

The Impact Of An Interdependent Conferencing Activity In An Online Rn-bsn Practicum Clinical Conference On Psychologocial Sense Of Community

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THE IMPACT OF AN INTERDEPENDENT CONFERENCING ACTIVITY
IN AN ONLINE RN-BSN PRACTICUM CLINICAL CONFERENCE
ON PSYCHOLOGICAL SENSE OF COMMUNITY

by

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A dissertation submitted in partial fulfillment of the requirements
for the degree of Doctor of Philosophy
in the College of Nursing
at the University of Central Florida
Orlando, Florida

Spring Term
2010

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ABSTRACT

RN-BSN students enrolled in a clinical course often have limited or no interaction with other students within the course due to geographic distance and individual preceptor assignments. Learning is often restricted to a student and his/her preceptor and instructor. Geographic and physical distance factors inhibit a student's perception of connectedness and learning. Interdependent interaction between peers, the instructor, and the professional community may increase student achievements and enhance a sense of connectedness.

The purpose of this study was to assess the effects of an Interdependent Conferencing Activity (ICA) in an online clinical conference on RN-BSN students' Psychological Sense of Community (PSOC). Students' perception of learning and connectedness are the secondary outcome measurements for PSOC. The ICA was developed to promote interdependence and interaction to enhance PSOC. The research supports the hypothesis that implementation of an ICA will increase PSOC in RN-BSN students in the intervention group when compared to the control and comparison group in an online clinical conference.

An experimental, pre-test, post-test research study was conducted to test the hypothesis that implementation of an ICA will increase PSOC in RN-BSN students in the intervention group when compared to the control and comparison group in an online clinical conference. RN-BSN students enrolled in their clinical practicum course (two sections over two semesters) were recruited to participate at the beginning of the course. Each of the sections had a web component. Those who consented to participate were randomly assigned to one of three groups: control, comparison, or intervention. The control group responded to focused questions; the comparison group answered questions related to the application of knowledge gained within their practicum experiences; and the intervention group

responded to inquiry about the same theoretical concept from the perspective of their total professional experience, citing examples to support or change evidence-based practice. The Classroom Community Scale (CCS) developed by Rovai (2002c) for use in online course assessment was administered at the beginning and end of the course to measure PSOC and its subscales of learning and connectedness.

A total of 67 students participated (control $n = 20$, comparison $n = 22$, intervention $n = 25$). The majority of subjects were female (91%) and Caucasian (83.6%). Their average age was 31.4 years and they had an average of 6.4 years of experience as an RN. With the exceptions of years of experience, demographic characteristics were similar for each group. There was a significant difference for PSOC among the groups (RMANOVA; $p = <.001$). Post hoc analyses indicated a significant difference in the total PSOC and the subscales of Connectedness and Learning between the experimental group and both the control and comparison groups.

Implementation of an ICA enhanced PSOC in an online RN-BSN online conference. The development and implementation of the intervention supported the research hypothesis, the 21st Century educational factors, and the use of experiential learning in the profession of nursing. This research addressed two critical gaps in literature: a paucity of research available on clinical conferencing in nursing, and clinical conferencing within the RN-BSN population. The ICA is an action that could easily be implemented in online conferencing.

ACKNOWLEDGMENTS

It is with the utmost respect and humility that I acknowledge my dissertation chair, Dr. Mary Lou Sole for her dedication and perseverance. The advice from Drs. Hennig, Hirumi, Ruland, and Wink has been invaluable. I am so fortunate to be surrounded by people who have supported me throughout this endeavor including family, friends, and students. The UCF College of Nursing has exemplified mentoring and role modeling at its best. I am blessed.

I would also like to acknowledge all of those who have completed the prior research in Psychological Sense of Community. I am especially grateful to Dr. Alfred Rovai for providing me the access and use of his Classroom Community Scale.

This endeavor is dedicated to my daughter, Kristen,
for her unwavering support and unending belief in me
and all those who had more faith in my abilities than I had in myself.

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CHAPTER 1: INTRODUCTION

Online education using the Internet has emerged as a major force in higher education (Gunaswardena, et al., 2006). Implementation of asynchronous learning networks in online higher education courses has escalated within the past decade (Dziuban, Moskal, Brophy, & Shea, 2007). Creation of asynchronous courses and increased focus on problem-solving or knowledge application challenge educators' responses to needed teaching/learning strategies for distance learning students.

Students of the Millennial age have taken communication to a new level and prefer a community focus to incorporate teamwork, creativity, and collaboration in problem-solving (Dziuban, et al., 2007). Students in the Millennial generation use the Internet for research far more often than they use the library (Jones & Madden, 2002).

Historically the instructor acted as the holder of knowledge dispersed among students, but this is no longer preferable or appropriate (Dziuban et al., 2005). During the 1980s, interaction was a method to demonstrate independence, but now it is believed that interaction promotes group and community interdependence (Gunaswardena, et al., 2006). Students desire to be active participants in influencing the knowledge that is created as an outcome of their involvement within a learning community. Students are bored and impatient with passive learning that occurs in a linear process resulting in information traveling back and forth between student and instructor: students now desire collaboration with multiple sources of input and to partner with decision-making (Prensky, 2006).

Online courses within post-secondary education are both accepted and demanded (Beitz & Snarponis, 2006). Although the demand for online asynchronous courses is high, many

educators have criticized online learning as decreasing socialization and promoting isolation by eliminating the face-to-face interaction of students and instructors (Marx, 2006). Nursing educators freely admit that development and implementation of online courses are major challenges (Tilley et al., 2006). Marx (2006), notes that doubt and problems with online courses are not enough to eliminate the online modality of teaching.

Online teaching/learning is less than 15 years old as it relates to an environment of instruction and learning. Objectives in traditional post-secondary education often focus on students' acquisition and retention of knowledge, a passive learning style. With integration of technology, student knowledge acquisition is readily available, resulting in a change of learning focus and indicates a need for a new education paradigm (Marx, 2006). Active learning, where students develop the ability to apply, analyze, synthesize, and evaluate learned knowledge in an array of situations, is critical to the advancement of life-long learning practices (Dziuban et al., 2007). Active learning enhances both learning of the individual as well as the group. Active learning allows students the opportunity to integrate and accommodate cognition of others into their own knowledge base (Marx, 2006).

Tools that evaluate outcomes of traditional face-to-face classes are often adopted to evaluate outcomes of online courses; however, these measurements only focus on proof of attainment of pre-determined knowledge for all by meeting the course objectives. Knowledge acquisition is no longer sufficient. Nursing students require the ability to use, adapt, synthesize, and evaluate knowledge for professional practice. DeBourgh (2001) notes higher level thinking and decision-making skills occur most often in clinical courses. Different strategies and evaluation methods are needed to assess the higher level learning.

Many schools and universities offer increased numbers of asynchronous courses (Rovai, 2002a). Problems arise when instructors do not realize the differences in modality of instruction between traditional face-to-face and online classes. In online courses, the consumer is different, so the product is different. Not only does the product need to be different, but different evaluation criteria to determine if student-centered course objectives are met is also required (Rovai, 2002b, 2002c, 2002d).

Twenty-first century education

Twenty-first century education must meet the needs of a changing world. Meeting the needs of a changing world necessitates a major educational paradigm shift (Kellner, 2000). Kellner (2000), notes that the “technological revolution” requires new pedagogy, curricula, practices, and goals to facilitate changing educational needs.

The Partnership for 21st Century Skills (2004) states educational systems must recognize and respond to the reality of the increased competitiveness and interdependence of today’s world. A changing curriculum requires new skills and outcomes. Identified interdisciplinary themes include global awareness, entrepreneurial literacy, civic literacy, and health literacy (Partnership for 21st Century Skills, 2004). Student outcomes go beyond the acquisition of core knowledge. Additional outcomes include learning and innovation skills; information, media, and technology skills; as well as life and career skills. Many critical systems are recognized as essential to student mastery of content and its application. The systems directly related to this research include integration of community resources beyond school walls, engaging students with real world data they will experience professionally and personally, and supporting

expanding community and international involvement. A comparison of 20th and 21st century educational factors is demonstrated in Table 1.

Table 1 Comparison of 20th Century to 21st Century Education Factors

20 th Century Education Factors	21 st Century Education Factors
Focus on content	Focus on outcomes
Lower level Bloom's taxonomy	Upper level Bloom's taxonomy
Acquisition of knowledge	Application of principles
Limited scope	Broad perspective
Teacher in charge, content dictates curriculum	Teacher facilitates, student needs dictate curriculum
Focus on single discipline	Multi-disciplinary
Dependent	Interdependent

(21st Century Schools, 2008, pp. 4-5)

Table 1 indicates an alignment of 21st century education requirements with needs recognized by higher education and professional development. Specific needs include performance, interdependence and interaction, interdisciplinary activity, active learning, and progression to higher levels of Bloom's taxonomy including synthesis, analysis, and evaluation. These factors are aligned with the use of Internet learning in nursing education for RN-BSN students.

Statement of the Problem

In the capstone practicum course, RN-BSN students are assigned to work with preceptors in community or public health settings. Students submit an electronic journal and Clinical Activity logs to the course instructor in order to demonstrate mastery of clinical objectives. The clinical instructor conducts student and preceptor visits, in person or by phone, throughout the semester. Student-to-student interaction is limited during the semester clinical activities. While this arrangement allows distant or working students the ability to meet clinical objectives, learning is restricted to a student interacting with his/her preceptor and instructor. Since students are working in different geographical areas and student-to-student interaction is limited, connectedness and learning from each other may be lacking. In short, the problem is that geographic and physical distance factors potentially inhibit a student's perception of connectedness and learning. Interdependent interaction among peers, the instructor, and the professional community may increase student achievements and enhance a sense of connectedness and learning.

Purpose of the Study

The purpose of this study was to assess the use of an Interdependent Conferencing Activity (ICA) in an online clinical conference to enhance students' PSOC. Students' perception of learning and connectedness are the measurements for the indicators of PSOC. The measurement tool used to determine PSOC was the Classroom Community Scale (CCS) developed by Rovai (2002c) for use in online course assessment of PSOC.

Research Question

The overall goal of this study is to answer the question: does use of ICA enhance the Psychological Sense of Community by RN-BSN students in an online clinical conference?

Hypothesis

To help answer the research question the hypothesis was tested. The hypothesis is: implementation of ICA will increase PSOC in RN-BSN students in the intervention group when compared to the comparison and control groups in an online section of a clinical conference. For purposes of this study, Psychological Sense of Community (PSOC) is defined as an individual's perceived feelings of connectedness and learning in an online environment. PSOC will be measured by the Community Classroom Scale (CCS). An Interdependent Conferencing Activity (ICA) is an educational activity to promote students perception of connectedness and learning in an online environment. The ICA used in this study is the application of specific discussions that promote interaction and interdependence on others within the same learning environment and the professional community. It is proposed that the use of an ICA will enhance PSOC in an online clinical nursing conference as measured by students' perception of connectedness and learning.

Assumptions

A number of assumptions underlie the study, including the Community Classroom Scale (CCS), reflects true measurement of Learning and Connectedness. It is also assumed that interaction fosters interdependence and that interdependence fosters growth of individual and group learning, which then promotes PSOC.

Importance of the Study

It is a universal educational goal for students to achieve enhanced learning from the educational process. The literature indicates that PSOC contributes to enhanced learning. This research can add to the body of knowledge in nursing, social sciences, and education. An intervention to enhance instruction in online courses can promote both connectedness and learning as evidenced by increased PSOC.

The profession of nursing is dynamic, requiring higher degrees of both autonomy and teamwork. The RN-BSN curriculum is a rich opportunity to build community learning to promote skills, since the student's core knowledge is indicated by licensure as a registered nurse and prior clinical experience. Students are from an array of geographical locations with varied professional experiences. The concept of PSOC has not been studied in relation to either of these two factors.

This study is important because it will gather empirical evidence contributing to the validation and enhancement of learning and connectedness in online courses. Students will glean more insight and experiential learning through interdependence. If the activity is successful, nurse educators will be able to a broader perspective and assist students with knowledge synthesis and evaluation more easily in an interactive, interdependent clinical post-conference.

This study will also strengthen the research related to PSOC in higher education and specifically in distance learning commonly used in nursing programs targeted for adult learners. Since online learning is a newer methodology in academia, there needs to be an effective means to evaluate outcomes of online courses.

The relevance of this research is to enhance learning and connectedness by implementing ICA in an online clinical conference. It is anticipated that interactivity of the ICA will promote socialization and learning beyond the scope of an individual student clinical experience. A broader scope of learning will enable students to make better-informed decisions based on additional shared clinical experiences as reported by peers and clarified by instructor and peers.

To keep pace with current educational and professional needs, information regarding solutions to the problems of Internet-based learning is essential for students, educators, and researchers in both academia and clinical practice. Chapter 1 reviewed the problems of Internet-based methodology in academia and the need to change pedagogies to align with educational factors for the twenty-first century.

CHAPTER 2: LITERATURE REVIEW

Chapter 2 reviews research relevant to this study and describes a theoretical foundation used to guide new research specific to the hypothesis. The initial theoretical foundation examined is Tu and Corry's (2002) framework for eLearning Community. The same attributes of this theory will be realigned and redefined to design an eCommunity Learning framework. The two frameworks overlap by supporting increased interaction and interdependence to enhance student learning. Many of the same attributes will be used with a different perspective particular to the group, setting, and application of this study

Review of relevant theoretical literature

Online learning

Information in the twenty-first century is increasing at a rapid pace (Marx, 2006). The Internet has joined people and information unlike any previously available communication tool. Access to information via the Internet is altering students' previous thoughts and expectations of the educational process (Dziuban et al., 2007). Traditional face-to-face interaction in a specific location for a specific amount of time does not always fit students' expectations of education. A singularly focused educational activity interferes with multi-tasking and multidimensional aspects of students' lives (Marx, 2006; Prensky, 2006). Traditional learning required that all students be in the same place at the same time to receive the same information. A growing trend in post-secondary education is students at different locations participating in learning activities at different times, referred to as asynchronous learning. Flexibility of asynchronous learning allows for better adaptation and time management (Dziuban et al., 2005).

According to Shiffman, Vignare, and Geith (2007), institutions of higher education offer online education to recruit students who previously lacked accessibility to the institution, to recruit new students, extend campus regions, potentially enhance diversity, retain on-campus students, facilitate fast-tracking to graduation, and possibly contain costs. A virtual Internet campus or classroom has no geographical boundaries (Shiffman, Vignare. & Geith (2007).

RN-BSN Population

The population of RN-BSN students is unique. These students are licensed as a Registered Nurse (RN) with either a diploma or Associate Degree in nursing. They are returning to elevate their academic degrees, not to obtain initial RN licensure. The education of this population involves a degree of professionally focused education and a professional working relationship within the community. The RN-BSN population has never been examined in light of different needs for online post-conferencing.

Sense of Community (SOC)

Initial Sense of Community studies were based on geographical proximity to define a community. Most of those studies examined the differences between connectedness of residents in rural versus urban settings. Following studies examined SOC in the workplace was then studied based on the close proximity and amount of time spent at work.

Klein and D'Aunno (1986) postulate that the role of the workplace is an integral component in an adult's life, and examined the effect of PSOC in the work environment. Their research was one of the first insights into the PSOC area and determined a correlation between PSOC and work behaviors. Community in the workplace is defined as an employee's sense of membership, participation, and identification with some work or work-related group. The factors

they believed influenced PSOC were characteristics related to individuals, job, leadership, work group, organization, and external organizational factors. These factors were impacted by work-related friendships, organizations, job class, and work. While research allowed Klein and D'Aunno to develop a framework for assessing PSOC in the workplace, it was exploratory and conceptual only. More research is needed in relation to work organizations and PSOC (Klein & D'Aunno, 1986).

Psychological Sense of Community (PSOC)

PSOC extends beyond SOC by examining issues that bring people together in ways other than physical or geographic connectedness. Research determined that people shared common issues that were psychosocially based, such as addictions, trauma, cultures, and beliefs.

PSOC in Psychosocial Studies

PSOC has been researched in various populations: women with eating disorders, abuse, or trauma in substance abuse recovery (Curtis et al., 2005), women and men in residential group homes recovering from alcohol abuse (Jason et al., 2001), and a group of recovering male alcohol addicts (Bishop et al., 1997). A study was conducted of 60 women (Curtis et al., 2005) suffering from a combination of eating disorders, substance abuse, and trauma. The study examined the effect of perceived social support on PSOC. Women who felt they had social support and were able to experience independent living as a result of social support, were more likely to have positive outcomes related to recovery from psychological and physical abuse.

Another psychosocial, societal impact of PSOC includes research of individuals with alcohol abuse problems. Jason et al. (2001) conducted a study of alcohol associated rehabilitation at different locations throughout the United States in group homes operating in four different

geographic areas in 1988, 1990, and 1992. A total sample size of 437 was reported and results were obtained via survey and/or interviews. The mean treatment compliance rate of all areas was 79 percent. Results indicated that shared-governance in residential group settings resulted in greater feelings of social support, autonomy and higher compliance rates than traditional inpatient treatment, outpatient treatment, or self-help group settings. The feelings of connectedness decreased the isolation experienced by troubled individuals. Positive outcomes related to PSOC enhanced the recovery process.

Bishop et al. (1997) examined 133 men suffering from substance addictions. This study assessed an ethnically diverse group of men in residential substance abuse rehabilitation. All participants were required to have been sober for a minimum of 24 hours before participation. PSOC results indicated that individuals experiencing similar life experiences have better recovery outcome from alcohol abuse with a higher perception of social support and interaction.

PSOC in Academia

McCarthy, Pretty, and Catano (1990) researched the phenomenon of student burnout related to PSOC in the academic population. Their findings confirm that increased involvement contributes to an increased PSOC and decreased student burnout. PSOC is again viewed as a positive condition for coping and survival.

Studies examined PSOC in academic settings categorized by course content (Johnston, 1995), by size of the institution (Lounsbury & DeNeui, 1996), and in virtual settings (Rovai, 2001, 2002a, 2002b, 2002d). Student burnout in college has also been addressed (McCarthy, et al., 1990). Psychological Sense of Community results were inversely related to burnout; higher PSOC was an indicator of lower burnout.

Lounsbury and DeNeui (1996) conducted a study comparing PSOC in three groups: (1) students living on-campus compared to those living off-campus, (2) students living on-campus compared to students belonging to a fraternity or sorority, and (3) students attending large universities compared to smaller universities. A convenience sample of 198 undergraduate psychology students participated. Ten students were enrolled in a large university with enrollment >20,000 students; 88 students were from small universities with enrollment <2,000 students; and 110 students were from another large university. Results indicated an inverse correlation between university size and PSOC, a higher PSOC in students living on-campus when compared to off-campus, and a higher PSOC for students belong to a fraternity or sorority. All results indicate a higher PSOC is associated with personal and social interaction.

Rovai (2001; Rovai, 2002a, 2002b, 2002c, 2002d) is one of the more recent researchers to study PSOC, and his particular area of research is PSOC in virtual classroom communities. Rovai (2002d) conducted research to test the degree of PSOC for 314 of 478 students enrolled in graduate courses offered online using the Blackboard e-learning platform. The average age was 39.25 years, with approximately 29% male and 71% female subjects. Major ethnic groups included 62% White, 26% African-American, and the remainder categorized as “Other.” Rovai (2002c) developed and implemented a pre- and post-test approach using his Classroom Community Scale (CCS). The study found students’ PSOC increased significantly over the semester, and females reported a greater PSOC than males.

Rovai’s (2002a) next research study compared the PSOC of 274 traditional face-to-face students to 52 asynchronous learning network (ALN) students in a graduate education course. He found no significant differences in PSOC between the two groups of students. Rovai (2002d)

suggested ways to foster PSOC in distance education using his previous data, supporting a strong PSOC in virtual classrooms.

Royal and Rossi (1996) studied PSOC in two different academic groups: 189 faculty/staff at three high schools, and 1,014 students at the same three schools. Factors that promoted PSOC in adults at both schools were tenure or length of employment, and status within an organization. Common support for enhanced PSOC of students was grade level, extracurricular activities, size of school, and longevity at same school. Royal and Rossi (1996) concluded that schools provided the same social and emotional support to students that workplace provided to adults, thereby promoting a high PSOC for individuals who involve themselves in the experience.

One qualitative study described PSOC in an online nursing course. MacIntosh et al. (2002) conducted a phenomenological study discussing adaptation of nursing students to online education. He concluded that teaching strategies for this modality should consider learner perspectives as well as teacher input.

Summary of PSOC Studies

All of the investigators conducting research in academic settings agreed that PSOC is an important component in the success of students' achievement. Advantages of enhanced PSOC are improved interaction, enhanced self-report of learning and connectedness, as well as decreased attrition and burnout. Research also demonstrated that PSOC is not limited to a neighboring community of adults and can be applied in other settings.

PSOC Measurement Tools

Multiple measurement tools have been developed to assess PSOC. Although there are several tools, all share the common thread of asking participants if they feel like they are

connected to the group and if they benefit from being a part of that group. Table 2 depicts a history of the development of a variety of PSOC measurement tools.

Several measurement instruments for PSOC have been used in the past. Schneider and Bartlett (1968) developed the Organizational Climate Scale with PSOC as a variable to assess human relations issues between managers and agents in the insurance industry. Outcomes were not significant with results noting reported self-perceptions could possibly be skewed depending on the participant. Continuing to focus on employment environments, Moos (1974) an environmental psychologist, developed the Work Environment Scale, contending that environment in work community will have an effect on productivity and choices made by an individual. Inclusion of social support was a major contribution to development and measurement of PSOC. Moos (1974) results demonstrated slight correlations between social support and productivity, but they were not significant.

Table 2: History of PSOC Measurement Tools

Tool	Yr	Author	Aspects	Reliability	Validity	Outcome	n
Organizational Climate Scale	1968	Schneider & Bartlett	Management: Managerial Support	.90	17-26 low agreement on how agency should be evaluated	Not encouraging	Manager 126
80 items			Managerial Structure	.65-.69		Conclusions based on self-reported perceptions should be used cautiously	Agents 385
Insurance agency setting			New Employee Concern	.56-.59			
			Agents: Intra-Agency conflict	.66-.76		Few significant differences needing clarification other than data	
			Agent Independence	.52-.58			
			General Satisfaction	.74-.78			
PSOC Scale	1981	Glenn	Competence Satisfaction	none	face	No significant difference in behaviors, attitudes and community characteristics representing PSOC / significance between Ideal and Actual perspectives of SOC	171 quota sample
			Ideal SOC level	.924			
			Actual SOC level	.972			

Tool	Yr	Author	Aspects	Reliability	Validity	Outcome	n
Perceived SOC Scale	1990	Developed by Chertok (theoretical, no location dependent)	Mission Connection Reciprocal Responsibility	N/A	N/A	N/A	N/A
	1997	Used by Bishop et al.	Mission Reciprocal Responsibility Disharmony	.93 .96 .95	None noted	Supports PSOC as multi-dimensional construct with beneficial implications	133 males in alcohol abuse recovery
	2001	Used by Jason, et al.	Mission Reciprocal Responsibility Harmony	None noted	None noted	No significant differences between Church group and recovering group	60 females in substance abuse recovery
CCS	2002	Rovai	Learning Connectedness	.93 overall	face	PSOC in online courses was equivalent to face-to-face courses	314 graduate students taking online courses

Legend: SOC Sense of Community
CCS Classroom Community Scale

The PSOC Scale (Glenn, 1981) evolved in an attempt to identify a range of community characteristics, actions, and attitudes that correlate to PSOC. To operationalize and measure those characteristics, actions, and attitudes, a quota sample of 171 was obtained from a target audience of three Israeli and American communities. There were no significant differences between the Israeli and American communities based on characteristics, actions, or attitudes.

Geographic communities were a major focus of research for McMillan and Chavis (1986). Their Sense of Community (SOC) Index measured the aspects of membership, influence, integration and fulfillment of needs, as well as shared emotional connections. The SOC Index is an ambiguous survey including questions designed to apply to any situation; i.e., “I feel that the people I (work with, live near, share a class with, etc.) care about me.” The index was used in several studies to determine that people in rural locales perceived a higher PSOC than people in urban areas. Collegiality and community interaction was significantly higher in rural areas than in urban areas.

Beyond the study of characteristics and behaviors of individuals within a geographical residence or work area, Chertok (1990) developed the perceived SOC Scale. This measurement scale transcended into psychosocial research of individuals recovering from addictive behaviors, psychological impairments, or had experienced physical trauma. This scale was used by Bishop, et al. (1997) in two separate studies. The first study’s population was 133 males in alcohol recovery programs. The findings support that PSOC was multidimensional and identified mission, reciprocal responsibility, and disharmony as characteristics identified by the scale. The study was repeated with 60 females in substance abuse recovery and the outcome identified the same common characteristics.

Rovai (2001) was the first to attempt to measure PSOC in online academic classes. The initial Classroom Community Scale was developed by Rovai (2002c) as an 80-item Likert-scale tool to measure the attributes of connectedness, cohesion, spirit, trust, and interdependence. After testing this instrument and analyzing the data, Rovai (2002c) further revised the CCS to include 20 Likert-scale questions with two attributes: connectedness and learning. The CCS will be used in this research as it has the best alignment with the research question and the outcomes reflect on the research hypothesis.

Learning Community vs Community Learning

There are two specific community-like terms that need differentiation: learning community and community learning. According to Tu and Corry (2002) a learning community is comprised of a group of individuals with a similar interest or goal that works together towards the acquisition of knowledge and/or accomplishment of a goal. A learning community tends to be structured and limited. A traditional classroom situation is an example of a learning community where the instructor and students have the same focus and plan to meet course objectives. An online course with limited interaction is another example. The learning takes place horizontally, with the same information being disseminated and the aim of the course being the completion of predetermined outcomes. The outcome of a learning community is educated individuals.

Several researchers (Schlager et al., 2000; Tu & McIsaac, 2001) agree that community learning goes beyond the traditional, structured classroom. It allows learning to take place between individuals, between sub-groups within the class, and beyond the parameters of the class. Community learning promotes life-long learning by supporting both the individual learners

as well as the community-learned experience. An online, asynchronous course of professionals with an instructor serving as facilitator will meet course objectives, but in a different way. Meeting the course objectives involves including prior professional experience from outside and within the community. Community learning tends to be less structured to allow for unpredictable input and experiential learning. The outcome of community learning is an educated community due to its synergistic nature. An online clinical post-conference of RN students completing a community/public health practicum is an ideal descriptor of community learning.

Tu and Corry (2002) also note that in a community learning experience, learning and goals attainment often go beyond the objectives of the course. Supporting life-long learning exemplifies community learning where learning about the concepts and application of the course objectives become more important than the objectives themselves (Marx, 2006). In community learning, learning is both horizontal and vertical where all in the community attain the same basic knowledge, but application of that knowledge extends learning vertically to accommodate future search of continued learning and has no predetermined end point. Andrew and Ferguson (2008) report community learning in the United Kingdom (UK) indicates favorable outcomes in nursing education from a combination of academics and clinical experience which produces outcomes that are both scholarly and pragmatic.

eLearning Community

The eLearning Community model (Figure 1) developed by Tu and Cory (2002) inspired the development of an eCommunity Learning model by this author. The same components will be used with a different interpretation and use within the new framework.

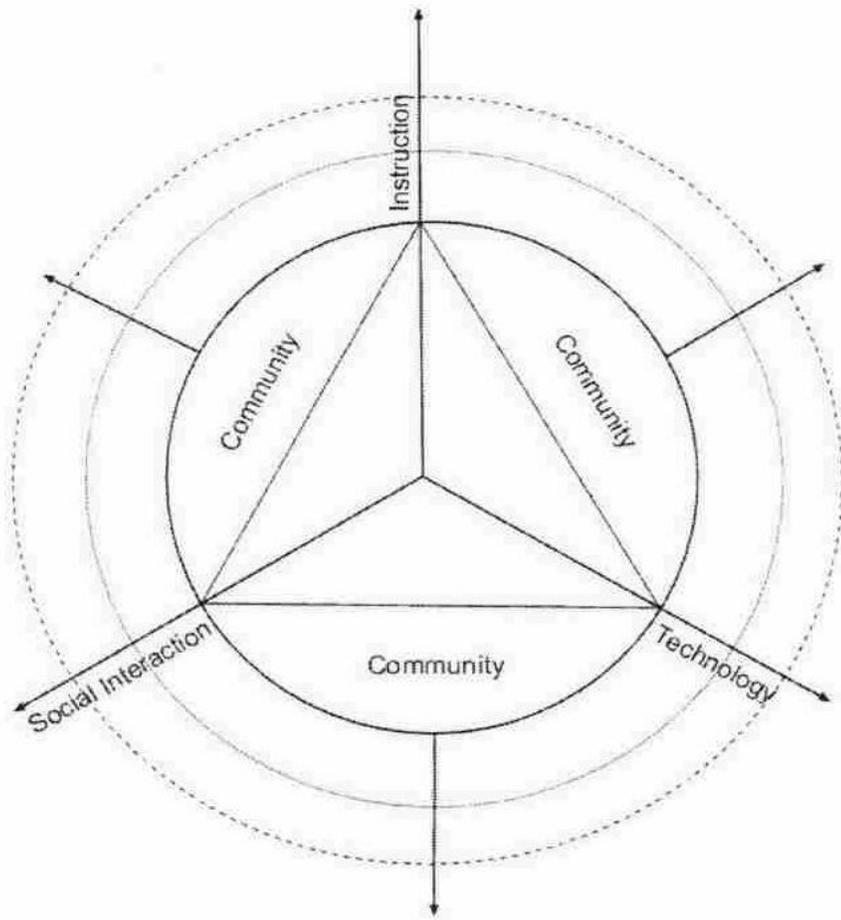


Figure 1: eLearning Community Model (Tu and Corry, 2002)

The four dimensions of online learning community include instruction, social interaction, technology, and community (Figure 1). This four dimensions framework (Tu & Corry, 2002) is the primary focus in developing a new eCommunity Learning model. The eCommunity Learning model will be used to will be used to examine how an online clinical conference can impact PSOC. Instruction is the traditional interplay between instructor and students within a course. Social interaction portrays interactivity between peers. Technology is the methodology of information acquisition and exchange. Community refers to students.

Instruction

Instruction is defined as the delivery of information to enable learning. It is the process by which knowledge and skills are transferred to students. Instruction applies to both training and education (NIU, 2006).

Social Interaction

Social Interaction is defined as an event when two or more people have a discussion or interchange that results in experience for all parties (US Office of Special Education Programs, 2005). Boyer (1995) agrees that an essential and primary element of education is community. Communities of learning using technology for communication build relationships to access not only knowledge, but socialization as well (Billings and Kowalski, 2005). In an online course, students have peers and an instructor to assist in validating or changing individual performance. DeBourgh (2001) contends that a clinical conference is a perfect venue for community focused learning. Absence of contact interaction shifts focus to a community of learners in an online social group as opposed to individual student learners (Tilley et al., 2006). Online discussions

areas and course email are examples of tools that facilitate social interaction within Internet based courses.

Technology

Technology is defined as a body of knowledge used to create tools, develop skills, and extract or collect materials; the application of science (the combination of scientific method and material) to meet an objective or solve a problem (NIH & NCRR, 2005). College students use technology to a greater degree than the general public (Jones & Madden, 2002), so using technologically based tools to implement an additional learning modality is a logical move. The use of online courses meets the technology component.

Community

Within the eLearning Community framework, community refers to the group of students participating in the online course. It does not include anyone outside of the course.

Other Considerations

There are three other dimensions that are considered for this study: directionality, outcome, and structure. The directionality of a learning community is a bidirectional, dynamic process. The interplay of the course is primarily between student and instructor, or student and student. The outcome of a learning community is educated individuals with pre-determined objectives. All students learn the same information and are evaluated over the same material. The structure of a learning community is pre-determined with limited interaction outside the objective of the course.

eCommunity Learning

The eLearning Community model has inspired development of an eCommunity Learning framework by this author to guide this study. Components of Tu and Corry's (2002) model will be used with a different interpretation within a new framework.

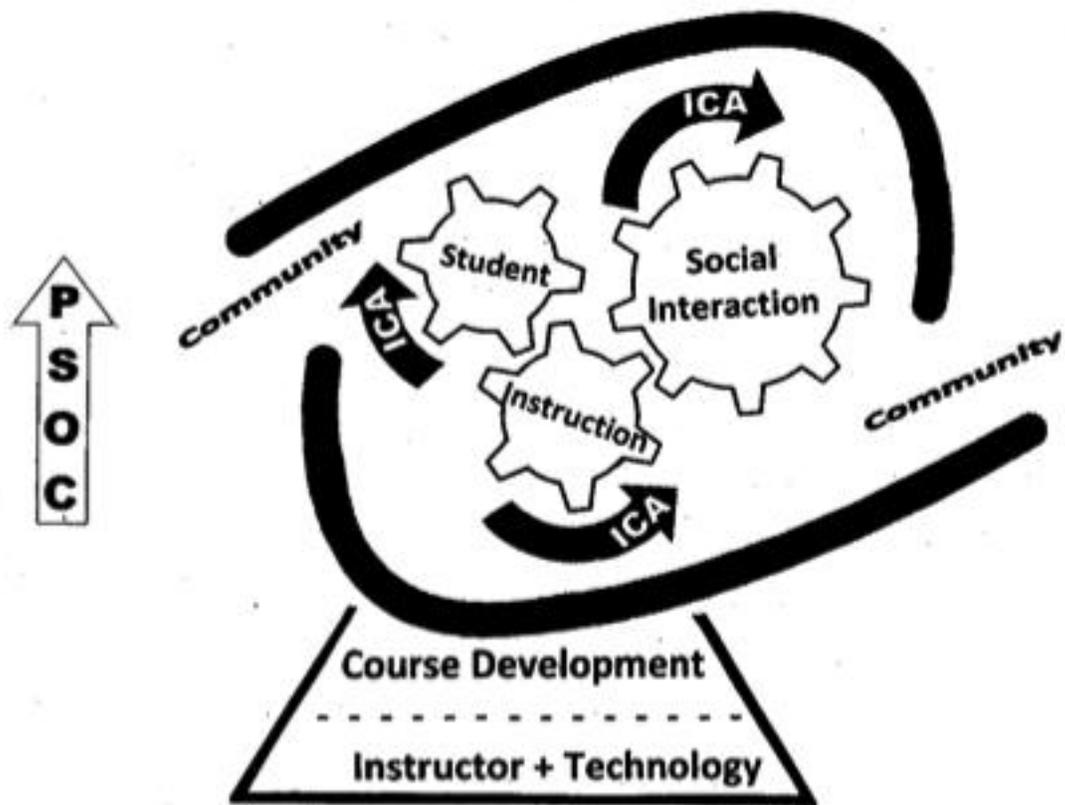


Figure 2: eCommunity Learning Model

Instruction

In eCommunity learning, instruction goes beyond delivery of information at development of the course and continues to facilitate the community learning process within the course. It is initially the process by which knowledge and skills are transferred to students, but the process only accounts for approximately 30% of the instructor/facilitator role. The facilitator role of the instructor is responsible for guiding, motivating, encouraging, and promoting synthesis of information among course participants. Instruction is the primary concept that will be impacted by this study. An online ICA will be used to differentiate mode of instruction for the intervention group of students.

Social Interaction

Social Interaction differs in an eCommunity Learning scenario as professional experience and diverse practicum assignments involve interaction more far-reaching than the course. Social interaction is used to share experiences, think critically, and problem-solve with other professionals. Social interaction goes beyond development of cognitive solutions, it involves learning of different communities, different skill sets, and different policies that play a part in Community Learning. Online discussion areas, announcements and course mail in Webcourses are examples of tools facilitating social interaction.

Technology

Technology is defined as a body of knowledge used to create tools, develop skills, and extract or collect materials. It is the application of science (the combination of scientific method and material) to meet an objective or solve a problem (NIH & NCRR, 2005). While technology is a critical component of Community Learning, it is not considered dynamic as depicted in the

Learning Community framework. The use of technology by participants and facilitator is synergistic, but technology itself is stable. Use of online Web-based courses as a foundation for course offerings in this study meets the technology component requirement.

Community

Within the eCommunity Learning framework, community refers to students, professional community, and public. This definition is much broader than the description used for eLearning Community which is limited to the participants enrolled in the online course.

Other Considerations

There are three other dimensions that are considered for this study: directionality, outcome, and structure. The directionality of community learning is a multidirectional, synergistic process. The interplay of the course is between and among the instructor, all students, and the community. The outcome of a community learning is an educated community that not only meets the objectives of the course, but the needs of the community. This interdependence promotes PSOC and life-long learning. Student learning is unlimited as there are multiple sources of exposure to knowledge of the discipline of the nursing. The structure of a learning community is less structured and limitless to allow for unpredictable input and experiential learning.

Table 3 Comparison of eLearning Community and eCommunity Learning

Component	eLearning Community	eCommunity Learning
Instruction	Maintains instructor status	Changed from instructor to facilitator
Social Interaction	Dynamic	Synergistic
	Independent	Interdependent
Technology	Dynamic	Foundational, static –use of technology is functional, but presence of technology is structural
Community	Instructor, students	Facilitator, students, community
Directionality	Bidirectional	Multidirectional
Outcome	Educated individuals Accomplish objectives	Educational, static Increased PSOC
		Lifelong learning
Structure	Structured and limited	Less structured and limitless to allow for unpredictable input and experiential learning
	Noun	Verb

RN-BSN Student Clinical Conference

Although clinical post-conferencing is critical to nursing education and is part of the curriculum, there is a paucity of research related to clinical conferencing in literature. Wink (1992) published the first research-based article on clinical conferencing. The study examined the effect of an intervention on faculty use of asking higher quality questions. Letizia (1996) continued research in post-conferencing by examining learning environment. She defined learning environment as an atmosphere that facilitates students and instructor interaction and communication to enhance learning. This research specifically examines online post-conference activity of a group of RN-BSN students who are located in different geographical areas and working with individual preceptors. Student subjects in this research already possess an RN license and have earned a diploma or associate degree in nursing.

Gaps in the literature

One area that lends itself to additional research is a community defined by its profession. A profession is a group defined by its membership, which has its own unique communication system (McMillan & Chavis, 1986). One could study interaction and dialogue within a profession.

An additional area needing further investigation is qualitative research related to PSOC (Banyard & Miller, 1998). Previous studies have predominantly used a SOC index with Likert-style responses. While this type of instrument can verify the existence or strength of SOC, it assumes that the attributes of McMillan and Chavis' (1986) theory are intact.

Summary

Chapter 2 reviewed the literature highlighting PSOC and its attributes. Two similar, but different models, eLearning Community and eCommunity Learning were compared. The eCommunity Learning model demonstrates a better fit for clinical post-conferencing in an online RN-BSN course. Tu and Corry (2002) designed a framework for a learning community depicting the influence of instruction, technology, and social interaction to facilitate needs of the student community. Surrounding rings of the framework figure (see Figure 1) show potential growth areas of individuals along with community. The proposed new eCommunity Learning uses cogs within the framework to signify interaction and synergism of the model. The ICA intervention fosters the promotion of PSOC. Both frameworks use the same components with different perspectives, definitions, and outcomes. This study begins to examine the differences and the use of an ICA to answer the research question, thereby supporting the hypothesis.

CHAPTER 3: METHODOLOGY

Chapter 3 describes the methods and procedure for conducting the study. It examines the components of the proposed experimental pre- post-test design, its implementation, and explores methods of analyzing the data. The research question was: Does use of ICA enhance the Psychological Sense of Community by RN-BSN students in an online clinical conference?

Research Design

The research design for this study was an experimental, pre-test, post-test design (Figure 3). Completion of an online pre-test indicated agreement to participate in the study. Those students were randomly assigned to one of three groups: the control, comparison, or intervention group.

Consent	R	O ¹	Control Group	O ²
Consent	R	O ¹	Comparison Group	O ²
Consent	R	O ¹	Intervention Group	O ²

Legend: R = Random
O¹ = CCS pre-test
O² = CCS post-test

Figure 3: Experimental Design Schematic

Variables

Dependent Variable

The dependent variable of the study was PSOC. PSOC is a personal experience based on social interaction that results in potential feelings of belonging, membership, and sharing of information and experience. For the purposes of this study, PSOC is defined as an individual's perception of connectedness and learning as a result of instruction, technology, and social interaction as measured by the CCS scale developed by Rovai (2002). PSOC is a measure of the culmination of learning and connectedness indicative of community learning.

Independent Variable

The independent variable of the study was implementation of an Interdependent Conferencing Activity (ICA). ICA is an active educational learning endeavor to promote learning and connectedness through instruction, use of technology, and social interaction. Its underpinnings are based on Tu and Corry's (2002) eLearning Community model (Figure 1). The intervention of an online ICA is firmly based in the framework of eCommunity Learning. Interaction, engagement, collaboration, and moderation are vital elements of effective online learning. Community learning acknowledges the importance of interplay person to person, person to group, group to group, and includes the community outside of the designated student participants. For purposes of this study, implementation of an ICA with the intervention group was the operational definition.

Mediating Variables

The potential mediating variables in this study are age, gender, ethnicity/race, and number of years as an RN. Random assignment to groups addressed these potential mediating

effects; however, these data were collected to describe the sample and test for equivalence among groups.

Sample

The population studied in this research consisted of RN-BSN students in the final semester of a baccalaureate nursing program enrolled in the capstone clinical course. Inclusion criteria included (a) university eligibility to enroll in the course; (b) registration in the four credit hour clinical course; (c) completion of all previous general education, foreign language, and pre-requisite courses; (d) ability to navigate Web-based courses; (e) completion of one or more online nursing course(s); and (f) ability to read and write in English. Exclusion criteria included any student repeating the course. Based on prior enrollment statistics, approximately 60 to 80 students enroll in the course each semester.

A preliminary power analysis was performed to determine the needed sample size. Considering a medium effect size of 0.3, and a significance level of .05, the study required a sample of 83 participants to achieve 80% power.

The setting for the study was a college of nursing in a major metropolitan university in central Florida. The college has a variety of nursing programs, including a RN-BSN program that is offered online. The course being examined for the purposes of this study was a RN-BSN four credit hour capstone clinical course with an accompanying online conferencing component. Although the majority of students live in Florida, students often reside in a variety of cities throughout the United States, and sometimes abroad. Students complete clinical requirements in the geographical region of choice with a preceptor in an agency where an affiliation agreement is in place.

Ethical Considerations

Both the pilot and research study were approved by the Institutional Review Board (IRB) at the University of Central Florida (Appendix A). The study was considered exempt as there were no identified risks to students and grades would not be affected by participation or non-participation. Students were assured of anonymity and understood that data would only be reported in aggregate form. Participation in the pre- and post-tests implied consent.

Data Collection Instrument

The Classroom Community Scale (CCS) (see Appendix B), was used to measure PSOC. Questions are based on perception using words that align with feelings, beliefs, values, or trust. The tool consists of 20 questions with a five point Likert-style scale with responses of strongly agree, agree, neutral, disagree, and strongly disagree. The score ranges from 1-5 for each question. Total scores range from 0 to 80. The overall score of the instrument measures PSOC, and a higher score reflects a higher sense of community. The two 10-item subscales are connectedness and learning.

The CCS was developed by Rovai (2001, 2002a, 2002b, 2002c, 2002d) to evaluate outcomes of online instruction. Rovai initially began with an 80-item test with multiple aspects to be measured: connectedness, cohesion, spirit, trust, and interdependence. However, he revised the tool based on the belief that two major attributes effectively represent PSOC in an online classroom community: learning and connectedness. Since the items on the CCS are closely aligned with the current study's framework, this instrument was chosen to measure the dependent variable of PSOC.

Rovai (2002c) field-tested the survey with 375 students enrolled in 28 online graduate leadership and education courses. The elements originally measured by CCS were feelings of connectedness, cohesion, spirit, trust, and interdependence among members (Rovai, 2002c). Those five characteristics were evaluated by faculty experts and the CCS survey was further refined to reflect two sub-groups of connectedness and learning as major outcomes being evaluated. The internal consistency of the CSS was .93 as measured by Cronbach's α , indicating a high degree of reliability. Cronbach's α for the connectedness subscale was .92, and .87 for the learning subscale (Rovai, 2002c).

Face validity was determined by three university professors who taught educational psychology courses both face-to-face and online (Rovai, 2002c). The CCS items had a Flesch Reading Ease score of 68.4. Most standard surveys score 60 to 70 points out of a possible 100, points with the higher score indicating the document is easy to understand. The CCS items also reflect a Flesch-Kincaid grade level score of 6.6. The evolution of PSOC attributes is depicted in Table 4.

Table 4 Evolution of Attributes of Psychological Sense of Community

McMillan & Chavis	Chertok	Lounsbury & DeNeui	Rovai	Rovai
1986	1990	1996	2000	2001
Membership	Mission	Feelings of belonging	Connectedness	Connectedness
Influence	Connection	Commitment	Cohesion	Learning
Integration & fulfillment of needs	Reciprocal Responsibility	Fulfillment of needs	Spirit	
Shared emotional connection		Attachment	Trust	
		Overall sense of community	Interdependence	

Data Collection Process

Recruitment

An introductory letter to each student was posted in the Web-based course on the first day of class explaining the research, the request for participants, and assurance of protection and anonymity (see Appendix C). Students were told their participation in the study was entirely voluntary and there were no risks or rewards attached to their participation. A student could change his or her decision to participate at any time during the study. A guarantee of anonymity with their identity and their individual responses was made. Data would be reported as an aggregate without specific identifiers. Students choosing to participate completed the CCS within the first two weeks of the course as a pre-test and within the last two weeks of the course as a post-test.

Collection of Data

Data were collected from Web-based courses using the Assessment function of the Blackboard platform. This function allowed students to access and complete the pre-test online. Results were available to PI to gather the data. Neither results of the testing nor participation status of students were posted. Data were de-identified by removing student names and assigning random case numbers generated by the "RANDBETWEEN" function of Microsoft Excel. The PI kept a record of student names and random numbers separate from the data collection sheet, only randomly assigned numbers appeared on the final data collection form. The data were entered into SPSS by a graduate assistant and verified by the Principal Investigator (PI). The PI reviewed at least 25% of entries to check for accuracy of data entry. Data were preserved on a USB drive and kept locked for safety and confidentiality.

Procedure

All individuals enrolled during the study period in NUR 4604L, Community/Public Health Practicum for RNs, were asked to participate in the study during the first 14 days of the course. Those choosing to participate were asked to provide demographic information as well as participate in pre- and post-testing.

Following completion of pre-test, students were randomized to one of three groups using a computer-generated program: control, comparison, or intervention. Students choosing not to participate were also randomized to one of the groups to ensure equal number of students for course management. Table 5 compares the groups' online conference experience.

Data were collected over two subsequent semesters to obtain an adequate sample size. These were Summer and Fall semesters of 2008. All procedures were followed the same during both iterations of the course and fidelity was monitored in both sections.

Table 5 Comparison of Control, Comparison, and Intervention Groups

	Control	Comparison	Intervention
Clinical Logs	Bi-weekly	Bi-weekly	Bi-weekly
Required Postings	Three	Three	Three
Discussion Areas	Theoretical	Theoretical + Practicum experience	Theoretical + Practicum experience + Prior life experience
Dependence	Independent	Independent	Intrdependent

Similarities within groups include clinical log submissions and required number of discussion postings. The differences occurred in the foci of discussion topic for the different groups and the added dimension of interdependence in the intervention group. Interdependence is shown by supplying peers with research data to either support or offer a different perspective of the peers' original posting. Table 6 lists how the dimensions of instruction, social interaction, and technology should be included in the development of a learning community. The last column of this table gives examples of how the use of an ICA was incorporated to meet the requirements of both a learning community and community learning. Table 7 demonstrates the differences in the foci and interdependence requirement for the groups in community learning. The five Discussion questions are shown for each group. The questions for the intervention group exemplify the use of ICA.

Table 6 Activities for Promoting Community Learning

Dimension	Key Concept	Suggested Activity	Planned ICA Activity
Instruction	Interactivity	Coaching with feedback	Make assignments, provide example of expectation, encourage interaction by soliciting opinions and experiences of others, and provide feedback at every level.
	Community engagement	Determine knowledge. Build important topics or issues. Gain members' background context. Pulling information together for reflection	Initial posting will consist of each student providing a professional background to establish a baseline of clinical experience. Most topics will evolve from the student's bi-weekly clinical experience; others will involve participation in predetermined case studies. Instructor will provide reflection of experiences and responses for first 2 weeks, students will then either volunteer or be assigned to an end of week reflection.
	Collaboration	Adopt seminar-style presentations/discussions. Apply debates. Conduct group projects. Apply simulations. Apply role-playing exercises. Engage the collaborative composition of essays. Exam questions, stories and research plans.	Presentations will primarily be exemplars to clarify expectations since this is the clinical conference part of a class, not the didactic portion. Stories will be abundant, both in relating weekly experiences and drawing on previous clinical experiences for background, decision-making, and outcome comparison.

	Moderation	Participate in discussion regularly. Express honest opinions. Engage peer moderations. Venting toward technology, content & even the facilitator is acceptable & evident. Show concern & support for the community.	Students will participate a minimum of twice weekly; facilitator will participate a minimum of four times bi-weekly. Facilitator will respond to every student and every student will respond to at least one other student bi-weekly. A discussion area will be provided for “Technical Difficulties,” “Questions for Instructor,” “Questions for Peers” and “Important Information;” all will allow for student input related to personal issues with the course.
Social Interaction	Social Context	Become familiar with recipients. Build informal social relationships. Build trust relationships. Foster positive attitude toward learning community. Support private & convenient access & locations. Become familiar with members’ characteristics.	Each student will introduce himself to the group and the facilitator will introduce herself as well, being sure to include professional nursing experience, and nursing education experience, as well as anything that a student feels important information to share with the group. Discussion areas for each week as well as the Moderation discussion areas listed above will be available to all. There will be a “Main” discussion area where the facilitator will send out important announcements and/or reminders to the course participants. The Course Mail function of Webcourses provides private communication within the course the facilitator as well as every individual within the course. A “Thought for the Week” will be sent out weekly via Course Mail to every individual. “Thought for the Week” will be encouragement, motivational, or reflective.
	Socio-cultural & socio-cognitive environment	Provides multiple viewpoints. Supports reflection. Offers frequent feedback. Encourage critical thinking.	Facilitator will reply to student experiences with requests for more insight from the student and input from other students related to the posting. Suggestions will be made by the facilitator, but all will be encouraged to reach an outcome that best reflects individuals’ beliefs, values, experience, and professional role.

Technology

Assess infrastructure by evaluating network, computer systems, security, & information. Anticipate new roles & responsibilities. Select the right technologies & partners. Adopt realistic collaboration.

Facilitator will work closely with Webcourses to make necessary components easily available and to problem-solve quickly when needed. There will be a back-up email means to communicate with students should the Webcourses system fail or be down for updates of the system.

Caption: Andrade et al., 2001, Tu & Corry, 2002)

Table 7 Discussion Questions

Discussion 1	Topic: Advocacy
Control	Define/describe advocacy in nursing. List and discuss at least 3 areas in nursing where you feel advocacy is essential. Provide research-based rationale for your response.
Comparison	Describe an incident during your practicum experience that demonstrates either a great example or demonstrates the need for patient advocacy. Provide research-based rationale for your response.
Intervention	Think back over your nursing career. Share with your group a particularly “Memorable Moment” that you feel is an excellent example demonstrating the need for being a nurse advocate. For confidentiality, do not use names of anyone and do not identify the healthcare institution - just describe the situation and support why you think this was a crucial moment. Provide at least two peers with a research article that either supports or indicates another way that the advocacy could have been structured.
Discussion 2	Topic: End-of-Life
Control	Define/describe end-of-life care in nursing. List and discuss at least 3 areas in nursing where you feel end-of-life care is essential. Provide research-based rationale for your response.
Comparison	Describe an incident during your practicum experience that demonstrates either a great example or demonstrates the need for patient end-of-life care. If you have not had this experience in the practicum, explore the policy and procedure manual in the healthcare setting where you are assigned and report on that policy. Explain if you support or would encourage changing this policy. Provide research-based rationale for your response.
Intervention	Think back over your nursing career. Share with your group a particularly “Memorable Moment” that you feel is an excellent example demonstrating the need for end-of-life care. What was the impact of this care? For confidentiality, do not use names of anyone and do not identify the healthcare institution - just describe the situation and support why you think this was a crucial moment. Provide an article, web link, or some specific research resource to either support the original student's opinion, or to refute the opinion if you find research that takes a different perspective on the policy.
Discussion 3	Topic: Professionalism
Control	Define/describe professionalism in nursing. List and discuss at least 3 behaviors that would best exemplify professionalism in nursing. Provide research-based rationale for your response.
Comparison	Describe a behavior during your practicum experience that demonstrates either a great example or indicates the need for professionalism in nursing. Explain if you support or how you would encourage changing this behavior. Provide research-based rationale for your

	response.
Intervention	<p>Think back over your nursing career. Share with your group a particularly “Memorable Moment” that you feel is an excellent example demonstrating professionalism in nursing. What was the impact of this professionalism?</p> <p>For confidentiality, do not use names of anyone and do not identify the healthcare institution - - just describe the situation and support why you think this was a crucial moment.</p> <p>Provide at least two peers with a research article that either supports or indicates another way that professionalism could have been structured.</p>
Question 4	Topic: Teaching/Learning
Control	<p>We have all been taught that hand washing is the key to preventing the spread of infection. It is extremely important to prevent hospital acquired infections (AKA nosocomial infections). Find an online resource specifically giving information on infection rates related to improper hand washing or success rates with proper hand washing. Relate the statistics in this posting and provide a hyperlink to your online resource. The CDC is a great resource for national statistics and there are many other avenues for local statistics.</p> <p>What would you do if you saw a health care practitioner (nurse, physician, tech, or phlebotomist) leave a patient’s room and not wash his/her hands? Please come up with at least one creative idea to promote and enforce hand washing.</p>
Comparison	<p>Think back over the clinical experience related to your practicum during this semester. Share with your peers a "memorable moment" that somehow changed you. It can be a funny moment, an inspiring moment, an educational moment, or just a personal growth moment. We should learn something from every opportunity.</p> <p>Share information with your group about this instance. Do not use names of individuals or of healthcare agencies for confidentiality purposes.</p>
Intervention	<p>We have previously discussed the Nurse as teacher, now we're going to address the Nurse as a learner. Think back over your nursing career. Share with your group an instance that you feel exemplifies how a patient actually taught you something about nursing or life in general. Usually one of these memories will trigger an "I will always remember (name) ..." and remind you that nursing can be very humbling at times. I'm certainly an advocate for formal nursing education, but I also believe that nursing education can occur at the bedside.</p> <p>Include a Web site or other resource that addresses learning in the workplace</p> <p>For confidentiality, do not use names of anyone and do not identify the healthcare institution - - just describe the situation and provide a Web link or other resource.</p>
Question 5	Topic: Community/Public Health Care
Control	<p>Suppose for a moment that you are in charge of the health care programs offered in your county of residence via the Public Health Department. You may initiate only 3 programs in your county. Explain the 3 programs you would initiate and give rationale for your decisions. You should back up your decisions with county statistics. Find an online resource specifically giving information on your county's health care needs. Relate the statistics in this posting and</p>

	<p>provide a hyperlink to your online resource.</p> <p>Your response to peers should also include resources to reinforce or challenge your peer's decisions.</p>
Comparison	<p>Think back over the clinical experience you've had during this practicum this semester. Share with your peers a change that has occurred to your perception of community/public health nursing. Relate how this will impact your nursing practice. Will you view patients and/or patient care differently? Will you change some of the things you teach? Will you view nursing differently? These are just a few possible questions that you may answer. Look inside yourself and see what you've discovered during this clinical experience and what it will mean to your future professional nursing practice.</p> <p>Share information with your group about this experience. Do not use names of individuals or of healthcare agencies for confidentiality purposes.</p>
Intervention	<p>Hopefully, your RN-BSN education program has made you more aware of community-based nursing, its benefits and downfalls and its future in nursing. Think back over your nursing career. Share with your group a particularly "Memorable Moment" that you feel is an excellent example demonstrating the need for community-based nursing. What was the impact of this presence or lack of community-based knowledge?</p> <p>For confidentiality, do not use names of anyone and do not identify the healthcare institution - just describe the situation and support why you think this was a crucial moment.</p> <p>Provide at least two peers with a research article that either supports or indicates another way that community-based nursing care could have been structured.</p>

The post-test was made available during the last two weeks of each semester. A general announcement was sent out to all students as a reminder that the post-test was available. No reminders were sent directly to individual students. A total of three reminders were sent. The first was sent at two weeks before the last day of the course; the second went out at one week before the end of the course; and the last reminder was posted two days before the end of the course. This timeline was consistent for both semesters that the ICA was tested.

Pilot Study

The CCS tool had established internal consistency reliability, but only face validity had been ascertained. A preliminary study was conducted to assess the usefulness of the CCS in gathering data in the RN to BSN population. During the Summer and Fall 2007 semesters, lasting 12 and 16 weeks respectively, the Classroom Community Scale (CCS) was presented as a pre-test during the first half of the semester, and repeated as a post-test during the final week of the semester in NUR4636L Community as a Continuum Clinical. The course was a clinical course taken concurrently with an online didactic component. Each clinical section of the course had a Web account for online clinical conferencing.

A total of 69 students were enrolled in the Summer 2007 course. All students were offered equal opportunity to participate in the study following IRB guidelines. Those choosing to participate in both the pre- and post-test of the Classroom Community Scale numbered 34 (49.3%). A total of 90 students enrolled in the Fall 2007 course. Similar to the Summer class, all students were invited to participate in the CCS preliminary testing; 71 (78.8%) chose to engage in the CSS pre- and post-tests. Data were thus available from 105 students.

Internal consistency ranged between .79 and .89. Cronbach's alpha results for the CCS pre-test was .89 and for the post-test .79. A paired t-test was run to compare pre- and post-test results of the PSOC and its subscales. No significant difference was noted between pre- and post-test scores ($p>.05$). No intervention was provided; therefore, this finding was expected.

Data Analysis of research study

Two levels of data analyses were completed. A Repeated Measures Analysis of Variance (RMANOVA) was run to determine if significant mean differences of the dependent variable PSOC. Additional analyses were completed on the two PSOC subscales of Connectedness and Learning between the control, comparison, and intervention groups. If there were significant differences, post hoc analysis was completed.

Fidelity/Integrity

Fidelity of the research was promoted by having another faculty member with expertise in both content and online delivery monitor the ICA intervention. These courses were assessed a minimum of three times throughout each semester. The faculty member examined the construction of discussion topics prior to the semester and followed up on PI adherence to the parameters developed for the control, comparison, and intervention groups. The faculty member monitoring the course found there was no coercion for student participation, all students were offered the opportunity to participate, and identified no differences in treatment or grading of students within the study groups. She acknowledged that intervention was delivered as planned.

Limitations

As a capstone course, it is possible that PSOC was developed prior to this course. Although students do not go through the program as a cohort, they may be in several of the same

courses prior to the capstone course. They may also feel more connected simply because they will graduate at the same time. However, random assignment to groups should account for differences.

When students are responding to the pre- and post-test instruments (CCS), many factors outside of academia can influence their perception at the time they are completing the assessments. This could be a threat to internal validity. Again, random assignment addresses this potential limitation.

It is possible that study participants were those who value research. The sample is based solely on the number of registered students and their choice to participate. There is not an alternate source to recruit students.

A group of 17 concurrent nursing degree students were enrolled in the courses and participated in the study. A concurrent student is one who is taking both Associate degree nursing courses and Baccalaureate degree nursing courses at the same time. This group had completed the Associate Degree in Nursing the previous semester and was finishing the Baccalaureate Degree in Nursing in the semester of the study. Having already been in a cohort of other nursing courses together for all previous nursing courses, this group may have a greater perception of connectedness.

Summary

Chapter 3 described the methods for conducting this study. Methods were consistent between the two semesters that the study was undertaken.

CHAPTER 4: FINDINGS

Study findings are presented in Chapter 4. Data are presented to address the research questions and hypothesis. Demographic data and pre-test/post-test scores were gathered over the Summer and Fall 2008 semesters and aggregated for analysis. During these semesters, 128 students were enrolled in the RN-BSN practicum course. A total of 67 (52.3%) students participated in the study. Random assignment into three groups was as follows: Control (n=20, Comparison (n=22) and Intervention (n=25). All participants completed both pre- and post-tests. There were no missing data. Two non-participants completed the post-test only, and their cases were excluded from the data analysis.

This chapter describes the demographic data and study findings. If significant findings were determined, additional post-hoc analyses were completed.

Demographic Data

Demographic data collected were gender, ethnicity/race, age, and years as an RN. No differences ($p > .05$) were noted in demographic variables between the two semester cohorts. Aggregate demographic data are shown in Tables 8 and 9.

Gender

Females represented the majority of participants (91%). Two men were in each group. No significant differences were noted in gender among the three groups (Chi-square = .001, $df = 1$, $p = .97$).

Ethnicity/Race

The participants were predominantly Caucasian (83.6%). However, minority students were represented with 9% Hispanic, 4.5% black, and 3% Asian. No differences were note in percent of ethnic representation among the three groups. (Chi-square = 6.296, df = 3, p = .098).

Table 8 Participant Characteristics (Gender, Ethnicity/Race)

Characteristic		<i>n</i>	Percent
Gender	Male	6	9.0
	Female	61	91.0
Ethnicity/Race	Caucasian	56	88.1
	Hispanic	6	9.0
	Black	3	4.5
	Asian	2	3.0

Age

Participants ranged in age from 22 to 51 years. The average age of participants was 31.43 (s.d. 6.8) years. No differences were noted in mean age among the three groups, ($F = .52$, $df = 2, 64$, $p = .089$).

Number of years as RN

The number of years as an RN ranged from less than 1 year to 30 years. The mean for participants was 6.4 (s.d 6.34) years. This number needs to be qualified, as a score of 0 was assigned to students (20.9%) reporting less than 1 year experience as an RN. The remaining 53 participants (79.1%) had a mean of 8.04 years as an RN. There was a significant difference in years of experience between the three groups ($F = 3.213$, $df = 2,64$, $p = .047$). Post hoc analysis found that the years of experience for the comparison group was significantly lower than the intervention group.

Table 9 Participant Characteristics (Age, Years as RN)

Characteristic	Group	Mean	Std. Deviation
Age	Control	31.90	6.55
	Comparison	28.95	4.08
	Intervention	33.24	8.30
	TOTAL	31.43	6.80
Years as RN	Control	6.75	6.35
	Comparison	3.55	4.36
	Intervention	8.52	8.57
	TOTAL	6.36	6.34

Internal Consistency

Cronbach's alpha results for the pre-test were .80 and .91 for the post-test. These figures indicate good reliability of the CCS instrument and compare with Rovai's (2002c) values and those in the author's pilot study.

Psychological Sense of Community (PSOC)

The primary outcome variable was PSOC and its subscales: Connectedness and Learning. The hypothesis was: Implementation of ICA will increase PSOC in RN-BSN students in the intervention group when compared to the comparison and control groups in an online section of a clinical conference. Table 10 shows the mean scores for the PSOC by group. The aggregate scores on the PSOC pre-test ranged from 23-71. The scores on the PSOC post-test ranged from 30-74. Those in the Intervention group had the highest post-test scores in PSOC.

Table 10 Comparison of PSOC Pre-Test and Post-Test Mean Scores

Group	PSOC Pre-Test		PSOC Post-Test	
	Mean	Std. Dev.	Mean	Std. Dev.
Control	51.80	8.51	53.40	10.26
Comparison	48.68	10.59	54.00	9.71
Intervention	51.52	8.99	65.36	3.52
TOTAL	50.67	9.38	58.06	9.85

Computing a RMANOVA for repeated measures, there was a significant difference in the total PSOC score among the groups. The Box's Test for homogeneity of variance-covariance was significant at $p = <.001$; therefore Pillai's Trace is reported. Pillai's Trace = .224, $F = 9.228$, $df = 2$, $p = <.001$. Post-hoc analysis using multiple comparisons found a significant difference between the control group and intervention group ($p = .01$), as well as between the comparison group and intervention group ($p = .001$). There were no significant differences between the control and comparison groups ($p = .579$). This finding supports the research hypothesis. Since years of experience were different among groups, data were reanalyzed treating years of experience as a covariate. After adjusting for years of experience, findings remained unchanged.

Connectedness

Connectedness is a subscale of PSOC. Aggregate results for the Connectedness pre-test ranged from 9 to 34 out of a maximum score of 40 (Table 11). Connectedness post-test ranged from 12 to 37. RMANOVA found a significant difference in the connectedness subscale among groups; Wilk's lambda = .736, $F = 11.504$, $df = 2, 64$, $p = <.001$. Post-hoc analysis using multiple comparisons found a significant difference between the control group and intervention group ($p = .001$), as well as between the comparison group and intervention group ($p = <.001$). There were no significant differences between the control and comparison groups ($p = .412$). These findings further support the hypothesis.

Table 11 Comparison of Connectedness Pre-Test and Post-Test Means Scores

Group	Connectedness Pre-Test		Connectedness Post-Test	
	Mean	Std. Dev.	Mean	Std. Dev.
Control	23.10	4.38	23.90	5.32
Comparison	20.86	6.14	24.14	5.22
Intervention	23.12	5.47	32.08	2.04
TOTAL	22.37	5.43	27.03	5.81

Learning

Learning is a subscale of PSOC. Aggregate results for the Learning pre-test ranged from 14-38 out of a maximum score of 40 (Table 12). Learning post-test results ranged from 16 to 40 of 40 possible points. RMANOVA found a significant difference in the connectedness subscale among groups. Pillai's Trace = .109, $F = 3.913$, $df = 2, 64$, $p = .025$. Although the greatest difference in scores was between the control and intervention groups, post hoc analyses with multiple comparison did not detect a significant difference between any of the groups..

Table 12 Comparison of Learning Pre-Test and Post-Test Means Scores

Group	Learning Pre-Test		Learning Post-Test	
	Mean	Std. Dev.	Mean	Std. Dev.
Control	28.70	4.69	29.50	6.38
Comparison	27.82	5.53	29.86	2.16
Intervention	28.40	4.49	33.28	2.11
TOTAL	28.30	4.85	31.03	4.99

Summary

No differences in demographic characteristics were noted between or among subjects randomized to either the control, comparison, or intervention groups, except for years of experience as an RN (Table 13). Significant differences among the three groups were found for a total PSOC and the Connectedness subscale in the Intervention group a compared to both the Control and Comparison groups. These data support the research hypothesis that implementation of ICA increases PSOC in RN-BSN students in the intervention group when compared to the comparison and control groups in an online section of a clinical conference.

Table 13 Summary of Findings

Variable	Significant Difference		
	between Control and Comparison groups	between Control and Intervention groups	between Comparison and Intervention groups
Total PSOC	No	Yes	Yes
Connectedness	No	Yes	Yes
Learning	No	No	No
Age	No	No	No
Gender	No	No	No
Ethnicity/Race	No	No	No
Years as RN	No	No	Yes

CHAPTER 5: DISCUSSION

Chapter 5 discusses the study results in relation to the research hypothesis, research question, and explores the implications for online nursing clinical conferencing. Since the findings support the hypothesis, there are implications that lend support to the newly developed eCommunity Learning model. Prior research suggested that increased interaction and interdependence enhance PSOC, but there had not been an intervention to test that hypothesis. In the past, the different PSOC measurement tools had been used only to see if there was a difference between groups, but there had not been an intervention to test the strength of the measurement tools. Suggestions for future research are noted.

Relationship of Findings to Previous Research

Previous research indicated that PSOC includes membership, influence, fulfillment of needs, shared emotional connection, reciprocal responsibility, feelings of belonging, commitment, connectedness, spirit, trust, interdependence and learning (Rovai, 2002c, 2001; Loury & DeNeui, 1996; Chertok, 1990, and McMillan & Chavis, 1986). This study used the attributes of Connectedness and Learning as subscales of PSOC. Rovai (2002c) developed the CCS to be used specifically for online courses in academia. This research reflects the same values, so the CCS was used without adaptation. Its use in this research adds to the validity and reliability of the CCS.

In response to the research question, study results support that ICA enhances the Psychological Sense of Community by RN-BSN students in an online clinical conference. There were significantly higher PSOC scores on the CCS in the intervention group in relation to the control and comparison groups.

The research hypothesis was supported since implementation of ICA resulted in an increased PSOC in RN-BSN students in the intervention group when compared to the comparison and control groups in an online section of a clinical conference. There was no increase in PSOC between the control and comparison group. This supports that the ICA intervention was effective for the increase in PSOC.

Prior research with measurement tools for PSOC has been used to measure differences between groups, i.e. urban compared to rural, managers compared to laborers, or students in large schools compared to smaller schools. Rovai (200c) used the CCS to determine reliability and revise his PSOC instrument based on the results of its use. Rovai began with an 80-item survey and five subscales of Connectedness, Cohesion, Spirit, Trust, and Interdependence. After initial testing, he revised the CCS to consist of 20 questions with two subscales of Connectedness and Learning. He then retested the instrument with similar results indicating that two subscales effectively captured the essence of PSOC when combined.

This research is the first to test an intervention and measure its effect on PSOC. Instead of comparing groups without intervention, this study examined three similar groups with one group receiving the intervention. The outcomes indicated a significant difference in PSOC between the intervention group and the other two groups. This author believes the reason the intervention was instrumental in enhancing PSOC was its unique use of questioning to stimulate critical thinking and include prior professional experiences from the nursing community. The intervention did not limit the students to a specific arena such as a particular experience or a theoretical topic, but allowed for inclusion of information and experiential learning from the

professional nursing community. The ICA fostered the participation and responsiveness of students.

McCarthy, Pretty, and Catano (1990) studied the effects of involvement in extracurricular activities among students. The study found that increased student involvement correlated with higher levels of PSOC. The increased involvement of students in the Intervention group may have contributed to higher PSOC.

An additional area of social support was examined by Bishop, Chertok, and Jason (1997) and found to have a positive impact on PSOC. Similarly, this research study included social interaction as a dimension to enhance PSOC, but the interaction was supported by ICA. Lounsbury and DeNeui (1996) found that a higher PSOC was associated with personal and social interaction. The ICA activity increased the amount of interaction in the course, which may account for the findings.

When Rovai (2002a) studied students in traditional face-to-face classes to students in asynchronous online classes, he determined that there was no significant difference in the PSOC outcomes of the two groups. This author had similar results in the pilot study completed over two semesters before the experimental research began. There was no intervention, the intent was to monitor PSOC without interference, and the results indicated no significant difference in the pre- and post-test scores for PSOC or its subscales. Rovai's (2002a) study found no difference in PSOC between the face-to-face and online students. Similarly, no differences were noted between the control and comparison groups in this study. The significant difference occurred within the Intervention group. Findings in this study differ from those of the pilot study. The purpose of the pilot study was to test the CCS tool and no intervention was delivered. The

difference in PSOC noted in this study is particularly striking since again there were no differences noted between the control and comparison groups. Similar to Rovai's (2002c) work in graduate courses, PSOC increased significantly over the semester in RN to BN students. This study was predominantly female, so gender differences were not detectable.

Letizia (1996) examined the learning environment and its impact on PSOC. Her results indicated that students having an environment where increased interaction and communication occurred, experienced a greater perception of learning in clinical post-conferencing. In this study, the ICA enhanced the interaction and resulted in a significant difference in PSOC.

The greatest difference in PSOC was in the Connectedness subscale. The increase in the Connectedness subscale score reflected the overall PSOC results with a significant increase of perceived Connectedness in the intervention group. There was no significant increase in the control and comparison groups. This supports that the ICA intervention was effective in enhancing Connectedness since there was a significant difference between the Intervention group and both the Control and Comparison groups.

The overall increase in the Learning subscale scores reflected an increase in all three groups, but a greater increase in the intervention group than the control or comparison groups. This indicates all students perceived an increase in their Learning, but the intervention group experienced a greater perception of Learning.

Relationship of Findings to Framework

The eCommunity Learning model is supported by the findings of this research. Incorporation of ICA enhances the overall PSOC and its subscales, Connectedness and Learning,

when compared to a control and comparison group. The ICA allowed for input from previous professional experience to promote discussion with a broader perspective.

In reviewing the dimensions in comparing a learning community to community learning, the primary four dimensions of instruction, social interaction, technology, and community (Tu & Corry, 2002) are all present in both models but the introduction of the ICA intervention enhances the outcome of PSOC. The additional identified dimensions of directionality, outcome, and structure further support the impact of ICA on PSOC. The comparison of these dimensions indicate that learning communities are aligned with 20th century education while community learning is aligned with 21st century educational factors (Partnership for 21st Century Skills, 2004). The involvement of the instructor as facilitator, synergistic interaction, interdependence of peers, support of lifelong learning, and experiential learning are major differences between the two models and support the 21st century educational model as well. The ICA intervention provided an environment that promoted inclusion and interaction of all the dimensions to promote interaction and interdependence.

An additional finding in the study was an increase in the number of online postings per student. The average number of postings was 3.2 in the control group, 3.4 in the comparison group, and 4.8 in the intervention group. Three postings were required for each discussion. The additional participation was generally related to sharing prior professional experiences. This may have contributed to the increased PSOC within the Intervention group. The requirement of adding research sharing to the Intervention group may also have added to the Learning subscale within the group.

Increased interaction and interdependence within an online conference enhanced PSOC. This interaction and interdependence are promoted through the use of ICA. Community learning is different from a learning community and benefits from a new model allowing for input from broader experience and shared interaction with others within the community.

Implications for Nursing Education

The number of registered nurses enrolling in Baccalaureate completion programs is increasing throughout the U.S. Many RN-BSN students prefer online courses for convenience and access. Nurses often work non-traditional hours and a variety of schedules. The online venue is important to research to better meet the needs of nursing's professional community.

Clinical conferencing can be problematic in any course, but particularly in the RN-BSN population. Since these students are licensed RNs, they work individually in a clinical setting with a preceptor and do not experience the physical presence of a course instructor or student peers for reflection, discussion, or debriefing. The conference following a clinical experience is essential to the student's learning. Conferencing with peers and an instructor allow for expanded critical thinking, motivation and validation.

To use the ICA, the instructor must spend time constructing discussion questions that are broad enough to capture prior experience, current research, and promote critical thinking. These discussions must also relate to the objectives of the course to facilitate students meeting and thinking beyond the objectives. The ICA concept could also be applied in didactic courses to scaffold prior knowledge with new knowledge. The instructor must be prepared to help students adapt prior knowledge and expand it to include the new knowledge in a way that relates to students prior learning. The instructor must guide the discussions.

The ICA concept could be used in both undergraduate and graduate courses with clinical components. The role of the instructor as facilitator is critical. The instructor needs to be adept at motivating, promoting interaction and providing interdependent activities for students.

Recommendations for Future Research

This study supported that implementation of ICA enhances PSOC. This study should be replicated in a similar population of RN-BSN students to verify results and increase validity. It could also be evaluated in other clinical courses for traditional RN programs or graduate level programs.

This research study could be enhanced by adding a qualitative component to analyze the quality of discussion responses using Gunaswardena's (2006) predictors of learner satisfaction tool developed for online courses. This research could also be analyzed to compare the volume of postings. It was apparent from the data that the intervention group had a greater number of postings than what was required, while the control group was more aligned with the exact number of postings required. Besides the quality of the discussions, the frequency of postings could be further explored.

The Interdependent Conferencing Activity (ICA) developed for this research is based on guided questions used for discussions. There are many more ICAs that could be developed to enhance PSOC in online courses. An ICA is an activity to promote interaction and interdependence, which can be exemplified in many ways. Although the initial development of ICA was time intensive, the implementation of the intervention required a minimal amount of increased time to respond to the perceived results of increased participation and depth of responses.

Differences were noted in the years as an RN mediating variable. This is another area for future study of demographic data.

There is a paucity of research available on clinical conferencing in nursing. There is no research available related to clinical conferencing within the RN-BSN population. This is a critical gap in the literature.

Limitation

One potential issue that may be a limitation is a curriculum change that occurred in the RN-BSN program. The previous Community Health course consisted of two separate courses: a three credit hour didactic course accompanied by a two credit hour clinical course. The new curriculum has only one clinical course in its program: NUR 4604L Community/Public Health Practicum for RNs is a four credit hour clinical course. There are two other courses, Community Health Nursing and Public Health Nursing, which provide five credit hours of community-based didactic instruction. While this is a difference in the curriculum, it allows for the PSOC outcome to be based purely on one clinical course and its online conferencing without being influenced by a didactic component.

Summary

RN-BSN students in a clinical course have limited or no interaction with other students within the course due to geographic distance and individual preceptor assignments so learning is restricted to a student and his/her preceptor and instructor. These factors inhibit a student's perception of connectedness and learning from each other. Interdependent interaction between peers, the instructor, and the professional community increased student achievements and enhanced a sense of community.

The proposed solution to this problem was the use of an ICA as an intervention in online clinical conferencing. The ICA was designed to increase interaction and interdependence. The ICA intervention was successful in making a significant positive difference by enhancing PSOC and the Connectedness subscale in the intervention group. This initial study should inspire future research on the topic of PSOC in online courses and the adoption and further testing of the eCommunity Learning model.

APPENDICES

APPENDIX A: IRB Review and Approval



University of Central Florida Institutional Review Board
Office of Research & Commercialization
12201 Research Parkway, Suite 501
Orlando, Florida 32826-3246
Telephone: 407-823-2901, 407-882-2901 or 407-882-2276
www.research.ucf.edu/compliance/irb.html

From : **UCF Institutional Review Board**
FWA00000351, Exp. 5/07/10, IRB00001138
To : **Barbara Lange**
Date : **May 22, 2008**
IRB Number: **SBE-08-05663**

Study Title: **The Effects of an Interdependent Conferencing Activity on Psychological Sense of Community in an online Clinical Conference**

Dear Researcher:

Your research protocol noted above was approved by **expedited** review by the UCF IRB Vice-chair on 5/22/2008. **The expiration date is 5/21/2009.** Your study was determined to be minimal risk for human subjects and expeditable per federal regulations, 45 CFR 46.110. The category for which this study qualifies as expeditable research is as follows:

7. Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

A **waiver of documentation of consent** has been approved for all subjects. Participants do not have to sign a consent form, but the IRB requires that you give participants a copy of the IRB-approved consent form, letter, information sheet, or statement of voluntary consent at the top of the survey.

All data, which may include signed consent form documents, must be retained in a locked file cabinet for a minimum of three years (six if HIPAA applies) past the completion of this research. Any links to the identification of participants should be maintained on a password-protected computer if electronic information is used. Additional requirements may be imposed by your funding agency, your department, or other entities. Access to data is limited to authorized individuals listed as key study personnel.

To continue this research beyond the expiration date, a Continuing Review Form must be submitted 2 – 4 weeks prior to the expiration date. Advise the IRB if you receive a subpoena for the release of this information, or if a breach of confidentiality occurs. Also report any unanticipated problems or serious adverse events (within 5 working days). Do not make changes to the protocol methodology or consent form before obtaining IRB approval. Changes can be submitted for IRB review using the Addendum/Modification Request Form. An Addendum/Modification

Request Form **cannot** be used to extend the approval period of a study. All forms may be completed and submitted online at <http://iris.research.ucf.edu> .

Failure to provide a continuing review report could lead to study suspension, a loss of funding and/or publication possibilities, or reporting of noncompliance to sponsors or funding agencies. The IRB maintains the authority under 45 CFR 46.110(e) to observe or have a third party observe the consent process and the research.

On behalf of Tracy Dietz, Ph.D., UCF IRB Chair, this letter is signed by:

Signature applied by Joanne Muratori on 05/22/2008 10:06:15 AM EDT

A handwritten signature in black ink that reads "Joanne Muratori". The signature is written in a cursive style with a large, looping initial "J".

IRB Coordinator

APPENDIX B: Classroom Community Scale

SURVEY

DIRECTIONS: Below you will see a series of statements concerning NUR 4604L, a course you are presently taking. Read each statement carefully and click in the radial button next to the statement that comes closest to indicate how you feel about the course. Once you choose an answer, be sure to save it before submitting the quiz. There are no correct or incorrect responses. If you neither agree nor disagree with a statement or are uncertain, click on the neutral (N) area. Do not spend too much time on any one statement, but give the response that seems to describe how you feel.

Please respond to all items

SA = Strongly Agree
A = Agree
N = Neutral
D = Disagree
SD = Strongly Disagree

1. I feel that students in this course care about each other

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

2. I feel that I am encouraged to ask questions

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

3. I feel connected to others in this course
 - Strongly Agree
 - Agree
 - Neutral
 - Disagree
 - Strongly Disagree

4. I feel that it is hard to get help when I have a question
 - Strongly Agree
 - Agree
 - Neutral
 - Disagree
 - Strongly Disagree

5. I do not feel a spirit of community
 - Strongly Agree
 - Agree
 - Neutral
 - Disagree
 - Strongly Disagree

6. I feel that I receive timely feedback
 - Strongly Agree
 - Agree
 - Neutral
 - Disagree
 - Strongly Disagree

7. I feel that this course is like a family
 - Strongly Agree
 - Agree
 - Neutral
 - Disagree
 - Strongly Disagree

8. I feel uneasy exposing gaps in my understanding
 - Strongly Agree
 - Agree
 - Neutral
 - Disagree
 - Strongly Disagree

9. I feel isolated in this course

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

10. I feel reluctant to speak openly

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

11. I trust others in this course

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

12. I feel that this course results in only modest learning

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

13. I feel that I can rely on others in this course

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

14. I feel that other students do not help me learn

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

15. I feel that members of this course depend on me
- Strongly Agree
 - Agree
 - Neutral
 - Disagree
 - Strongly Disagree
16. I feel that I am given ample opportunities to learn
- Strongly Agree
 - Agree
 - Neutral
 - Disagree
 - Strongly Disagree
17. I feel uncertain about others in this course
- Strongly Agree
 - Agree
 - Neutral
 - Disagree
 - Strongly Disagree
18. I feel that my educational needs are not being met
- Strongly Agree
 - Agree
 - Neutral
 - Disagree
 - Strongly Disagree
19. I feel confident that others will support me
- Strongly Agree
 - Agree
 - Neutral
 - Disagree
 - Strongly Disagree
20. I feel that this course does not promote a desire to learn
- Strongly Agree
 - Agree
 - Neutral
 - Disagree
 - Strongly Disagree

APPENDIX C: Recruitment Letter

Students –

I am currently completing my PhD in nursing and have proposed to initiate my research in your NUR4604L course this semester. I am working towards improving Psychological Sense of Community (PSOC) for online clinical conferencing.

This research does not impact your participation or grade in this course. You are free to participate, but if you choose not to participate or to not answer any of the questions, there is no penalty. The format for the course is the same for all. There is no risk involved. Your role, should you choose to participate, is completing a pre- and post-test within the course. The test is a 20-item multiple choice survey that asks for your perceptions related to this online course. There are no right or wrong answers and the outcome is not considered in your ability to complete the course successfully. The benefit is that your answers may help me and others make changes to online courses to make them more beneficial. The pre-test needs to be taken within the first 2 weeks of the course and the post-test needs to be taken within the last 2 weeks of the course. I will send out reminders.

The answers to each of the 20 items are either:

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

Just go with your first “gut feeling” when responding. Don’t over-think the question or anticipate that I am looking for a particular answer – I am simply gathering data. I piloted this questionnaire for two semesters, and the average time to complete each questionnaire was 3.5 minutes. Please consider participating in this study as your initial step into research.

University of Central Florida IRB
IRB NUMBER: SBE-08-05663
IRB APPROVAL DATE: 5/22/2008
IRB EXPIRATION DATE: 5/21/2009

Participation Conditions:

- You must be 18 years of age or older to participate
- There are no direct benefits to you personally to participate and no penalties for not participating.
- There is no compensation available for participation

Assurances:

- A graduate student will download your responses and assign a random number in place of your name. I am aware of who has participated, but not aware of individual responses. This will provide you with confidentiality and me with valid research data that will be analyzed without bias of any kind. Again, participation is a personal choice, not a course requirement.

Benefits

- The only immediate benefit to you is the opportunity to actively participate in evidence-based research related to online education.
- The long-term benefit is to identify factors in questions that enhance a psychological sense of community in online clinical courses.

Any questions can be directed to me at blange@mail.ucf.edu or to my Dissertation Chairperson, Dr. Mary Lou Sole at mlsole@mail.ucf.edu .

Thank you for your consideration,

Barbara L. Lange, MSN, RN

Research at the University of Central Florida involving human participants is carried out under the oversight of the Institutional Review Board. Questions or concerns about research participants' rights may be directed to the UCF IRB office, University of Central Florida, Office of Research & Commercialization, 12201 Research Parkway , Suite 501, Orlando, FL 32826-3246, or by campus mail at 32816-0150. The hours of operation are 8:00 am until 5:00 pm, Monday through Friday except on University of Florida official holidays. The telephone numbers are (407) 882-2276 and (407) 823-2901.

University of Central Florida IRB
IRB NUMBER: SBE-08-05663
IRB APPROVAL DATE: 5/22/2008
IRB EXPIRATION DATE: 5/21/2009

References

- Andrade, A. F., Jacques, P. A., Jung, J. L., Bordini, R. H., & Vicari, R. M. (2001). A conceptual model of distance learning based on vygotsky's socio-cultural approach.
- Banyard, V. L., & Miller, K. (1998). The powerful potential of qualitative research for community psychology. *American Journal of Community Psychology*, 26(4), 485-505.
- Beitz, J. M., & Snarponis, J. A. (2006). Strategies for online teaching and learning. *Nurse Educator*, 31(1), 20-25.
- Bellah, R. N., Madsen, R., Sullivan, W. M., Swindler, A., & Tipton, S. M. (1985). *Habits of the heart: Individualism and commitment in american life*. New York: Harper and Row.
- Bernard, J. S. (1973). *The sociology of community*. Glenview, IL: Scott, Foresman Publishing.
- Bess, K., Fisher, A. T., Sonn, C. C., & Bishop, B. J. (2002). Psychological sense of community: Research, applications, and implications. In A. T. Fisher, C. C. Sonn & B. J. Bishop (Eds.), *Psychological sense of community: Research, applications, and implications* (pp. 339). New York: Kluwer Academic / Plenum Publishers.
- Billings, D., & Kowalski, K. (2005). Teaching tips: Online learning communities can provide support for nurses preparing for certification examinations. *Journal of Continuing Education in Nursing*, 36(2), 55-56.
- Bishop, P. D., Chertok, F., & Jason, L. A. (1997). Measuring sense of community: Beyond local boundaries. *The Journal of Primary Prevention*, 18(2), 193-212.

- Chertok, F. (1990). A measure of perceived sense of community.
- Curtis, C. E., Jason, L. A., Olson, B. D., & Ferrari, J. R. (2005). Disordered eating, trauma, and sense of community: Examining women in substance abuse recovery homes. *Women and Health, 41*(4), 87-100.
- DeBourgh, G. A. (2001). Using web technology in a clinical nursing course. *Nurse Educator, 26*(5), 227-233.
- Dziuban, C., Moskal, P., Brophy, J., & Shea, P. (2007). Student satisfaction with asynchronous learning. *Journal of Asynchronous Learning Networks, 11*(1).
- Dziuban, C., Moskal, P., & Hartman, J. (2005). *Higher education, blended learning, and the generations: Knowledge is power: No more*. Needham, MA: Cloan-C.
- Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford, CA: Stanford University Press.
- Glenn, T. J. (1981). Psychological sense of community: Measurement and application. *Human Relations, 34*(7), 798-818.
- Gunawardena, C. N., Ortegano-Layne, L., Carabajal, K., Frechette, C., Lindermann, K., & Jennings, B. (2006). New model, new strategies: Instructional design for building online wisdom communities. *Distance Education, 27*(2), 217-232.
- Jason, L. A., Davis, M. I., Ferrari, J. R., & Bishop, P. D. (2001). Oxford house: A review of research and implications for substance abuse recovery and community research. *Journal of Drug Education, 21*(1), 1-27.

- Johnston, S. (1995). Building a sense of community in a research master's course. *Studies in Higher Education, 20*(3), 279-291.
- Jones, P. S., Zhang, X. E., Jaceldo-Siegl, K., & Meleis, A. I. (2002). Caregiving between two cultures: An integrative experience. *Journal of Transcultural Nursing, 13*(3), 202-209.
- Jones, P. S., Zhang, X. E., & Meleis, A. I. (2003). Transforming vulnerability. *Western Journal of Nursing Research, 25*(7), 835-853.
- Jones, S., & Madden. (2002). The internet goes to college: How students are living in the future with today's technology. *The Pew Internet & American Life Project: 2002* Retrieved July 4, 2005, from http://www.pewinternet.org/pdfs/PIP_College_Report.pdf
- Klein, K. J., & D'Aunno, T. A. (1986). Psychological sense of community in the workplace. *Journal of Community Psychology, 14*(4), 365-377.
- Lott, A. J., & Lott, B. E. (1965). Group cohesiveness as interpersonal attraction: A review of relationships with antecedent and variables. *Psychological Bulletin, 64*, 259-309.
- Lounsbury, J. W., & DeNeui, D. (1996). Collegiate psychological sense of community in relation to size of college/university and extroversion. *Journal of Community Psychology, 24*(4), 381-394.
- MacIntosh, J., MacAKay, E., Mallet-Boucher, M., & Wiggins, N. (2002). Discovering co-learning with students in distance education sites. *Nurse Educator, 27*(4), 182-186.

- Marx, G. (2006). *Future-focused leadership*. Alexandria, VA: Association for Supervision and Curriculum Development.
- McCarthy, M., Pretty, G., & Catano, V. (1990). Psychological sense of community and college burnout. *Journal of College Student Development, 31*(3), 211-216.
- McMillan, D. W. (1976). *Sense of community: An attempt at definition.*: George Peabody College for Teachers, Nashville, TN.
- McMillan, D. W. (1996). Sense of community. *Journal of Community Psychology, 24*(4), 315-325.
- McMillan, D. W., & Chavis, D. M. (1986). Sense of community: A definition and theory. *Journal of Community Psychology, 14*, 1-23.
- Moos, R. (1974). *Evaluating treatment environments: A social ecological approach*. New York: Wiley.
- Prensky, M. (2006). *Digital natives, digital immigrants*. Unpublished Dissertation, University of Central Florida, Orlando, FL.
- Rovai, A. (2001). Building classroom community at a distance: A case study. *Educational Technology Research and Design, 49*(4), 33-48.
- Rovai, A. (2002a). A preliminary look at the structural differences of higher education classroom communities in traditional and aln courses. *Journal of Asynchronous Learning Networks, 6*(1), 41-56.

- Rovai, A. (2002b). Building sense of community at a distance. *International Review of Research in Open and Distanc Learning*, 3(1), 1-16.
- Rovai, A. (2002c). Development of an instrument to measure classroom community. *The Internet and Higher Education*, 5, 197-211.
- Rovai, A. (2002d). Sense of community, perceived cognitive learning, and persistence in asynchronous learning networks. *The Internet and Higher Education*, 5(4), 319-332.
- Royal, M. A., & Rossi, R. J. (1996). Individual-level correlates of sense of community: Findings from workplace and school. *Journal of Community Psychology*, 24(4), 395-416.
- Sarason, S. B. (1974). *The psychological sense of community: Prospects for a community psychology*. San Francisco: Jossey-Bass.
- Schiffman, S., Vignare, K., & Geith, C. (2007). Why do higher-education institutions pursue online education? *Journal of Asynchronous Learning Networks*, 11(2), 61-71.
- Schneider, B., & Bartlett, C. J. (1968). Individual differences and organizational climate: I. The research plan and questionnaire development. *Personnel Psychology*, 21, 323-333.
- Tilley, D. S., Boswell, C., & Cannon, S. (2006). Developing and establishing online student learning communities. *CIN: Computers, Informatics, Nursing*, 24(3), 144-149.
- Tu, C., & Corry, M. (2002). Elearning communities. *The Quarterly Review of Distance Education*, 3(2), 207-218.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*.

Cambridge, Massachusetts: Harvard University Press.

Watson, N., & Pulliam, L. (2000). Transgenerational health promotion. *Holistic Nursing*

Practice, 14(4), 1-11.