to as *cultural encounters*. Finally, *cultural desire* refers to the genuine interest or internal motivation in becoming culturally competent. Foundational to this model is gaining an understanding that cultural competence is a continuous process as opposed to reaching a state of being culturally competent (Campinha-Bacote, 2003). All components are essential to become culturally competent; developing cultural awareness is a first step in this journey.

Purpose of the Study and Research Questions

The literature review reflects many ideas and strategies to teach culture to nursing students, yet the actual effectiveness of many approaches is unclear. The purpose of this study was to explore the benefit of using a virtual community for culture education among nursing students. Because students are exposed to diverse perspectives and points of view among the virtual characters, we were interested to know if the use of virtual communities would influence cultural awareness. According to Campinha-Bacote (2003), cultural awareness is the first step in the development of cultural competence. The two research questions for this study were the following:

> *Research Question 1:* Does the virtual community stimulate cultural awareness among nursing students?

> *Research Question 2:* Is there a difference in cultural awareness among nursing students based on the level of virtual community use?

Method

Sample and Design

The sample included 350 undergraduate nursing students enrolled in a first-semester fundamentals or skills course within five baccalaureate nursing programs. The programs were located across the country, including two on the East Coast and one each in the Southeast, Midwest, and West. A power analysis was calculated (power = .99; significance = .05), demonstrating that we could detect a medium effect size (Cohen, 1988), confirming an adequate sample size for data analysis.

The study design was correlational, examining the relationship between virtual community use and cultural awareness among nursing students. Faculty agreed to teach the fundamentals nursing course using the virtual community intervention for one academic semester. At the end of the semester, participants completed an exit survey. Analysis included descriptive and comparative statistics.

We obtained institutional review board approval at each nursing program prior to beginning the study. To minimize bias and address concerns associated with a conflict of interest, the lead researcher (who developed the intervention) collaborated with researchers from other academic institutions for data collection and analysis.

The Intervention

The intervention used in this study is a virtual community known as *The Neighborhood*. *The Neighborhood* features the unfolding stories of 40 characters over three academic semesters. Community character stories focus on common health-related issues experienced by individuals and families, and the nurse character stories focus on professional practice issues. The stories are enhanced with photos, video clips, and medical records. A newspaper and community home page links individual character stories to community events (Giddens, 2007). Faculty use the stories and other featured applications as a basis for learning activities with the intent to draw connections to concepts in didactic and clinical courses. Because featured characters are diverse, there are multiple opportunities for learning activities and discussion related to differences in personal preferences and decision making among the characters.

Three research studies using *The Neighborhood* have been published to date. In a qualitative study involving 40 undergraduate students in one nursing program, emotional connectedness and engagement were the themes reported among participants who used *The Neighborhood* over three academic semesters (Shuster, Giddens, & Roerigh, 2011). In another study involving 248 undergraduate baccalaureate nursing students who used *The Neighborhood*, the greatest

perceived benefits were reported among underrepresented minority students and students who expected to receive a course grade below an A. The researchers believed that these differences could be attributed to learning preferences among students (Giddens, Shuster, et al., 2010). In a third study, Giddens, Fogg, et al. (2010) reported a significant relationship between frequency of use and perceived benefits among nursing students who used *The Neighborhood*—in other words, the greater the use by faculty, the greater were the perceived learning benefits among students. The study also revealed that among frequent users, minority students reported greater engagement compared with White/Asian students, $F = 2.40(4, 308)$, $p = .05$.

Instruments

Two surveys were used in the data collection process: a demographic survey and an exit survey. The student demographic survey included participant age, gender, race/ethnicity, and previous health care experience. The exit survey was used to learn about the participants' personal experiences as users of *The Neighborhood.* A total of 22 questions were on the exit survey. Eighteen items formed four subscales (engagement in learning, cognitive outcomes, perception of usefulness, and cultural awareness); one item measured frequency of use, and three questions were open-ended responses. The 18 subscale items came from an item bank known as the Current Student Inventory (CSI), a component of the Flashlight Evaluation System (TLT Group, 2010). Prior to being included in the bank, all items undergo extensive content validity testing.

Specific to this study, three items formed the cultural awareness subscale; participants answered the following questions based on a 5-point Likert-type scale:

- How often were diverse perspectives (different races, religions, genders, political beliefs, etc.) included in class discussions or assignments (1 = *never*; 5 = *frequently*)?
- How often have you tried to better understand someone else's views by imagining how an issue looks from his or her perspective (1 = *never*; 5 = *frequently*)?
- To what extent do you agree or disagree that you better understand people of other racial and ethnic backgrounds that differ from your own (1 = *strongly disagree*; 5 = *strongly agree*)?

Procedure

Prior to the beginning of the study, faculty members teaching the fundamentals course from each school attended a 2-day workshop to learn how to incorporate the intervention into their teaching. Information provided at the workshop included an introduction to the virtual community, pedagogical basis for use, learning to log on and navigate the website, and examples of teaching strategies. A written resource, the *Neighborhood Faculty Guide*, which provided additional orientation information and teaching tips, was given to each faculty member. Specific learning activities were left up to individual instructors due to the variability of curriculum across the five schools; thus, we were unable to specifically control the frequency or quality of use among participating programs.

At the beginning of the semester, all participants were informed that their school was testing a virtual community for instruction and that faculty would be using the application in the fundamentals or nursing skills course. Those agreeing to participate in the study completed the demographic survey at the beginning of the semester and the exit survey at the end of the semester. Both surveys were administered and collected during a class session by the coinvestigators at each site. The completed surveys were sent to the research team for analysis. Participant demographic data were matched to exit surveys with codes; no personal identifiers were included in the data collection procedure.

Findings

A total of 342 participant surveys were collected out of 350 baccalaureate nursing students enrolled in a first-level course from the five schools previously described. The high response rate was attributed to the method of data collection (surveys were completed and collected during class sessions).

Participant Demographics

The majority of study participants were women (86.7%), and the average participant age was 24.4 years ($SD = 6.4$; range = 19-56). The racial/ethnic distribution was 55.4% White, 18.5% African American, 16.6% Asian, 3.1% Pacific Islander, 0.6% Native American, and 5.2% mixed race/other. Nineteen participants did not self-identify race or ethnicity. Federal data collection guidelines differentiate race from ethnicity. For this reason, participants were also asked to self-identify whether they had an affiliation with Hispanic/Latino ethnicity. Nine percent of student participants indicated such an affiliation. Fewer than half of the participants (37.5%) had previous health care experience.

Cultural Awareness and Level of Virtual Community Use

We were interested in determining whether the context of personal stories among culturally diverse characters in the virtual community would be effective in stimulating cultural awareness among students. The mean cultural awareness subscale score for all participants was 3.58 ($SD = 0.69$), with a range of 1.33 to 5.0. We noted a wide range of virtual community use by faculty (as reported by participants) across

Table 1. Participating School Profile

School	School Characteristics	Total No. of Participants	Reported Use Mean
1	College/university without academic health sciences center	62	1.95
2	College/university without academic health sciences center	77	2.40
3	Private, not for profit	102	2.64
4	University within academic health sciences center	66	3.85
5	Private, not for profit	43	2.42
Total		350	2.68

Table 2. Analysis of Variance Applied to the Cultural Awareness Mean According to Use

Group	Reported Use on Survey	Cultural Awareness, Mean (SD)	Analysis of Variance
No use ($n = 61$)	Never (1)	3.39 (0.69)	$F = 11.78\ (2, 339); p < .001$
Low use ($n = 203$)	Rarely or sometimes (2-3)	3.52 (0.70)	
High use ($n = 78$)	Often or very often (4-5)	3.81 (0.57)	

schools (Table 1), which presented an opportunity for us to examine differences in cultural awareness based on level of use. One item on the exit survey asked participants to rate the frequency of use. Specifically, participants rated the item "Attended a class where the instructor provided an activity or assignment based on *The Neighborhood*" on a 5-point Likert-type scale (1 = *never*; 5 = *very often*). This item represented the level of perceived student use of the intervention. A correlation between level of use and cultural awareness was significant ($r = .246; p < .000$). This indicates that cultural awareness among students appears to increase with intervention use by faculty.

To investigate this further, participant data were sorted into one of three groups: high users, or those who reported use often or very often ($n = 78$); low users, or those who reported use rarely or sometimes ($n = 203$); and nonusers, or those who reported no use ($n = 61$). Comparisons were made based on age, gender, race/ethnicity, and health care experience. No differences were noted, confirming that the groups were homogenous on these variables.

An analysis of variance statistical analysis was calculated on the mean cultural awareness subscale scores and reported frequency of use; these data are presented in Table 2. The differences were substantial and were not likely to be due to chance, $F = 11.78(2, 339)$, $p < .001$. A post-hoc Tukey test showed that the largest difference was between low-use and high-use groups. These results suggest that utilization of *The Neighborhood* was the main predictor of cultural awareness. From a practical application, this means that students who experienced high use of the virtual community were more aware of culture and diversity. It is possible that the intervention provided more opportunities for faculty to discuss cultural issues because of the cultural context of the stories.

Discussion

As mentioned previously, cultural awareness involves a process of self-examination of one's own culture and biases that might exist toward individuals of other cultures. Self-awareness also involves a self-recognition of how cultural attitudes and behaviors interface in professional nursing practice. The study findings suggest that virtual communities may be a useful teaching application to enhance the cultural awareness of nursing students. The fact that these findings emerged in fundamentals of nursing courses without specific intent to teach cultural awareness as a topic is especially intriguing. When students read the character stories, they are exposed to differing perspectives of the same event through the eyes of multiple individuals. They gain an understanding of thought processes and choices made by a character; these are central to the task of developing cultural awareness. It is possible that many students have never been exposed to, let alone critically examined, alternative points of view from such a perspective.

The longitudinal trajectory of evolving character stories in the virtual community provides a platform on which to deliver specific culture-based learning activities and assignments. For example, a faculty member might ask students to reflect on one or more character responses to an event and compare this with what they think and how they might respond to the same event. This is a safe way to begin exploring diverse points of view and opens the door for dialog about increasingly complex—and at times, difficult—situations, such as evidence of racism.

The cultural awareness subscale used in this study links only to the first step of cultural competence as described by Campinha-Bacote (2003). It is unknown whether the virtual community is effective for further facilitating the process of

becoming culturally competent by addressing other constructs, including knowledge, skills, encounters, and desire. For these reasons, we recognize that the findings should be interpreted carefully; at best, these findings provide an initial foundation for future research efforts.

A known limitation of this study was the lack of consistency in faculty use of the intervention (dose and efficacy). We purposefully targeted fundamentals- or skills-type courses because of the similarity in content found across multiple programs. Because we were unable to control the frequency or how the intervention was used, the level of reported use by participants provided an opportunity to make comparisons based on use. The comparisons made among nonusers, low users, and high users may not have been an optimal approach, but the results certainly provide initial support for the theoretical assumptions about virtual community benefits postulated by Giddens (2008).

Implications for Nursing Education and Recommendations for Further Research

As the population of the United States continues to become more ethnically diverse, nurse educators must find ways to introduce culture and engage students in the process of becoming culturally competent. Developing an effective program that is sustainable (in the event of loss of funding for special projects or loss of faculty with expertise) makes this a challenge. Technology applications such as the virtual community may provide a valuable educational enhancement to learning in classroom and clinical settings. An opportunity may exist to develop virtual cultural immersion experiences without the limitations associated with real immersion experiences (cost, scheduling, etc.). This may especially be helpful given the limited number of faculty with specific expertise to teach cultural content. For this reason, such innovative approaches should be rigorously developed and tested. Specifically, it is recommended that a planned cultural competence education approach using a virtual community platform be developed by experts certified in transcultural nursing to ensure the quality of strategies and assignments. This then should be tested to determine the benefits in terms of cost, sustainability, the ability of noncertified faculty to implement it effectively, and student outcomes using a validated instrument. If possible, it would be beneficial to also determine the outcomes of students beyond graduation as well, ultimately evaluating the benefit for translation into practice.

Because this issue extends to all health professions education, designing and testing an interprofessional education approach using a virtual community platform is another important consideration. Learning activities that include enriching discussions that reveal the perspective of students or professionals from nursing, medicine, pharmacy, physical therapy, and social work, among many other health professions disciplines, may ultimately be the most advantageous approach that we could collectively work toward.

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