# Empowerment and Leadership Development in an Online Story-Based Learning Community

by

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A dissertation submitted in partial fulfillment of the requirements
for the degree of Doctor of Philosophy
in
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The problem was that there is a shortage of nurses who possess the leadership practices required to fill current and impending nursing leadership vacancies. Hospital-based nurse educators are in a prime position to foster a leadership mindset within nurses, and seek out potential nurse leaders; however, nurse educators first need to develop their own leadership practices and feel empowered to take on the role of mentoring future nurse leaders. The goal was to develop an online learning community where hospital-based nurse educators could develop their own nursing leadership practices through storytelling within an environment that included the elements of teaching presence, cognitive presence, and social presence. The online learning community would be considered an empowering environment, and nurse educators would improve their own feelings of empowerment.

A wiki was used as the computer-user interface for the online learning community, and was designed based on the principles of human-computer interaction, learning theory, and instructional design. The wiki was separated into two learning communities, namely, the facilitated community and the self-organizing community. Some of the wiki pages were viewable by both communities, some were community specific, and other pages were private and viewable only to the nurse educator and the facilitator. The researcher/facilitator was the leader of the facilitated community, while self-organizing community members were responsible for leading their own community. The facilitator intervened in the self-organizing community when necessary, mostly to address technical issues. Through direct instruction via narrated presentations available to both communities, and leadership stories written and posted by the community members themselves, nurse educators learned about exemplary practices of leadership.

Nurse educators in both communities significantly increased their own perceived leadership practices and perceived levels of empowerment. Educators in both learning communities identified that their communities included the elements of teaching, cognitive, and social presence. There were no differences between the communities, except on the teaching presence subscale of direct instruction, where the facilitated community was rated significantly higher. Given increases in empowerment levels, it was determined that both online learning communities could be considered empowering environments.

**Acknowledgments**

The journey to come to the point of completion of this dissertation has been one in which many things have been put on hold for three years. What has not been put on hold is the learning and knowledge I have acquired that I will carry with me through my nursing career and beyond. I could not have completed this journey without the support of my mom who listened for the past three years about my successes and challenges, and took over the responsibility for many things when I could not because I was in front of my computer. I dedicate this report to my mom!

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## Table of Contents

**Appendices**

## List of Tables

**Tables**

## List of Tables Continued

## List of Figures

### Figures

# Chapter 1

# Introduction

## Background

The growing nursing shortage in Canada has attracted the attention of various levels of government, policy makers, the media, and the public (Bartfay & Howse, 2007). Predicting the extend of the future nursing shortage is a complex endeavor based on such factors as the population and age of Canadian citizens, the average age of nurses and their expected age at retirement, the number of nurses leaving the profession prior to retirement, the employment status of nurses (i.e., full-time, part-time, or casual), and the annual number of nurses graduating from entry-to-practice programs. Based on these many factors, the Canadian Nurses Association (CNA) (2002) predicted that by 2011, Canada will experience a shortage of 78,000 registered nurses, and by 2016, the number will increase to 113,000. When CNA made those predictions, it was estimated that 12,000 entry-to-practice graduates would be needed per year from 2002 onwards to combat the predicted shortage. Today, the number of entry-to-practice graduates has not reached 12,000, and to reach this number a 27% increase in graduates is still needed (CNA & Canadian Association of Schools of Nursing [CASN], 2008).

The number of nurses who elect to retire in the next few years will have a positive or negative impact on the future nursing shortage. Eligibility for retirement is based on age and years of employment, and although the eligibility age for retirement fluctuates and many nurses can retire at approximately age 50, the Canadian Federation of Nurses Unions (2006) report that on average nurses retire in their late 50s. In 2005, 37% of the

251,675 registered nurses employed in clinical areas in Canada were eligible for retirement (CNA, 2006), and in 2004, CNA and CASN (2006c) found that 44% of nurse educators in a sample of 3,171 were over the age of 50. The growing concern regarding the impending retirement of baby-boomers who currently fill leadership positions in management and education is of particular importance (Bartfay & Howse, 2007; Redman, 2006; Sherman, 2005; Sherman & Bishop, 2007). There is a limited number of nurses prepared to assume leadership positions as there have been few career-laddering opportunities since the mid 1990s when 29% of nursing leadership positions were deleted as a result of work restructuring and cost containment (Canadian Health Services Research Foundation [CHSRF], 2006; Registered Nurses' Association of Ontario [RNAO], 2006). In addition, there are a limited number of nurses prepared academically to fill impending leadership vacancies. For example, in 2004, it was projected that 3,673 masters prepared nurses would be needed on an annual basis to fill vacant nurse educator positions (CNA & CASN, 2006a); however, only 427 nurses graduated from masters of nursing programs in the same year in Canada (CNA & CASN, 2006b).

Hospital-based nurse educators fulfill many roles including that of teacher, supervisor, support person, and role model (Conway & Elwin, 2007), and they are in a prime position to foster the development of a *leadership mindset* within nurses, act as *talent scouts* to seek out potential nurse leaders, encourage nurses to consider graduate education, and promote nursing leadership as a career track (Sherman & Bishop, 2007). However, with increasing demands being placed on nurse educators in terms of the frequency of orientations and continuing education sessions, as well as numerous other responsibilities, hospital-based nurse educators frequently face role tension and conflict,

and feel disempowered (Conway & Elwin, 2007; Davies, Laschinger, & Andrusyszyn, 2006). If nurse educators are going to be expected to play a major role in the recruitment, development, and mentoring of future nurse leaders, they need to first develop their own leadership practices, and feel empowered to foster a leadership mindset within nurses.

**Problem Statement**

There is a shortage of nurses who possess the leadership practices required to fill current and impending nursing leadership vacancies in both management and educational sectors. Strong leadership is required at every level of the healthcare system hierarchy (CHSRF, 2006; Lewis & Farrell, 2005), as quality nursing leadership has been linked to decreased patient mortality, increased recruitment and retention of staff, as well as positive outcomes for patients, nurses, and organizations (RNAO, 2006). Leadership succession planning, a key business strategy, is needed to ensure that pools of well-prepared leaders are available to fill current and impending leadership vacancies (Redman, 2006), and a proactive approach that includes the recruitment, development, and mentoring of future nurse leaders is needed (Sherman & Bishop, 2007).

**Goal Statement**

The goal was to develop an online learning community where hospital-based nurse educators could develop their own nursing leadership practices through storytelling within an environment that included the elements of teaching presence, cognitive presence, and social presence. Garrison, Anderson, and Archer's (2000) community of inquiry model (see Figure 1) posits that learning occurs at the intersection of teaching,

cognitive, and social presence within a constructivist learning environment. Teaching presence is seen as a unifying element in the model that is necessary to shape a meaningful learning experience; whereas, social presence acts as a support to cognitive presence and the ability to construct meaning (Garrison, 2006; Garrison et al., 2000).

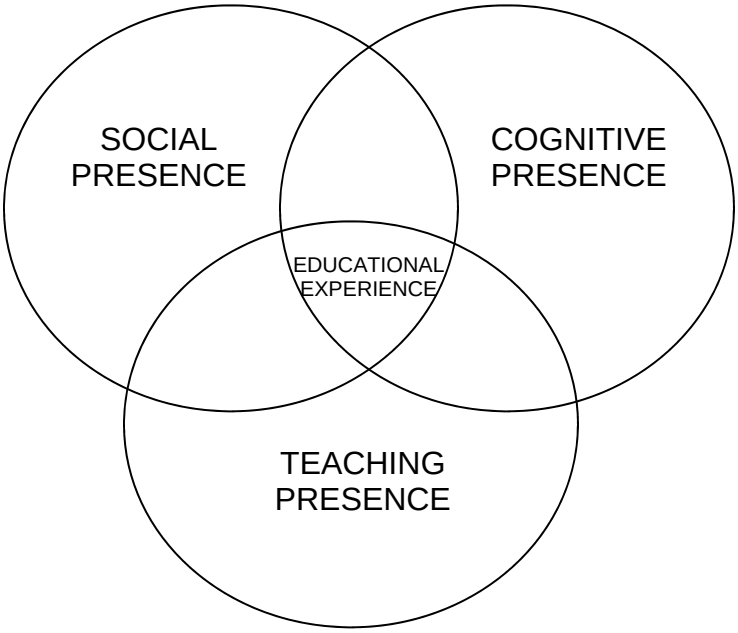


*Figure 1.* Community of inquiry model. Copyright 2000 by D. R. Garrison, T. Anderson, & W. Archer. Used with permission.

It was anticipated that in the online learning community the facilitator would provide the necessary teaching presence for nurse educators to identify their current leadership practices. Then, as a collective community, nurse educators would continue to develop their leadership practices by learning about leadership through direct instruction, and through cognitive engagement by writing their own leadership stories and responding to leadership stories presented by other nurse educators in the community. Community members would provide the social presence to support learning. In addition, through

participation in the online community, nurse educators would increase their feelings of empowerment. Nurse educators who have acquired the necessary leadership practices, and feel empowered to act, would then be able to mentor future nurse leaders.

Empowerment has two broad meanings with the first referring to managerial practices and decision-making responsibilities known as *structural empowerment*, and the second referring to an experience or *psychological empowerment* (Boudrias, Gaudreau & Laschinger, 2004). According to Kanter's (1977; 1997) theory of workplace structural empowerment, empowering work environments enable employees to be effective and control their work, function better as a team members, participate in decision-making, and suffer less burnout or job stress. Empowerment structures include *opportunity*, *resources*, *information*, *support*, *formal power,* and *informal power.* Structural empowerment can lead to psychological empowerment that includes the dimensions of *meaning*, *competence*, *self-determination*, and *impact* (Laschinger, 2004; Spreitzer & Quinn, 2001).

Via their expertise and varied roles and responsibilities, nurse educators contribute to the establishment of an empowering work environment for themselves and others. Through their leadership stories, nurse educators would reveal the type of empowerment structures in their workplace and divulge their own dimensions of psychological empowerment. It was expected that with leadership development, facilitation, and the support and guidance of community members, nurse educators would be able to recognize the contributions that they make in creating an empowering work environment and increase their own feelings of empowerment.

The online learning community in itself would be an empowering environment where nurse educators would have access to information and resources, and the opportunity to gain support from community members with similar professional interests and work responsibilities. Nurse educators would enhance their own informal power through the establishment of collegial relationships.

## Research Questions and Hypotheses

One global research question was answered and four hypotheses were tested. In addition, four exploratory research questions were examined.

### *Research Question*

What is the effect of the type of online learning community, based on a community of inquiry model, on hospital-based nurse educators' perceptions of structural and psychological empowerment and leadership practices?

### *Research Hypotheses*

1. The increase in the perceived level of structural empowerment will be significantly greater for nurse educators participating in an online facilitated learning community than for nurse educators participating in a self-organizing community.
2. The increase in psychological empowerment will be significantly higher in nurse educators participating in a facilitated community compared to those in a self-organizing community.

3. The degree of increase in leadership practices will be significantly greater in nurse educators participating in a facilitated community than those in a self-organizing community.
4. Nurse educators participating in a facilitated community will rate levels of teaching, cognitive, and social presence significantly higher compared to those in a self-organizing community.

*Exploratory Research Questions*

1. Which empowerment structures are present in nurse educators' workplaces as revealed through their participation in an online learning community?
2. What psychological empowerment dimensions are manifested in nurse educators?
3. What leadership practices are exhibited by nurse educators?
4. How does a facilitated environment compare with a self-organizing environment?

**Relevance and Significance**

The establishment of an online learning community that provides hospital-based nurse educators with the opportunity to learn about leadership through direct instruction and storytelling was a first. An investigation into the relationships among teaching, cognitive, and social presence, and structural and psychological empowerment had never been completed. The investigation provided evidence that furthers the work of Garrison et al. (2000), Kanter (1977; 1997), Spreitzer and Quinn (2001), and Kouzes and Posner (2002). Results added to the growing body of knowledge specifically related to nursing, nursing education, education, computing technology in education, and leadership.

**Definitions and Acronyms**

**Blog:** A style of Web site that is "organized around short posts of information" (Hendron, 2008, p. 276), and similar to an electronic bulletin board where multiple users can post informational text, hyperlinks, pictures, and audio or video files (Poonawalla & Wagner, 2006).

**CASN:** Canadian Association of Schools of Nursing.

**CHSRF:** Canadian Health Services Research Foundation.

**CNA:** Canadian Nurses' Association.

**CNO:** College of Nurses of Ontario.

**Cognitive presence:** "…The extent to which the participants…[in an online learning community] are able to construct meaning through sustained communication" (Garrison et al., 2000, p. 89).

**CoII:** Community of Inquiry Instrument.

**Community of learning:** An environment in which participants learn through cognitive presence, social presence, and teaching presence (Garrison et al., 2000).

**Competence:** Individuals' feeling of confidence in being able "…to perform a task *and* that no outside causes will prevent them from attaining the required level of performance" (Spreitzer & Quinn, 2001, p. 17)

**Constructivist learning environment:** A complex, situated, and realistic learning environment used to engage learners in a sense-making process where learners investigate, discover, explore, build new learning on prior knowledge, and construct their own meaning to concepts (Ali, Hodson-Carlton, & Ryan, 2004; Almala, 2005; Bolliger, 2006; Cooperstein & Kocevar-Weidinger, 2004; Driscoll, 2005; Lee, 2006).

**CRNBC:** College of Registered Nurses of British Columbia.

**CRNM:** College of Registered Nurses of Manitoba.

**CWEQ-II:** Conditions of Work Effectiveness Questionnaire-II.

**Ethnography:** "…The study and description of a culture of a particular group of people" (Fain, 1999, p. 187).

**Facilitated online learning community:** An online learning community in which a facilitator assists participants in organizing their online learning community and analyzing posted stories (Author).

**Facilitation:** A synonym for teaching presence (Author).

**Facilitator:** An individual who provides the teaching presence necessary to structure, shape, and support a meaningful learning experience (Garrison, 2006).

**Formal power:** "…Job characteristics that contribute to job recognition within the organization through discretionary actions that are important to the organization's goals" (Patrick & Laschinger, 2006, p. 15).

**Hospital-based nurse educator:** A registered nurse employed in the capacity of an educator within a Canadian hospital. The nurse educator's main responsibility is to meet the orientation and continuing education needs of nurses employed within the hospital (Author).

**HTML:** Hypertext markup language.

**Impact:** "…The degree to which people can influence their surroundings and to which their work units and organizations listen to their ideas" (Spreitzer & Quinn, 2001, p. 19).

**Informal power:** "…The development of effective relationships with peers, superior[s] and subordinates within the organization (Patrick & Laschinger, 2006, p. 15).

**Information:** "…The data, technical knowledge, and expertise required to function effectively in one's position" (DeCicco, Laschinger, & Kerr, 2006, p. 50).

**Leadership:** "…A relationship between those who aspire to lead and those who choose to follow" (Kouzes & Posner, 2005, p. 358).

**Leadership practices:** The five practices of exemplary leadership that include Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act, and Encourage the Heart (Kouzes & Posner, 2003c).

**LPI:** Leadership Practices Inventory.

**MANOVA:** Multivariate analysis of variance.

**Meaning:** "…The degree to which people care about their work and feel that it is important to them" (Spreitzer & Quinn, 2001, p. 16).

**NVivo:** A qualitative software program.

**Online learning community:** A group separated by space and time that use networked technologies, such as a wiki, in an asynchronous manner to reach learning goals through a community of learning (Johnson, 2001; Paulus, Horvitz, & Shi, 2006).

**Online story-based learning community:** An online learning community in which participants reach their learning goals by reflecting on their own learning, and writing and sharing their experiences in a story format (Author).

**Opportunity:** "…The prospect of advancing within… [an] organization, as well as a chance to learn and grow" (DeCicco et al., 2006, p. 50).

**PBwiki:** Peanut-butter wiki.

**PC:** Personal computer.

**PEI:** Psychological Empowerment Instrument.

**Podcasting:** "…The ability to create or listen to audio or video content…via the Web, either live, or downloaded for later viewing/listening on your desktop, laptop computer, or on a mobile device…" (Williams, 2007, p. 6).

**Psychological empowerment:** "…A motivational construct manifested in four cognitions: meaning, competency, self-determination, and impact. Together, these four cognitions reflect an active…orientation to a work role…in which an individual wishes and feels able to shape his or her work role and context…The four dimensions…combine additively to create an overall construct of psychological empowerment (Spreitzer, 1995, p. 1444)."

**Resources:** "…Equipment and supplies in addition to human resources to assist in achieving work objectives" (Patrick & Laschinger, 2006, p. 15).

**RNAO:** Registered Nurses Association of Ontario.

**RSS:** Really simple syndication. "…Refers to both a standard and a technology used to deliver online content (Hendron, 2008, p. 275).

**SAS:** Statistical Analysis Software.

**Self-determination:** "…The degree to which people are free to choose how to do their work" (Spreitzer & Quinn, 2001, p. 14).

**Self-organizing online learning community:** An online learning community where participants assist each other in analyzing their own posted stories and are responsible for organizing their own community after the initial wiki set-up (Author).

**Social presence:** The ability to connect on a personal level with members in an online learning community (Garrison, 2006).

**SPSS:** Statistical Package for the Social Sciences.

**Structural empowerment:** Refers to managerial practices and decision-making responsibilities. It is defined as a work environment that includes the opportunity to learn, access to information, support, resources, and formal and informal power systems (Almost & Laschinger, 2002; Boudrias et al., 2004; Patrick & Laschinger, 2006).

**Support:** "…Problem-solving advice and feedback from colleagues and senior management" (Patrick & Laschinger, 2006, p. 15).

**Teaching Presence:** A force that structures and leads the learning process while enhancing social and cognitive presence for the purpose of realizing educational outcomes (Garrison, 2006; Garrison et al., 2000).

**Themes:** "…General propositions that emerge from diverse and detail-rich experiences of participants and provide recurrent and unifying ideas regarding the subject of inquiry" (Bradley, Curry, & Devers, 2007, p. 1766).

**URL:** Uniform resource locator.

**Web 2.0:** "…Refers to our new era of Read/Write Web sophistication, where anyone can contribute through a variety of media, including blogs, podcasts, wikis, and social Web sites (where online communities are flourishing around common interests and function)" (Hendron, 2008, p. 276).

**Wiki:** A collection of webpages that are interconnected and organized as required, and collectively authored with users being able to add content and edit the content of other users (Beldarrain, 2006; Best, 2006; Bold, 2006; Duffy & Bruns, 2006).

## Summary

There is a growing concern within the healthcare field that there are limited numbers of nurses prepared to assume impending leadership vacancies. Hospital-based nurse educators are in a prime position within an organizational hierarchy to foster the leadership development of nurses; however, they first need to feel empowered to act and develop their own leadership practices. Providing nurse educators with the opportunity to develop their own leadership practices via an online learning community was explored within the context of empowerment and a community of inquiry model. The investigation into the relationships among the elements of the community of inquiry model, empowerment, and leadership practices was a first. The fields of nursing, nursing education, education, computing technology in education, and leadership will benefit as further research is conducted based on this initial work.

The focus of the next chapter is the review of the literature. Related literature including applicable theories will be presented.

# Chapter 2

## Review of the Literature

Literature pertinent to empowerment and leadership development in an online learning community has been organized into eight main sections and several subsections. Within the *theoretical framework* section, a review of learning community frameworks is presented to determine the most appropriate theoretical framework for the study. Variables examined are grounded in additional theories including structural empowerment (Kanter, 1977; 1997) and psychological empowerment (Spreitzer & Quinn, 2001), and these variables will be examined within the *empowerment* section. The concept of *leadership*, and in particular, the five practices of exemplary leadership as described by Kouzes and Posner (2002) will be outlined. A review of *online storytelling* will highlight the strategy as one that can be used to build a community of learning, and the learning approach of *constructivism*, which is the basis for the online learning community, will be included. There are numerous *considerations in the development of an online learning community*, and within this section fundamental concepts, computer literacy, learning preferences, human-computer interaction, asynchronous communication, grouping, privacy, and learner support will be included. A key variable is facilitation, and the *online learning community facilitator role* will be outlined in relationship to the theoretical framework, and learning preferences in particular. A review of *Web 2.0 technology*, including a discussion of wikis, blogs, and podcasting is important, for although a wiki will be used as the main computer interface, podcasting

will be incorporated into the curriculum as a teaching-learning strategy. Blogging is included for information and comparison to wikis.

**Theoretical Framework**

There are numerous learning community frameworks. A review of a selected number of frameworks was necessary to determine an appropriate theoretical framework.

Based on an extensive review of the literature, Garrison et al. (2000) developed the community of inquiry model (see Figure 1), and identified three core elements that are essential for an educational experience, namely, teaching presence, cognitive presence, and social presence. Garrison (2006) claims that learning occurs at the intersection of the three core elements within a collaborative constructivist learning environment. Teaching presence is the critical force that structures and leads the learning process and assists learners in transitioning from social to cognitive presence for the purpose of attaining educational outcomes (Garrison; Garrison et al.; Garrison & Cleveland-Innes, 2005). Cognitive presence is the element most basic to success in higher education, and refers to "…the extent to which the participants in any particular configuration of a community of inquiry are able to construct meaning through sustained communication" (Garrison et al., p. 89). Social presence is the ability to connect on a personal level with members in the community (Garrison). The purpose of social presence is to act as a support for cognitive presence (Garrison et al.).

Teaching presence consists of two general functions including the design of the educational experience and facilitation (Garrison et al., 2000). The design of the education experience, usually performed by an educator, includes selecting, organizing,

and presenting course content, as well as designing and developing learning activities. Facilitation is a function that can be shared between the educator and one or all of the participants. The terminology related to the categories within the teaching presence element have evolved and include *design and organization* (formerly instructional management), *facilitation* (formerly building understanding), and *direct instructi*on (Garrison et al.; http://communitiesofinquiry.com/papers_method). Garrison et al. note that indicators for design and organization include *structuring content*, *establishing discussion groups*, and *setting discussion topics*. *Sharing personal meaning and/or values*, *expressing agreement*, and *seeking consensus* are indicators of facilitation, while *focusing and pacing discussion*, *answering questions*, *diagnosing misconceptions*, and *summarizing learning outcomes or issues* are indicators for direct instruction.

According to Garrison et al. (2000), cognitive presence corresponds to the four phases of critical educational inquiry including a *triggering event*, *exploration*, *integration*, and *resolution*. Indicators for a triggering event include *recognizing the problem* and a *sense of puzzlement*, while *information exchange* and *discussion of ambiguities* are indicators for exploration. *Connecting ideas* and *creating solutions* are indicators for integration, and *vicariously applying new ideas* and *critically assessing solutions* are indicators of resolution.

Categories within the social presence element of the community of inquiry model include *affective expression* (formerly emotional expression), *open communication*, and *group cohesion* (Garrison et al., 2000; http://communitiesofinquiry.com/papers_method). Indicators for affective expression include *emoticons* and *autobiographical narratives*. Indicators for open communication include *risk-free expression*, *being encouraging*, and

*acknowledging others*, while *encouraging collaboration*, *helping*, and *supporting* are indicators for group cohesion.

Wenger (2000) claims that communities of practice are the "…basic building blocks of a social learning system…" (p. 229) and may be considered the "…social containers of the competencies…" that constitute a social learning system (p. 229). Competence within a community of practice includes the dimensions of enterprise, mutuality, and repertoire to work in harmony. Enterprise refers to the "…level of learning energy," mutuality is the "…depth of social capital," and repertoire is the "…degree of self-awareness" (p. 230). A community needs strong relationships and a sense of belonging to hold the community together. Individuals also need learning energy otherwise stagnation will occur, and the community needs to be able to reflect otherwise it will become a "…hostage to its own history" (p. 230). Boundaries connect communities and are a place for learning based on shared practices. A community of practice exists because competence and experience come together, and learning takes place within the community. Competence and experience separate at the boundaries of a community, and learning can occur by being exposed to an unknown competence. If competence and experience always match, challenges are not present, and it is not likely that learning will take place, similarly, if the two entities are too disconnected, learning will not take place.

Hoadley and Kilner (2005) propose a framework called C4P to describe how learning takes place in knowledge-building communities. Elements of the framework include content, conversation, connections, context, and purpose, and if all of the elements are present in a community, the more likely knowledge generation and transfer will occur.

The basis of the Hoadley and Kilner's (2005) framework is that content will shape conversations that will foster connections, and through the establishment of connections, context will be added, while the purpose is the reason members come together in the community. "Connections are the lifeblood of a knowledge-building community, without connections, an online space is merely a document repository…or chat room" (p. 34). Overall, an appropriate interface that provides linkages between content and conversation facilitates connections between members and allows members to understand the context of the contributions.

Palloff and Pratt (2005) view *collaboration*, which is the *heart and soul* of an online course, and *community* in a cyclical relationship, with collaboration supporting the development of a community, and community supporting collaborate work. Additional components of the model include a constructivist context, social presence, interaction and communication, reflection and transformative learning, and technology. Outcomes of collaboration include deeper levels of knowledge generation, critical thinking, and the development of a shared goal for learning.

According to Sims and Hedberg (2006), an online environment does not need to include a set of content structures that learners access via navigation paths. An online learning environment may be one in which the teacher, learner, designer, and other stakeholders are involved in the communication and negotiation process. First, there is the *user illusion* of a narrative space where knowledge is constructed, as opposed to an interface within a learning management system that focuses on functionality of tasks such as assignments, discussions, and grading. Within the narrative space, the interface allows for free navigation where learners can conceptually enter and exit, as opposed to starting

and finishing a prescribed activity, and there is a period of engagement when learners focus on a particular component and associated interactions are involved. Overall, the environment plays a significant role in supporting and being adaptive to the needs of the learner.

There are probably more commonalities than differences among the various learning community frameworks. The elements of social and cognitive presence are prominent in all of the frameworks, while teaching presence is explicitly outlined in Garrison et al.'s (2000) model and included in Sims and Hedberg's (2006) framework. Given the importance of social presence, cognitive presence, and teaching presence in the teaching-learning process, it would appear that the framework of Garrison et al. is the most inclusive, and the most appropriate theoretical framework. Variables being examined are grounded in additional theories including structural empowerment (Kanter, 1977; 1997), psychological empowerment (Spreitzer & Quinn, 2001), and leadership (Kouzes & Posner, 2002).

## Empowerment

### *Structural Empowerment*

Kanter (1997) claims that empowered individuals:

- foster higher group morale;
- have subordinates who inhibit their negativity and aggressiveness, behaving in more cooperative and less critical ways, thereby reducing the need to exercise strong controls;

- behave in less rigid, directive, authoritarian ways, to delegate more control and allow subordinates more latitude and discretion;
- provide opportunities for subordinates to move along with them, find talented subordinates and groom them for better things; [and]
- have their actions seen more often as helping than hindering. (p. 248)

Individuals become empowered more from structural factors within their work environments than their own leadership styles and skills (Kanter, 1977; 1997). Empowerment structures include access to *information*, *support*, and *resources* necessary to carry out a task, and *opportunity* for growth and mobility. To be an effective member of an organization, one needs access to information and needs "…to be 'in the know' in both the formal and informal sense" (Kanter, 1997, p. 137). Access to information includes knowledge of organizational decisions, policies, and goals, as well as data and technical knowledge (Laschinger, Purdy, & Almost, 2007). Through information, employees gain a sense of purpose and meaning, and are better able to influence decisions that contribute to the goals of the organization. Support can take the form of emotional support, helpful advice, or hands-on assistance from superiors, peers, or subordinates, while resources refers to access to materials, money, supplies, time, and equipment to reach organizational goals. Opportunities for growth and mobility include access to professional development and challenges that will increase skills and knowledge.

Kanter (1977) views power as "…the ability to get things done, to mobilize resources, to get and use whatever it is that a person needs for the goals he or she is attempting to meet" (p. 166). When more individuals are empowered, meaning that they

are "…allowed to have control over the conditions that make their actions possible – then more is accomplished, more gets done" (p. 166). There are two types of power, namely *formal power*, which is related to job characteristics, and *informal power*, that is attributed to alliances. Formal power is gained when an employee has a job that is flexible, allows for creativity and decision-making, and is central to the organization's goals, while informal power is gained from effective relationships and communication channels with individuals both inside and outside the organization (Laschinger et al., 2007).

Kanter (1997) compared how organizational factors can lead to either empowered or disempowered individuals. Empowerment is generated when there are few rules, approval processes, or established routines. Rewards for unusual performance and innovation will increase empowerment, while rewards for reliability and predictability will decrease empowerment. A central physical location of an individual along with high interpersonal contacts and contact with senior management will lead to empowerment, while low participation in problem-solving task forces or job tasks that are peripheral to a problem will lower empowerment. High publicity about job activities, flexibility around the use of individuals, and the prospect of advancement of subordinates all increase empowerment.

### *Psychological Empowerment*

According to Spreitzer and Quinn (2001), "…the mindset of people who feel empowered has four dimensions: empowered individuals see themselves as having freedom and discretion (*self-determination*), as having a personal connection to the

organization (*meaning*), as confident about their abilities (*competence*), and as able to make a difference in the system in which they are embedded (*impact*)" (p. 14). For people to feel psychologically empowered, all four dimensions must be present, for any one dimension is only part of the equation.

Self-determination is closely related to delegation where individuals are given decision-making power (Spreitzer & Quinn, 2001). Individuals who feel a sense of self-determination take the initiative to make decisions, they do not feel micromanaged, and they feel that their involvement in an activity is their choice instead of feeling pressured or coerced. Self-determination is an "…inner endorsement of one's actions, a sense that they emanate from one-self and are one's own" (p. 15), and "…is the foundation of a leadership mindset" (p. 15).

"A sense of meaning is the engine of genuine empowerment" (Spreitzer & Quinn, 2001, p. 16). When individuals believe that what they are doing matters, then they have a sense of meaning. If an activity does not have meaning, individuals may disengage and experience feelings of dissonance. Meaningful activities create personal connections for individuals resulting in congruence between their values and behaviors, and they are energized to do their best.

When individuals feel competent and are empowered in their work, they gain a sense of personal mastery in which to learn and grow and face new challenges (Spreitzer & Quinn, 2001). Withdrawal, psychological paralysis, and increasing levels of absenteeism can be seen in individuals with a low sense of confidence.

Seeing oneself as making a difference is impact (Spreitzer & Quinn, 2001). Learned helplessness is not experienced by individuals who believe that they have an impact in

the workplace. When individuals feel that they have impact, they believe they can shape the direction of the workplace, and will challenge existing mindsets and push workplace boundaries. “It is through this lens of personal control that empowered individuals see the world and choose to act” (p. 19). A mindset of change as opposed to regulation and maintenance is common in empowered individuals, and they not only feel that change is necessary and vital, but that they have control over change.

Spreitzer and Quinn (2001) identify five factors that explain the failure of empowerment: ambivalence, culture, conflict, personal time constraints, and a misunderstanding of how empowerment is achieved. Regarding ambivalence, Spreitzer and Quinn state, “The reality is that many managers reinforce control systems that, intentionally or unintentionally, send the message that employees are not trusted to show initiative, take risks, or make responsible decisions” (p. 10).

Bureaucratic culture is another impediment to empowerment (Spreitzer & Quinn, 2001). Barriers to change, risk taking, and initiative are created through bureaucratic culture. They note that in organizations with multiple hierarchies, it is difficult to get an initiative approved, for although a number of people may say yes to an initiative, it only takes one person to stop the initiative.

Conflict is the third impediment to empowerment (Spreitzer & Quinn, 2001). Spreitzer and Quinn identify than an organizational structure has the potential to exacerbate tensions between areas by creating strong divisions. When divisions are established and conflict is present, it discourages employees from taking initiative.

According to Spreitzer and Quinn (2001), the fourth reason for the failure of empowerment is that of personal time constraints and the fact that the majority of

organizations place intense time constraints on employees. When the message is, "…we want more for less" (Spreitzer & Quinn, p. 12), employees do not feel empowered.

The final impediment to empowerment is that there is a fundamental misunderstanding about the concept of empowerment. Spreitzer and Quinn (2001) claim that it is less accurate to think in terms of an *empowering workplace*, instead one should think in terms of *releasing the power* in the workplace. Only when conditions are right will employees feel empowered to make decisions, take the initiative, demonstrate flexibility, and *do the right thing*. "People must want to be empowered, and they must make a personal commitment for it to happen" (Spreitzer & Quinn, p. 30).

Spreitzer and Quinn (2001) outline an effective plan that can be used in the creation of an empowering environment: continuous vision and challenge, continuous support and security, continuous openness and trust, and continuous control and guidance. The first step in creating an empowering environment focuses on vision and challenge. Spreitzer and Quinn note that organizations need to create an overall vision, and then live the vision. In addition, each level within the organization needs to have a vision that aligns with the organizational vision. Developing a vision is consistent with Kouzes and Posner's (2003c) exemplary leadership practice of Inspire a Shared Vision. Challenging employees and creating opportunities is the second part of the first step in creating an empowering environment (Spreitzer & Quinn), and this concept is consistent with the work of Kanter (1977) in terms of the empowerment structure of opportunity.

Consistent with the work of Kanter (1977; 1997), Spreitzer and Quinn (2001) identify continuous support and security as the second step in creating an empowering environment. Specifics in this step include developing a network of support, providing

secure jobs, encouraging risk taking, keeping work hours reasonable, providing training, rewarding performance, putting safety first, ensuring people have the resources they need, and buffering people from unnecessary change.

The third step is continuous openness and trust (Spreitzer & Quinn, 2001). Sharing information freely, involving employees in organizational decision making, building trust by showing concern for the needs of all employees, and creating a culture that values all contributions adds to the creation of an empowering environment. If leaders focus on promoting an environment of openness and trust they are assisting in establishing the empowerment structures of information, informal power, and formal power as described by Kanter (1977; 1997).

Continuous control and guidance is the final step in establishing an empowering environment (Spreitzer & Quinn, 2001). Leaders need to ensure that employees are aware of their boundaries, and loosen boundaries as necessary. In addition, it is essential that there are clear lines of authority. Hierarchies need to flatten, and the least number of approval stages for an initiative adds to one's feeling of empowerment.

### *Empowerment in Nursing*

In 1992, the University of Western Ontario Workplace Empowerment Research Program was established within the university's School of Nursing by principal investigator Heather K. Spence Laschinger (http://publish.uwo.ca/~hkl/program.html). Between 1992 and 2008, 33 studies examining the concept of empowerment have been completed through the Workplace Empowerment Research Program generating support for Kanter's (1977; 1997) theory. In

the early years of the research program, it was identified that although work empowerment was a common theme in the nursing literature, few researchers studied empowerment using an explicit framework (Laschinger, 1996). Based on a review of studies testing Kanter's theory, Laschinger explicitly illustrated the relationship among the various concepts of Kanter's theory (see Figure 2).

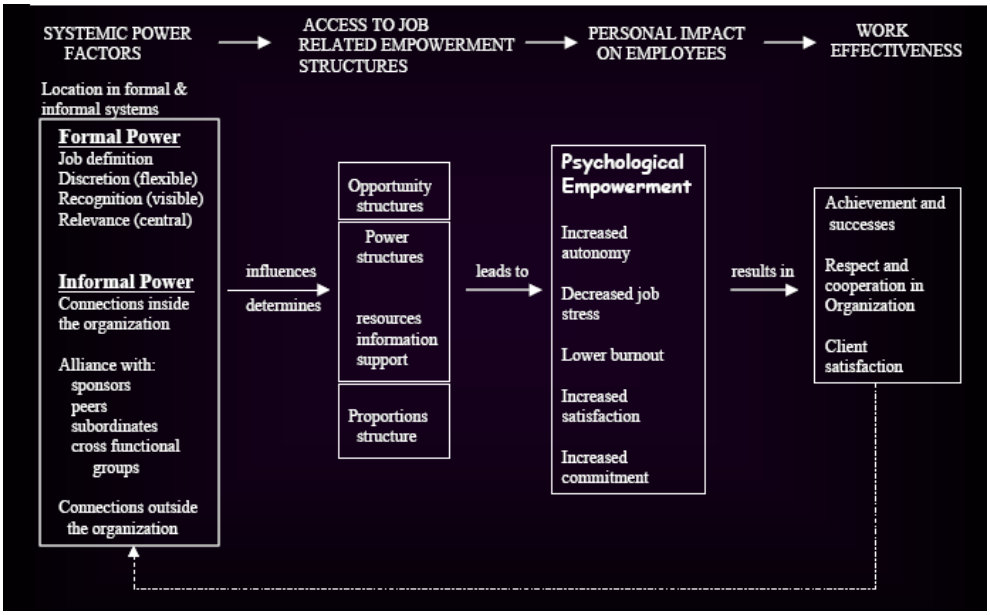


*Figure 2*. Relationship of concepts in Kanter's theory. Copyright 1996 by H. K. S. Laschinger. Used with permission.

Further research resulted in Laschinger (2004) generating a summary of the tenets of work empowerment theory illustrating the relationship between structural empowerment, psychological empowerment, and positive work behaviors and attitudes (see Figure 3). Reviews of selected empowerment studies in nursing are included in the remainder of this section.

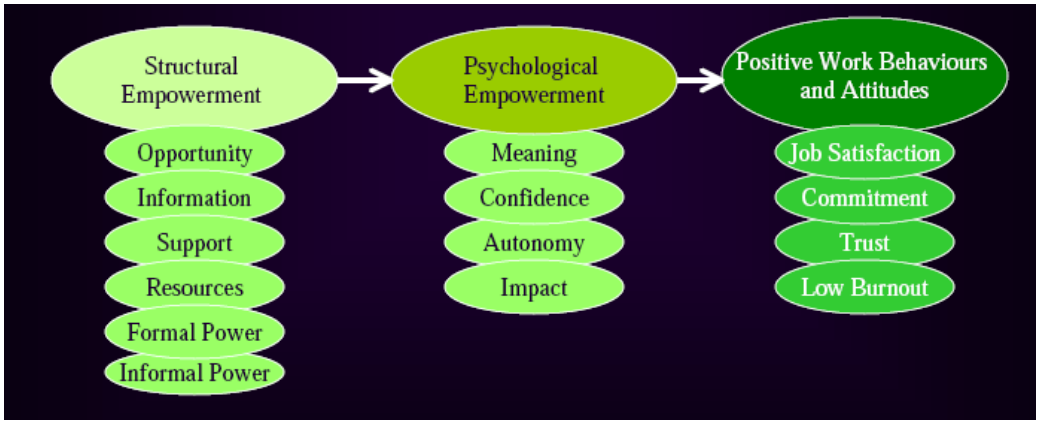


*Figure 3*. Tenets of work empowerment. Copyright 2004 by H. K. S. Laschinger. Used with permission.

Laschinger and Finegan (2005) studied 285 nurses working in urban teaching hospitals in Ontario, Canada. They found that structural empowerment had a direct positive effect on five out of six areas of work-life including *control* (i.e., opportunity to make choices and decisions, solve problems, and fulfill responsibilities), *workload* (i.e., amount of work expected in a given timeframe), *fairness* (i.e., consistent and equitable rules for everyone), *reward* (i.e., acknowledgement of one's contributions), and *sense of community* (i.e., quality of the social environment in an organization characterized by support, collaboration, and positive feelings). Control had a direct effect on value congruence (i.e., fit between what is important to the organization and to members of the organization), and reward had a direct effect on sense of community. Work-life variables of workload, reward, value congruence, sense of community, and fairness were significant predictors of emotional exhaustion. Emotional exhaustion had a positive effect on self-reports of depressive symptomology and physical symptoms, and a negative effect on energy level. In general, positive workplace conditions and interventions that

increase feelings of empowerment influence nurses' health and their ability to respond effectively to the demands of a healthcare environment.

Looking at the relationship among empowerment, professional nursing practice, and leadership, Manojlovich (2005a) found that structural empowerment had a direct positive relationship on professional nursing practice behaviors in a sample of 251 nurses throughout Michigan, and an indirect positive relationship on professional nursing practice behaviors through self-efficacy. Manojlovich (2005b) discovered that the relationship between structural empowerment and professional nursing practice behaviors increased in the presence of nursing leadership, and there was a significant positive relationship between structural empowerment and self-efficacy when strong nursing leadership was present, but not when weak nursing leadership was present. Manojlovich (2005b) noted that dedicated resources for leadership development would be money well spent, as not only would self-efficacy increase in those leaders participating in a leadership development program, but self-efficacy could be bolstered in the staff that they lead.

Laschinger et al. (2007) examined empowerment, job satisfaction, leader-member exchange theory, and core self-evaluation. Leader-member exchange theory focuses on the evolving relationship between leaders and followers and their response to their work environment. Contribution (i.e., working beyond minimal expectations), affect (i.e., friendship and liking), loyalty, and professional respect are four dimensions in a high-quality leader-member exchange relationship. Core self-evaluation refers to how individuals evaluate themselves and is made up of self-esteem, general self-efficacy, locus of control, and emotional stability. Although core self-evaluation is well known in

the management literature, Laschinger et al. could not find any published studies of core self-evaluation in the nursing literature. Using a sample of 141 hospital-based nurse managers, the relationships among core self-evaluation, leader-member exchange, structural and psychological empowerment, and job satisfaction was examined. It was found that leader-member exchange had a positive effect on structural empowerment, which in turn had a positive effect on psychological empowerment and job satisfaction. In addition, core self-evaluation was positively related to leader-member exchange, structural and psychological empowerment, and job satisfaction.

Siu, Laschinger, and Vingilis (2005) investigated empowerment in 41 nursing students enrolled in a problem-based learning program, and 67 nursing students enrolled in a conventional lecture-learning program. It was found that students enrolled in a problem-based learning program had higher perceptions of structural and psychological empowerment than students enrolled in traditional programs consisting of lecture learning. Similar to the findings of Laschinger et al. (2007), Siu et al. found that structural empowerment was positively related to psychological empowerment.

Empowerment studies in nurse educator populations have yielded similar results (Davies et al., 2006; Sarmiento, Laschinger, & Iwasiw, 2004). Davies et al. examined the relationship between perceptions of empowerment and perceived job tension and job satisfaction in 141 Canadian hospital-based clinical nurse educators, while Sarmiento et al. investigated the relationships among empowerment, burnout, and work satisfaction in a sample of 89 nurse educators working in community colleges in Ontario, Canada. In both studies, the researchers found positive relationships between empowerment and job satisfaction, and empowerment and access to support. Formal and informal power were

positively related to perceptions of workplace empowerment, and nurse educators perceived that they had more access to opportunity than to resources. In addition, Davies et al. found that perceptions of work-related empowerment by nurse educators were negatively related to perceptions of job tension, and Sarmiento et al. found that greater work satisfaction and lower levels of burnout were associated with higher levels of empowerment.

According to the RNAO (2006), an empowering work environment is based on trusting and respectful relationships, and is one in which nurses have access to information, support, resources, and opportunities to learn and grow. An empowering work environment supports professional autonomy, strong collegial networks, knowledge development and dissemination, and continuous inquiry. In addition, an empowering workplace leads to increases and improvements in nursing job satisfaction, staff motivation, respect and appreciation for the leader, occupational mental health, perceptions of autonomy and control over nursing practice, organizational commitment, work effectiveness and performance, retention of staff, and positive patient outcomes. Strategies for creating an empowering work environment include providing new challenges, implementing training and professional development opportunities, facilitating communication, building trust through information sharing, providing timely feedback on performance, and providing nurse educators with the resources to perform their work (Sarmiento et al., 2004). Davies et al. (2006) suggest that to create empowering work conditions for nurse educators, nurse educators should be positioned in a way that highlights their importance in an organization as well as their exemplary nursing practice. Formal power can be enhanced by including nurse educators in

discussions that influence their work, considering them for leadership roles in significant projects, keeping them apprised of issues and changes in the organization, increasing their visibility to the staff, and providing them with more discretion and latitude with decision-making. Informal power can be enhanced by creating a formal socialization process and mentorship relationship with an experienced nurse educator. In addition, it is important to create a supportive environment for clinical nurse educators that fosters innovation and creativity.

An online learning community could be an empowering environment where nurse educators have access to information, support, the resources needed to fulfill their multiple responsibilities, and where nurse educators have an opportunity to develop their own leadership practices. The notion of an online learning community for leadership development is supported by Barker (2004) and Lewis and Farrell (2005). Lewis and Farrell propose that a distance education model, which focuses on collaboration and learning rather than presentation of knowledge, may be beneficial for leadership development. Interestingly, they recommend that a network of educational leaders be formed for exchanging information, resources, and strategies for the purpose of pooling resources in order to develop a distance education program for nursing leadership. Learning activities in the leadership program could focus on convergent and divergent thinking, decision making, problem solving, collective action, and group processes. An online environment, however, is not without challenges; Barker indicates that educators as well as learners struggle with the paradigm shift from traditional teaching to learning that is engaging, deep, long lasting, and achieved in a collaborative online format.

**Leadership**

Since 1982, Kouzes and Posner (2003c) have asked thousands of people to tell their stories of their personal best leadership experience, and found that when leaders are at their personal best, they engage in the five practices of exemplary leadership:

- Model the Way,
- Inspire a Shared Vision,
- Challenge the Process,
- Enable Others to Act, and
- Encourage the Heart.

Associated with each of the five practices are 10 commitments of leadership:

- *find your voice* by clarifying your personal values (Model the Way);
- *set the example* by aligning actions with shared values (Model the Way);
- *envision the future* by imagining exciting and ennobling possibilities (Inspire a Shared Vision);
- *enlist others* in a common vision by appealing to shared aspirations (Inspire a Shared Vision);
- *search for opportunities* by seeking innovative ways to change, grow, and improve (Challenge the Process);
- *experiment and take risks* by constantly generating small wins and learning from mistakes (Challenge the Process);
- *foster collaboration* by promoting cooperative goals and building trust (Enable Others to Act);
- *strengthen others* by sharing power and discretion (Enable Others to Act);

- *recognize contributions* by showing appreciation for individual excellence (Encourage the Heart); and
- *celebrate the values and victories* by creating a spirit of community (Encourage the Heart).

Kouzes and Posner (2005) found that leaders who are competent, inspiring, and honest have *source credibility*. Credibility, which is the foundation of leadership, is earned throughout one's career and does not come automatically with a title or a job. Credibility is gained by finding your voice, doing what you say you will do, getting close and listening, building a community, developing capacity, and learning continuously. If one believes that "leaders are defined by their followers" (p. 358), and "leadership…is only in the eyes of the beholder" (p. 363), then potentially anyone regardless of her position within an organization can be a leader. One does not need the title of manager or administrator to be considered a leader, for the foundation of leadership is credibility.

Interestingly, the RNAO (2006) completed a leadership best practice guideline and highlighted five transformational leadership practices. The leadership practices identified as fundamental to transforming nurses' work settings into healthy work environments for nurses include: building relationships and trust, creating an empowering work environment, creating an environment that supports knowledge development and integration, leading and sustaining change, and balancing competing values and priorities.

Besides essential leadership competencies such as having effective conflict resolution, communication, and listening skills, being an effective change agent, or being a visionary that is able to value diversity and think strategically, it appears that

trustworthiness and relationship and partnership building are key leadership competencies that are needed to build an empowering work environment that will support knowledge development and integration (Heller, Drenkard, Esposito-Herr, Romano, Tom, & Valentine, 2004; Henrikson, 2005; Mahoney, 2001; Murdoch, 2001; RNAO, 2006; Shultz, 2003; Stanley, 2006; Upenieks, 2003; Wieck, Prydun, & Walsh, 2002; Wolf, Bradle, & Nelson, 2005). Kouzes and Posner (2005) articulate the importance of relationships in building trust when they state, “Increased trust and confidence won’t magically emerge from a new corporate strategy, policy initiative, accounting system, or legislative act. They may help, but the real source of power is in the relationship itself” (p. 358).

**Online Storytelling**

Ready (2002) identifies two essential criteria for developing potential leaders: the belief that leadership is most appropriately learned within the context it will be practiced, and leadership lessons are best learned from trusted and well respected individuals. The two criteria combine into one powerful method of building leadership effectiveness: storytelling. Stories are told for different purposes such as sparking action, communicating who you are, transmitting values, communicating who the firm is, fostering collaboration, taming the grapevine, sharing knowledge, and leading people into the future (Denning, 2006). The content of a story and the manner in which a story is told varies according to the objective to be achieved; however, it is important to remember that a story is told for a purpose and not an end in itself.

Effective stories are context-specific, have drama, are told by respected role models, have high learning value, and are framed at an appropriate level so participants can visualize themselves in the story and reflect on appropriate actions (Ready, 2002). There are many ways to tell a story, and if a story is not performed convincingly, a perfectly crafted story may be completely ineffective, for non-verbal aspects such as voice tone, facial expression, and gestures are critical (Denning, 2006).

Given that non-verbal aspects are critical in storytelling (Denning, 2006), it is important to investigate whether online storytelling can be effective. Hancock, Landrigan, and Silver (2007) examined how emotion can be expressed in text-based communication. It was found that positive users disagreed significantly less than negative users, negative users expressed five times more negative affect terms in their conversations, positive users had approximately six times the number of exclamation marks over negative users, and positive users used approximately 29% more words than negative users. Overall, participants did not find it difficult to differentiate between negative and positive emotions.

Storytelling has been used as an effective teaching-learning strategy in nursing and medical education. For example, D'Alessandro, Lewis, and D'Alessandro (2004) claim that the use of patients' stories is common in medical education, and medical students gain clinical expertise by listening to and analyzing patient stories. Eight digital stories were posted on a Web site, and over a 4.5 year period, 362,351 users read the stories. Three hundred and ninety three individuals responded to an online survey regarding the digital stories, 91.4% of the respondents indicated that they would remember at least

some part of the case in the future, and 95.4% believed that they could begin to evaluate at least some aspect of a similar case presentation.

The faculty at Creighton University School of Nursing in Australia identified storytelling as an effective teaching-learning strategy while developing a community healthcare management course (Schwartz & Abbott, 2007). During community field visits, the faculty encountered community health nurses using storytelling to introduce a patient, gather data, teach, and plan patient care. Stories seemed to provide a common language to describe human experiences that crossed all cultures and enhanced multidisciplinary learning. Stories can be told through journaling, case studies, or life reviews, and most importantly "every person has a story to tell and stories have power" (p. 186).

Cangelosi and Whitt (2006) describe how storytelling was used as a teaching-learning strategy in a graduate level nurse educator practicum where a graduate student was a teaching assistant in an undergraduate nursing research course. The graduate student shared practicum issues within her instructor via storytelling, and by using a storytelling approach, the instructor and graduate student created a collegial relationship, were able to gain insight into students' learning styles, and actually decided to incorporate storytelling into the undergraduate nursing research course. Stories shared by students in the course facilitated dialogue and enhanced a feeling of inclusiveness while addressing frustrations that the students were experiencing. They recommend examining the potential of storytelling as a strategy for current and new nursing faculty to acquire or update skills and knowledge, and gain confidence in teaching in new environments. Also recommended is examining the potential effectiveness of storytelling on an educator's

ability to develop a sense of community by reflecting on problems and successes, and identifying ways to improve teaching-learning environments.

Journaling is a method by which stories can be told, and is a structured activity with a purpose (Billings, 2006; Schwartz & Abbott, 2007). Journaling should be linked to learning outcomes, and should allow for feedback from a variety of sources that may include self, peers, and an educator (Billings). Through journaling, learners can increase their awareness and reflect on their own beliefs, values, and practices. An electronic format can be used for journaling including the use of online discussion forums or blogs. The writing of narratives is similar to that of reflective journaling, and "…is a brief recount of an actual situation or episode in clinical practice that is significant because it results in new learning and/or new understanding" (Levett-Jones, 2007, p. 113). The reflective learning cycle used in the writing of narratives includes five main phases including (a) what happened, (b) so what, (c) now what, (d) learning, and (e) action.

Ready (2002) outlines six steps to be considered when implementing a storytelling leadership program. The steps include getting the top team actively engaged, developing a collective point of view, considering all available alternatives, getting the right team in place to carry out the program, coaching the storytellers and orienting the participants, and using stories to stimulate dialogue, reflection, and action. Before one can consider establishing an online learning community, a preferred learning approach needs to be determined.

**Constructivism**

Reigeluth (1999) describes how the paradigm of instruction needs to change from standardization to customization, from teacher-directed to student-directed learning, and from passive to active learning. Lee (2006) agrees, and notes that educators are transitioning from delivering information to remote learners, to constructing a community of learners. It appears that *curriculum delivery* is frequently the focus of concern in traditional face-to-face or online educational environments, while the *development of a community*, as a foundation for learning, is often ignored. In addition, the misapplication of learning approaches, such as implementing a behavioral approach as opposed to a constructivist approach to shape the development of a learning community remains an obstacle in online learning, as constructivism is emerging as the preferred learning approach when creating an online learning community (Bolliger, 2006; Lee, 2006).

Shifting paradigms is not always easy, for Barker (2004) identified that educators as well as learners struggle with the paradigm shift from traditional teaching to learning that is engaging, deep, long lasting, and achieved in an online format. Learners must accept the active and engaging learning model that is different from a traditional passive model of listening to lectures. For learners to make the transition to a constructivist environment, learners need to be self-directed, self-disciplined, and have good time management skills (Barker; Kozlowski, 2004; Rovai, 2003).

Numerous authors (Ali et al., 2004; Almala, 2005; Bolliger, 2006; Cooperstein & Kocevar-Weidinger, 2004; Driscoll, 2005; Lee, 2006) have written about constructivism and describe a constructivist learning environment as a complex, situated, and realistic learning environment used to engage learners in a sense-making process where learners

investigate, discover, explore, build new learning on prior knowledge, and construct their own meaning to concepts. The conditions for learning are a social context where learners are viewed as autonomous, independent, self-motivating, engaging, and interactive individuals. Constructivist learning outcomes focus on reasoning, critical thinking, understanding and use of knowledge, self-regulation, and mindful reflection (Driscoll). Constructivism is consistent with Garrison et al.'s (2000) community of inquiry model, and based on the literature, appears to be the preferred learning approach when creating an online learning community. Additional considerations in the development of an online learning community are numerous and need to be explored.

## Considerations in the Development of an Online Learning Community

### *Fundamental Concepts*

Early adopters of online learning, known as the first wave of online learning instructors, experienced both successes and failures as they experimented with course designs and techniques to engage learners (Palloff & Pratt, 2005). As the first wave of online learning crests, the second wave is starting in which the focus is on best practices and improving interaction and interactivity. In order to improve interaction and interactivity in an online learning community, there is a need to first consider the multitude of factors involved in online learning.

Waltonen-Moore, Stuart, Newton, Oswald, and Varonis (2006) analyzed 239 threaded discussion board transcripts in a professional development education course involving 18 classroom teachers and found that learners collectively pass through five stages of development in an online environment including introduction, identification,

interaction, involvement, and inquiry. In the first stage, there is a strong affective component as participants introduce themselves and meet one another. In the identification stage, there is a sense of openness and comfort, and participants and facilitators begin to identify and relate to each other. Trust, reliance, and tentativeness exists in the interaction stage as participants start forming a community of learners; whereas, in the fourth stage, participants are comfortable, involved, engaged, and seek advice and guidance from one another as they operate in a task-oriented mode. In the final stage, namely, inquiry, there is evidence of application, analysis, synthesis, and evaluation.

Fundamental elements of a learning community include supportive and shared leadership, collective creativity, shared values and vision, shared personal practice, and supportive conditions (Bassi & Polifroni, 2005). Ku, Cheng, and Lohr (2006) studied 94 graduate students enrolled in an online instructional-design course. They found that for students to work well in an online group collaborative setting, members needed to practice the five C's: communicate, cooperate, compromise, complement, and commitment. In regard to *communicate*, members of an online group need to take the initiative to interact with group members. Reaching team agreement on working strategies is the focus of *cooperate*, while *compromise* means that members need to brainstorm ideas and reach agreement to finalize project topics, set reasonable deadlines for the group, and accommodate varying schedules. Members need to identify their own strengths and weaknesses, combine expertise, and share skills so that members *complement* each other, and finally, members need to make a *commitment*, respect each other, abide by deadlines, and try to resolve differences within the group prior to

involving the instructor. Similar to these findings, Tilley, Boswell, and Cannon (2006) found that unique identifiers in a cohort of 45 registered nurse baccalaureate nursing students who met during orientation and progressed together through an online nine month nursing program included supportiveness, opening sharing of oneself, and socialization.

The outcomes of a successful online learning community can include a reduction in isolation and increased connectedness, as well as a belief in community participation as opposed to individualism, with members becoming responsible for community issues and becoming a problem solver for themselves and the community (Bassi & Polifroni, 2005). Authors (Bassi & Polifroni; Billings, Jeffries, Daniels, Rowles, Stone, & Stephenson, 2006; Jeffries, 2005; Kozlowski, 2004; Lee, 2006 Maag & Fonteyn, 2005; Pethtel, 2005; Ryan, Hodson-Carlton, & Ali, 2005) have found than an online learning community may foster professional growth, mutual respect, critical thinking and reflection, and improve writing skills as well as communication skills. The potential for miscommunication is believed to be a major barrier to student success. There are opportunities for sharing of creative ideas, and learners are able to construct new knowledge and apply concepts learned in an online course to their nursing practice. An online community may even foster nurse recruitment and retention.

The notion of an online learning community for leadership development is supported by Barker (2004) and Lewis and Farrell (2005). Lewis and Farrell propose that a distance education model, which focuses on collaboration and learning rather than presentation of knowledge, may be beneficial for leadership development. Interestingly, they recommend that a network of educational leaders be formed for exchanging information, resources,

and strategies for the purpose of pooling resources in order to develop a distance education program for nursing leadership.

Despite an understanding of the frameworks, principles, and elements needed for an online learning community to succeed, as Shneiderman and Preece (2007) indicate, many online communities fail. It is important to be able to understand and capture what generates such intense participation in various online communities such as the Wikipedia community, MySpace, or Facebook. Bishop (2007) states, "…An online community can have the right tools, the right chat platform, and the right ethos, but if community members are not participating the community will not flourish" (p. 1887). Changing *lurkers* into participants is a challenge for community providers, and Bishop proposed a three level ecological cognition framework for understanding participation in an online community. In order for a person to carry out an activity such as posting a message in an online community, the person needs to have the desire to post the message, the desire needs to be consistent with the person's goals, plans, values, beliefs, and interests, and the person needs to have the tools and abilities to post the message. Arguello, Butler, Joyce, Kraut, Ling, Rose, and Wang (2006) agree that the needs of members within an online community need to be met in order for a community to survive  Similarly, Maloney-Krichmar and Preece (2005) found that in a 2.5 year study of a thriving online health community that the reasons for success included members having a sense of continuity and stability, members were linked to resources both within and outside the group, and members' offline lives were positively influenced by their online participation. Members also need to have their messages responded to, and after analyzing over 6,000 postings from eight Usenet groups, Arguello et al. found that

postings that include asking questions, testimonials, or those that use less complex language are more likely to get a reply, while newcomers were less likely to get a reply. Maloney-Krichmar and Preece note that trust among group members is essential for reciprocity to occur, and members need to know that they will be respected and cared for by the community.

*Computer Literacy*

An understanding of the computer literacy of participants is important, especially when considering the design of the online environment. When examining the current state of nursing education in regard to online learning, it was found that information technology skills might be present in curricula; however, given the questionable skill level of nurse educators in regard to computer technology, it is not evident that educators are teaching the content (McNeil, Elfrink, Bickford, Pierce, Beyea, Averill, & Klappenbach, 2003). The fact that students may not be exposed to information technology is concerning, for Maag (2006) and McNeil et al. found a clear perceived need for information technology skills in nursing curricula. A consequence of a lack of exposure to information technology and computer training in either basic nursing education programs or continuing education programs is that nurses are not prepared to manage the information systems in the clinical areas (McNeil et al.; Wilbright, Haun, Romano, Krutzfeldt, Fontenot, & Nolan, 2006).

Wilbright et al. (2006) noted that many clinically experienced nurses have limited basic computer skills, because clinically experienced nurses would have graduated when computer training was not considered an essential component of a nurse's basic

education, nor were computers prominent in clinical units. McNeil et al. (2003) found that information technology skills might be present in nursing curricula; however, given the questionable skill level of nurse educators in regard to computer technology, it was not evident that educators were teaching the content.

Wilbright et al. (2006) surveyed 454 nurses at the Medical Center for Louisiana in New Orleans, and found that nurses self-reported fair to poor computer literacy skills, with limited proficiency in basic skills such as using a mouse, minimizing windows, saving files, dragging and dropping files, using email, or using a web browser. Kozlowski (2004) noted similar findings in regard to computer literacy skills in nurses.

Learners participating in an online learning environment require basic computer and word processing skills, the ability to send and receive email with attachments, and the ability to use and understand Internet protocols (Barker, 2004; McNeil, Elfrink, Beyea, Pierce, & Bickford, 2006). Learners also require hardware competencies such as troubleshooting computers (Barker; McNeil et al.). McNeil et al. note that education related to discussion groups, asynchronous and synchronous chats, and online learning programs are important. A significant point to note is that it is commonly reported that students who enter an online program may have poor computer skills initially, but will exit with highly improved skills (Doutrich, Hoeksel, Wykoff, & Thiele, 2005; Kozlowski, 2004; McDowell & Ma, 2007; Ostrow & DiMaria-Ghalili, 2005), and that nurse educators who teach online have a significantly higher level of computer literacy (Ali et al., 2004).

There is no question that our current and future nurses require basic computer competencies, and as Doutrich et al. (2005) note, technology skills are a *requirement* and

not an *option* for nurse educators. Overall, progress is being made in increasing computer literacy in both students and nurse educators. McDowell and Ma (2007), for example, note that in 1997 only 40% of students owned a computer upon graduation, compared to 2003 and onward, where 90% of students owned a computer upon admission. Doutrich et al. reported on the development of the *Nurse Ed on the Web* program at Washington State University College of Nursing that was developed to prepare nurse educators to teach in both academic and service settings, and particularly to develop their skills and knowledge in relation to technology. Nurses enrolled in the *Nurse Ed on the Web* program increased their computer technology skills by 16%.

*Learning Preferences*

In Carl Jung's theory of psychological types, he distinguishes individuals by their orientation to four modes: relation to the world, decision making, perceiving, and judging (Kolb, 1984). In regard to an individual's relation to the world, *extraverts* are those who orient themselves towards the external world, and *introverts* are those who focus on the internal world. In terms of decision making, a *judging* type emphasizes order through decision making, while a *perceiving* type focuses on gathering information in order to obtain as much data as possible. The mode of perceiving is distinguished by either a *sensing* type or an *intuition* type. A sensing type focuses on facts, details, and concrete events, while imagination, meaning, and seeing things as a whole constitute an intuitive type. The mode of judging is determined by either *thinking* or *feeling*. A thinking type emphasizes logic and rationality, while a feeling type focuses on human values, establishing friendships, and making decisions based on beliefs.

Kolb (1984) identifies four modes of learning: concrete experience, reflective observation, abstract conceptualization, and active experimentation. Individuals who lean towards concrete experience emphasize *feeling* over thinking, and have a personal way of dealing with situations. An artistic approach is used when dealing with problems as opposed to a systematic scientific inquiry approach. Those with a concrete experience orientation enjoy unstructured situations, have an open-minded approach to life, and are good intuitive decision makers.

Being able to understand the meaning of a situation by *watching* is indicative of individuals with a reflective observation orientation (Kolb, 1984). They are able to examine a situation or idea from a different perspective while appreciating other viewpoints. There is an emphasis of understanding over practical application and reflection over action.

Kolb (1984) describes the individual with an orientation towards abstract conceptualization as a *thinker* who builds theories based on a scientific method of inquiry. The individual is good at systematic planning, analyzing ideas, manipulating abstract symbols, and quantitative analysis.

Individuals who prefer an active experimentation mode of learning focus on *doing* as opposed to observing (Kolb, 1984). They like to influence situations and people and are able to *get things done*. They will take risks to achieve their goals, and see value in being able to influence their environment.

The four basic learning styles, namely, convergent, divergent, assimilation, and accommodative are based on a combination of learning modes (Kolb, 1984). A convergent learning style relies on abstract conceptualization and active experimentation

as the dominant learning abilities. Concrete experience and reflective observation modes contribute to a divergent learning style that is the opposite of a convergent style. Assimilation is a combination of abstract conceptualization and reflective observation. Opposite to assimilation is an accommodative learning style that emphasizes concrete experience and active experimentation.

The relationship between Jung and Kolb's theories is interesting. Kolb (1984) links introversion with reflective observation, and extraversion with active experimentation. The learning mode of concrete experience is associated with sensing and feeling, while abstract conceptualization is linked to intuition and thinking. Kolb notes that is it more difficult to link perception and judgment to a learning mode, and places perception nearly in the middle of both the active experimentation-reflective observation and abstract conceptualization-concrete experience continuum. Judgment is more associated with abstract conceptualization and active experimentation.

Kolb (1984) explains that several forces shape one's learning style including psychological type, educational specialization, professional career, current job, and adaptive competencies. An awareness of learning preferences is important in any learning situation, as it would be expected that not all participants learn in the same manner. The best learners, however, are balanced in their learning styles and are able to adapt to the learning situation (Kolb, 2005). Kolb (2005) indicates that it is important to strengthen all learning skills, for if people rely too heavily on one particular learning mode they may miss important concepts and experiences. Facilitating all modes of learning is important in an online environment, and knowledge of human-computer interaction will allow for the development of an effective computer-user interface.

*Human-Computer Interaction*

It is not an easy task to develop a successful online community, for building the technology does not guarantee that communities will be formed, nor that participants will be satisfied with their experience (Arguello et al., 2006; Quan-Haase, 2005; Shneiderman & Plaisant, 2005). Arguello et al. describe one of the most important concepts to consider in the development of a community, and that is that the needs of individual members in an online community need to be met if the community is to be successful. Maloney-Krichmar and Preece (2005) studied a thriving online health support community for 2.5 years for the purpose of gaining information that designers, developers, managers, and others could use to build and maintain thriving online communities. A key finding in their examination of a thriving online health community is that the development and existence of an online community is not dependent on state-of-the-art technology, and the reliability and ease of use of the computer interface is more important than an interface with numerous features. Similarly, Vonderwell and Zachriah (2005) note that there is a need to develop pedagogically user-friendly interfaces, for participation and patterns of participation are influenced by technology and interface characteristics.

Shneiderman and Plaisant (2005) note that good interface design, along with the support and nurturing attention of a moderator are determining factors for a thriving online community. In regard to the computer user interface, the eight golden rules of interface design are important to consider. The first rule is to *Strive for Consistency.* De Marsico and Levialdi (2004) refer to the principle of *minimum amazement*, and similar to Shneiderman and Plaisant, note that every screen should have a common look. De Marsico and Levialdi note that consistency in the interface configuration improves

interaction by enforcing recognition over recall or remembering. There are many forms of consistency; however, color, layout, sequences of actions, and terminology in menus, prompts, and help screens, should be consistent (Shneiderman & Plaisant).

Rule two is to *Cater to Universal Usability*. As software products are used by a wide range of novice to expert users, the diverse needs of the various user groups needs to be taken into consideration (De Marsico & Levialdi, 2004; Shneiderman & Plaisant, 2005). St. Amant (2005) outlines various strategies for designing international online classes, and cautions using visual-based media, for persons from various cultural backgrounds interpret images or visual features differently. St. Amant suggests using text-based rollovers for images, integrating text with images, and using text-based buttons instead of icons or images.

Rule three is to *Offer Informative Feedback*. Shneiderman and Plaisant (2005) indicate that there should be a system response for every user action; however, Ceaparu, Lazar, Bessiere, Robinson, and Shneiderman (2004) point out that *unexpected message boxes* and *responses inconsistent with actions* results in frustrated users. Direct manipulation interfaces have replaced typed commands, and users are able to visualize objects and actions through icons, menus, and dialogue boxes (Shneiderman & Plaisant). Although Lane, Napier, Peres, and Sandor (2005) found that keyboard shortcuts are more efficient for commands, there is general agreement that icons are easier to recall and learn, and are more popular (Grobelny, Karwowski, & Drury, 2005; Lane et. al, 2005; Siau, 2005).

The fourth golden rule is to *Design Dialogs to Yield Closure*. Essentially, systems should be designed to move through a sequence from beginning to end, and the user should know when a task is completed (Shneiderman & Plaisant, 2005).

Rule five is to *Prevent Errors*. Ceaparu et al. (2004) found that *error messages* were the most cited cause of user frustration. It is important, therefore, that systems be designed so that if a user makes an error, the error will be detected and instructions will be provided for recovery (Shneiderman & Plaisant, 2005).

The sixth golden rule is to *Permit Easy Reversal of Actions.* The ability to backtrack any number of steps and reverse actions is important to relieve anxiety and promote exploration and interaction within the interface (De Marsico & Levialdi, 2004; Shneiderman & Plaisant, 2005).

The seventh rule is to *Support Internal Locus of Control*. Users want to be in charge of the system and want to believe that the system will respond to their actions (Shneiderman & Plaisant, 2005). van Schaik and Ling (2005) outline the following questions, representative of *control*, that can be asked to a user or to oneself: (a) time seemed to pass more quickly, (b) I knew the right things to do, (c) I felt like I received a lot of direct feedback, (d) I felt in control of myself, and (e) I felt in harmony with the environment.

The eighth golden rule of interface design is to *Reduce Short-Term Memory Load*. Displays need to be kept simple, and online access to information should be provided to decrease memory load (Shneiderman & Plaisant, 2005). According to cognitive load theory, one's working memory has limited storage capacity (Tempelman-Kluit, 2006). Tempelman-Kluit explains that cognitive load theory needs to be taken into consideration

during the design of multimedia material in order to minimize working memory load and support the utilization of long-term memory. Working memory storage can be increased by eliminating extraneous information, chunking content in a meaningful way for storage in the long-term memory, and promoting the use of both visual and verbal processing channels. Using both the visual and verbal processing channels allows learners to create meaning that leads to schema connections and enhanced long-term memory utilization. Combining, for example, animation and narration is better than combining animation and text, as both processing channels are used in the first case. The contiguity principle consists of both spatial and temporal contiguity. Spatial contiguity means that meaningful memorable mental models will be formed when images and text are presented close together. Temporal contiguity means that if verbal and visual images are presented at the same time, meaningful mental connections are more likely to occur. In addition, segmenting, which allows for time between learning tasks so that the learner is able to process information prior to proceeding to the next learning task, can reduce cognitive load or allow the learner to manage the load more efficiently.

De Marsico and Levialdi (2004) consider cognitive load theory when they note that navigation can be cumbersome without a plain visual structure, and the aesthetic and artistic features of visual elements should never overcome or manage the cognitive or functional purpose of the elements. Similarly, Lavie and Tractinsky (2004) found a positive correlation between aesthetic measures and perceived usability of Web sites, with classical aesthetics, emphasizing order and clear design, ranking higher than expressive aesthetics, reflective of a designer’s creativity and originality. In addition, managing cognitive load will be beneficial for field dependent learners who rely more on

their external environment and others in cognitive restructuring tasks than field independent learners (DeTure, 2004).

*Asynchronous Communication*

A major decision regarding the discussion interface is to determine whether the members of the community prefer a synchronous or asynchronous environment. The advantages of an asynchronous text-base community include flexible access to the community from either a home or work environment, flexible time management with the community available 24 hours a day, the ability to communicate across time zones, and the ability to think about and edit responses (Maloney-Krichmar & Preece, 2005). The types of asynchronous interfaces include electronic mail, newsgroups, listservers, threaded discussion boards, conferencing, blogs, and wikis (Shneiderman & Plaisant, 2005). Increasingly, blogs and wikis are being used in the development of online communities, and have the potential to promote communication, discussion, collaboration, reflection, and sharing of resources within a constructivist environment (Beldarrain, 2006; Boulos, Maramba, & Wheeler, 2006; Chin & Chignell, 2006; Du & Wagner, 2006; Lio, Fraboni, & Leo, 2005; Maag, 2005; Poonawalla & Wagner, 2006; Ray, 2006; Razavi & Iverson, 2006; Weller, Pegler, & Mason, 2005).

Grounded in constructivism, Knowlton (2005) presents a five-tiered taxonomy for asynchronous discussion. Passive participation, developmental participation, generative participation, dialogical participation, and metacognitive participation make up the five levels. Included within each of the levels are likely perceptions of how participants in an

asynchronous discussion view the environment, collaboration, and knowledge construction.

The first level focuses on passive participants (Knowlton, 2005). Passive participants are also referred to as *lurkers* who read discussion contributions, but do not participate in the discussion. Passive participants tend to lack knowledge of environmental logistics, and are uncomfortable with text-based discussion. Collaborating within small groups and a general lack of understanding of the concept of collaboration, group culture, or group values is indicative of passive participation. Passive participants do not view themselves as constructors of knowledge, and view participation as adopting a product instead of a process.

The second level focuses on developmental participants (Knowlton, 2005). Developmental participants are more active than the passive group; however, they do not substantially contribute to collaborative knowledge construction, and discussion is seen as a novelty and not a serious educational tool. Collaboration is viewed in terms of reciprocity, and the focus is on morale building and community creation. Developmental participants have difficulty with articulating theory and practice connections.

Participants at the generative level view an asynchronous environment as conducive to articulating ideas, and for communicating with the instructor (Knowlton, 2005). Generative participants emphasize their own ideas through monologue, and view collaboration as developing communal trust. Knowledge is constructed through writing, but is also viewed as a private and solitary process where participants respond to prescriptions from instructors.

The fourth level is that of dialogical participation (Knowlton, 2005). Dialogical participants generally understand the legitimacy of asynchronous discussion, and use the environment as a tool for increasing clarity and maximizing interaction with participants. Dialogical participants become situated as part of a learning community, try to alleviate cognitive dissonance created by discussion, and view knowledge as solely internalized.

The last level is metacognitive participation (Knowlton, 2005). In this level, participants view an asynchronous environment as having the potential to promote personal transformation. In terms of collaboration, metacognitive participants view other participants as a mirror in which to see themselves. Metacognitive participants view knowledge as being distributed among participants, and constructed through participation in discussion.

*Groupings*

Group size is an important consideration in an online learning environment. Although Arguello et al. (2006) do not provide a guideline for the optimal number of members in an online community, they do claim that if there are too many members and too many messages to read, members may not return to participate; whereas, if there are too few community members it will be difficult to maintain successful interaction. In terms of group composition, Amato and Amato (2005) found that homogeneous teams might lack synergy; whereas, Rutherfoord (2006) found that homogeneous teams are in danger of *groupthink*. Teams that are too divergent may not have any *common ground* (Amato & Amato); however, Rutherfoord found that the strongest teams were heterogeneous teams.

Maloney-Krichmar and Preece (2005) stated that the existence of subgroups had a positive effect on the community they studied, even though the software did not support subgroup formation. If subgroup formation is supported by the interface, there should be physical barriers that separate the subgroups from the rest of the community.

*Privacy*

Privacy concerns for Internet users have grown in importance (Razavi & Iverson, 2006), and many Web sites are restricted and password protected (Richardson, 2006). Razavi and Iverson claim that privacy is a key factor in making online learning communities a part of an individual's daily routine. An online learning community needs to be a safe place for reflecting, collaborating, and sharing ideas, and users need to be able to control what information is shared within both small groups and the larger community. The impact of privacy on group dynamics and trust within the learning community is an important consideration in the development of an online learning community.

*Learner Support*

Besides what could be described as the social needs of online members, learner support is another consideration, and prior to the development and implementation of a distance education program, educators must consider the need for support systems, services, and resources (Mueller & Billings, 2006). The success of an online program is dependent upon a comprehensive orientation program including information on accessing resources, learning community norms, strategies for success, and a detailed orientation to

the technology (Mueller & Billings; Ostrow & DiMaria-Ghalili, 2005). A user guide, handbook, or online presentation that focuses on all orientation areas may be helpful, and printed troubleshooting tips, frequently asked question (FAQ) pages, or online presentations can increase students' satisfaction and comfort with online learning (Mueller & Billings). Technical support is critical for establishing and supporting an online learning community, and 24 hour a day, 7 day a week support is ideal although cost prohibitive in many cases (Barker, 2004; Mueller & Billings; Ostrow & DiMaria-Ghalili).

As outlined, there are numerous considerations that need to be taken into account when developing and later sustaining an online learning community. One critical element that requires further discussion is the role of the facilitator.

**Online Learning Community Facilitator Role**

Although researchers have reported that there is no difference between peer and expert oversight in terms of the quantity and quality of contributions made by group members in an online community (Cosley, Frankowski, Kiesler, Terveen, & Riedl, 2005), or that facilitators should keep a low profile in online communities so that self-moderation can develop as a group norm (Maloney-Krichmar & Preece, 2005), the importance of a facilitator in an online learning community is well recognized (Garrison, 2006; Garrison et al., 2000; Garrison & Cleveland-Innes, 2005; Palloff & Pratt, 2005; Phillips, 2005; Russo & Benson, 2005; Shea, 2006; Shea, Li, Swan, & Pickett, 2005; Waltonen-Moore et al., 2006). Teaching presence or facilitation is a critical and unifying element in an online learning environment, and it is the role of the facilitator to provide

the teaching presence necessary to structure, shape, and support a meaningful learning experience (Garrison).

A facilitator fulfills numerous roles in an online learning environment including being responsible for establishing trust and a level of comfort within the learning community (Garrison, 2006), creating a supportive presence and attending to and facilitating participants' knowing and connecting with one another (Ali et al., 2004; Diekelmann & Mendias, 2005), and nurturing relationships to promote self-organization and empowerment (Palloff & Pratt, 2005). Effective facilitator-learner communication is critical in an online environment, and the personality, motivation, enthusiasm, and communication style of the facilitator is key to engaging learners in transparent and honest discussions that will build cohesiveness within a collaborative community atmosphere (Bangert, 2005; Mancuso-Murphy, 2007; Posey & Pintz, 2006; Ryan et al., 2005; Schell, 2006). Being able to establish a sense of community is essential in an online learning environment, and Shea et al. (2005) found that in a sample of 2,036 students enrolled in the SUNY Learning Network in New York, students reported a stronger sense of community when educators exhibited stronger teaching presence behaviors.

Group cohesion that goes beyond *polite dialogue* is important in sustaining a community, and the facilitator needs to build and maintain group cohesion through collaborative activities (Garrison, 2006). Group cohesion and social interaction, however, is not indicative of cognitive presence or engagement (Garrison & Cleveland-Innes, 2005), and again, it is the role of the facilitator to facilitate cognitive presence by scaffolding discussions (Waltonen-Moore et al., 2006), making connections among ideas,

and summarizing discussions (Garrison). Garrison and Cleveland-Innes investigated the depth of learning and the nature of online interaction in four distance education courses and found that the creation and sustainability of a community of inquiry that focuses on exploration, integration, testing of concepts and solutions, and transitions students from social to cognitive presence is dependent on teaching presence. The teaching presence that a facilitator provides in an online learning environment can be powerful in triggering discussion and facilitating a deep approach to learning where students embrace concepts and search for meaning in the material. As cognitive activities become more challenging, the facilitator needs to keep discussions focused, identify issues needing clarification, and move the discussion forward (Garrison).

Russo and Benson (2005) investigated the relationship between teaching presence in an online course and affective and cognitive learning outcomes. Students' perceptions of a facilitator's presence were positively correlated with scores on affective learning and students' satisfaction with their own learning. Interestingly, satisfaction with learning was correlated more strongly with perceptions of others than with the perceptions of the facilitator, emphasizing the importance of student-to-student interactions in an online learning environment.

With any interactions, there is a potential for conflict, and although the interactions are occurring online, Hancock et al. (2007) have found that participants in an online text-based environment are able to distinguish between positive and negative emotions. Palloff and Pratt (2005) and Garrison (2006) note that the facilitator needs to be comfortable in an environment that has a reasonable degree of chaos and conflict, and intervene when necessary to keep the anxiety levels of the learners at a manageable level.

Facilitators need to be able to find the balance between providing too much and too little direction, for learners need to assume responsibility for their own learning (Garrison, 2006; Waltonen-Moore et al., 2006). With active learning strategies, learners take on a more independent and self-directed role (Phillips, 2005). Strategies a facilitator can use to enhance active learning include having the learner write reflective journals or case studies, role play with designated roles related to case studies, partake in problem-solving assignments with real-world problems, debate with assigned roles, or build electronic portfolios (Phillips).

Providing student feedback is another one of the facilitator's roles and is essential for ongoing interaction and positive group dynamics (Bangert, 2005; Mancuso-Murphy, 2007; Posey & Pintz, 2006; Ryan et al., 2005; Schell, 2006). Ice, Curtis, Phillips, and Wells (2007) examined the differences between text-based feedback and audio feedback in which instructors embedded audio files into the student's document. Ice et al. found that students overwhelmingly preferred asynchronous audio feedback compared to text-based feedback, and students commented that audio feedback would be a key factor in selecting future online courses. Themes identified by students during semi-structured interviews included (a) an increased ability to understand nuances that sometimes get lost in written feedback, (b) a feeling of being more involved in the course, (c) improved retention of content, and (d) a belief that the educator cared more about the student (Ice et al.).

By fulfilling the numerous roles described, the facilitator is attending to a variety of learners' needs and preferences for learning. For example, extraverted students tend to prefer collaborative learning approaches and often become "…dependent on the hustle

and bustle of the external world for suggestions about how to proceed" (Perry & Ball, 2004, p. 13). The introverted students who prefer limited external distractions may feel more uncomfortable, but do have time in an asynchronous environment to prepare their responses in private. Students with a preference for feeling over thinking, as measured by the Myers-Briggs Type Indicator (Hammer, 2004), for example, tend to be right-hemispheric dominant learners, prefer holistic learning, and base their decision making on values and subjective evaluations; therefore, a more social environment would be beneficial (Hammer; Perry & Ball). Thinkers, who are more closely related to left-hemispheric dominant learners and tend to base their decisions on logic and cause and effect, may also benefit from objective ideas that are generated from the facilitator moving the discussion from a social presence to a cognitive presence. Students with diverging or accommodating learning styles, as measured by the Kolb Learning Style Inventory (Kolb, 2005), will thrive in a social environment in which ideas can be generated from interacting with people, and will challenge convergers and assimilators to become more balanced in their approach to learning.

**Web 2.0 Technology**

Alexander (2006) calls the term *Web 2.0* audacious, in that there is an assumption that the Web has progressed to a point in history where the technology is accepted enough that it can now be transitioned to a new level. However, it is not the term that is important as compared to the concepts, projects, and practices that the term represents. Encompassed under the Web 2.0 category are collaborative interfaces such as blogs, wikis, podcasts, videoblogs, trackback, really simple syndication (RSS) feeds, social

bookmarking, social networking sites such as Facebook or MySpace, and even the video sharing service called YouTube (Alexander; Skiba, 2007). Skiba claims that nurse educators can no longer ignore the social phenomenon of Web sites such as YouTube and other Web 2.0 tools, and coins the term *Nursing Education 2.0* to represent the "…emerging technologies that will transform the way nursing education is offered" (p. 100). Not all technology tools are appropriate for all learning situations, and the key is to determine which tools are the best in a given synchronous or asynchronous learning environment. When examining the role of technology as a vehicle for communication and completing tasks within an online learning environment, Palloff and Pratt (2005) indicate that the technology should provide for unrestricted communication, as well as being transparent and easy to use.

*Wikis*

Wiki is a short form of *wiki-wiki*, a Hawaiian word meaning *quick* (Richardson, 2006). Created by Ward Cunningham in 1995, a wiki is a collection of webpages that are interconnected and organized as required, and collectively authored with users being able to add content and edit the content of other users (Beldarrain, 2006; Best, 2006; Bold, 2006; Duffy & Bruns, 2006). A wiki does not follow a predetermined taxonomic hierarchical structure such as one would observe in a blog, and can be thought of as a spatial structure that is infinitely expandable (Duffy & Bruns), self-organizing, and self-regulating (Best). Wikis are easily navigated, users do not need to know hypertext markup language (HTML) programming, and files can be managed and categorized (Duffy & Bruns). Every page of a wiki has an edit button and a history page that tracks

edits and allows users to revert to previous versions of a page (Beldarrain; Duffy & Bruns; Richardson), and access to a wiki can be restricted with a password (Richardson).

Potential problems with using a wiki include the possibility that two users could be editing the same page simultaneously, and one set of changes will be silently deleted if the wiki does not have a page locking system (Duffy & Bruns, 2006). Some users may become frustrated with having other users edit their work (King, 2007), and *edit wars* can occur at times, especially with controversial subjects; however, the best way to stop the continuous editing is to block the page from being edited for a period of time (Duffy & Bruns). Best cautions users within a public wiki to be wary of the authenticity, quality, and correctness of information posted.

The key feature of a wiki environment is that it allows for group collaboration and information sharing (Best, 2006; Bold, 2006; Duffy & Bruns, 2006; Richardson, 2006). Bold indicates that the main advantage of a wiki is that changes can be made to documents through *live edit,* via a browser window on the Internet, as opposed to collaborating on a document via a course management system that requires saving and uploading documents. Due to the collaborative nature of a wiki, the technology continues to make inroads into corporations around the world, and open-source software packages such as MediaWiki and TWiki are being used by companies for a wide range of activities including project management, tracking industry news, setting meeting agendas, posting corporate policies and product information, and creating strategy documents (King, 2007). Companies such as Motorola, Amazon, Google, and Nokia have all incorporated the use of TWiki into their everyday business, and IBM's WikiCentral is used by 125,000

IBM employees. King indicates that the next step for many companies is to create wikis that can be used to engage customers and corporate partners.

In education, wikis are being used collaboratively by educators to create a teacher's resource for best practices, or to develop an online textbook for a class in which both the teacher and students contribute information (Richardson, 2006). Beldarrain (2006) notes that teaching models that integrate wiki technology may provide the learner with more control over the learning process as well as knowledge construction, while Richardson states, "The collaborative environment that wikis facilitate can teach students much about how to work with others, how to create community, and how to operate in a world where the creation of knowledge and information is more and more becoming a group effort" (p. 74). Bold (2006) reports that wikis have been used in several online courses at Texas Woman's University, and there has been little resistance to using the modality. In addition, the resources needed to establish wiki courses included the instructor's time and a Web site, and no university technical support was needed. Similarly, Beldarrain claims that wikis can be managed by the teacher or the learner.

*Blogs*

The term *blog* was named the 2004 word of the year by Merriam-Webster (http://www.merriam-webster.com/info/pr/2004-words-of-year.htm). Blog, abbreviated from *weblog*, refers to a web site containing an online personal journal with reflections, comments, and hyperlinks (http://www.merriam-webster.com/dictionary/blog). Blogs are being used by millions of people worldwide, and have infiltrated educational settings (Boulos et al., 2006; Hendron, 2008; Maag, 2005; Poonawalla & Wagner, 2006; Ray,

2006; Weller et al., 2005). Ray noted that blogs used for education purposes are called *edublogs*. A blog is similar to an electronic bulletin board where multiple users can post informational text, hyperlinks, pictures, and audio or video files. Each posting in a blog has a unique uniform resource locator (URL) that facilitates linking and organizing content (Poonawalla & Wagner). There is a plethora of resources available to users to easily establish a blog (Boulos et al.; Maag; Poonawalla & Wagner; Ray), and there is an ability to create a blog in a closed environment that is only available to a select community of users (Boulos et al.).

It is generally agreed that blogs have the potential to promote communication, discussion, collaboration, reflection, and sharing of resources (Boulos et al., 2006; Maag, 2005; Poonawalla & Wagner, 2006; Ray, 2006; Weller et al., 2005). Maag identified that blogs, as part of a social dialogue, may motivate nursing students to read more and ultimately enhance knowledge transfer to clinical practice. Boulos et al., however, noted that research is still needed to identify how a collaborative tool such as blog, can foster better communities of practice and support professional development.

### *Podcasts*

The term *podcasting* is derived from the word *iPod* and *broadcasting* (Mikat, Martinez, & Jorstad, 2007). Saalfeld (2007) claims that podcasting is an effective communication method, for the message is being delivered by the spoken word allowing the presenter to portray a fuller image of the discussion than is possible on paper or a Web site. There is also greater potential for collaboration and engagement as connections are made with real people.

Simonson (2007) identifies a podcast as: (a) a single concept or idea that is explained verbally via an audio file, or if necessary, the audio file is supplemented with still pictures or a video; (b) a relatively short recorded event that is three to 10 minutes long; (c) a part of a series with each podcast relating to the other; (d) a learning object most frequently stored in an MPEG format; (e) an object stored and accessible via a Web site; and (f) an object that represents a current event that is changed or updated frequently. Simonson's six key characteristics of a podcast do not necessarily coincide with the mainstream idea of a podcast in which entire news broadcasts, for example, are downloadable; however, the concept of chunking material into short single concept events is an effective teaching-learning strategy especially for field dependent learners (Driscoll, 2005). Mikat et al. (2007) agree that the length of a podcast is important as shorter recordings have faster download times, and are usually more effective in convening the message than a long recording. Both Stoten (2007) and Mikat et al. suggest that if educators are considering converting a lecture into a podcast, the lecture should be divided into several smaller segments.

Depending on one's computing capabilities, developing a podcast may or may not be a difficult task. Essentially, the development of a podcast requires hardware such as a PC and a microphone, software such as Audacity to record audio files, and a Web site or a podcast server such as iTunes U to store the podcast (Lamb & Johnson, 2007; Mikat et al., 2007). User guides outlining best practices for creating podcasts are available on Web sites such as iTunes U (http://www.apple.com/support/itunes_u/), and are an excellent resource for both novice and experienced podcast developers. Once developed, podcasts

can be made available via RSS feeds that allow for the automatic download of the podcast to a subscriber (Copley, 2007; Mikat et al.).

Copley (2007) investigated the download and use of audio and video podcasts among 84 undergraduate and graduate students. Copley found that 57% of the students downloaded audio podcasts, while 61% downloaded video podcasts. Ninety-four percent of those students who downloaded the audio podcasts played them on a personal computer (PC), while 100% of the downloaded video podcasts were played on a PC. Podcasts were used to prepare for assessments such as examinations, enable note taking at one's own pace, or to *catch-up* on missed lectures. Podcast materials were found to be at least as useful as traditional printed handouts, and 93% of the students indicated that they would like to have more lectures available via podcasting.

Stoten (2007) identifies that the advantages of podcasting include the ability of the podcast to be used as an adjunct to self-directed learning strategies, the fact that there is unlimited access to learning materials that can be viewed multiple times, and that the same consistent message can be delivered. In addition, Lamb and Johnson (2007) identify podcasting as a wonderful tool for the sharing of original works such as stories. In nursing, podcasting can be used to learn about changes in policies and procedures or to highlight clinical incidents, it can be used in conjunction with hardcopy material to either further explain or summarize points, it can be used to learn about clinical step-by-step procedures, or it could be used for new employee orientation. Both Stoten and Saalfeld (2007) highlight the disadvantages of podcasting including the time and expense to develop podcasts, the need for either a mobile device or a PC to view or listen to the

podcast, the linear design that is not necessarily conducive to two-way interaction, and the fact that podcasts take time to consume no matter how short in duration.

**Summary**

The underlying theoretical framework for an online learning community is an important consideration when designing and building a community. After reviewing a variety of frameworks, the community of inquiry model, developed by Garrison et al. (2000), was determined to be an appropriate framework for an online learning community of nurse educators. Included in Garrison et al.'s model are three core elements including teaching presence, cognitive presence, and social presence.

There are two types of empowerment, namely, structural empowerment and psychological empowerment. According to Kanter (1977; 1997), structural factors such as information, support, resources, opportunity, and formal and informal power empower individuals more than their own leadership styles and skills. Psychological empowerment has four dimensions including self-determination, meaning, competence, and impact, and all four dimensions must be present for individuals to feel psychologically empowered (Spreitzer & Quinn, 2001). In nursing, several researchers have supported the work of Laschinger (2004) who studied the relationship between the two types of empowerment and found that structural empowerment leads to psychological empowerment with the outcome being positive work behaviours and attitudes such as job satisfaction, commitment, trust, and low burnout.

When leaders are at their personal best, they engage in the five practices of exemplary leadership, namely, Model the Way, Inspire a Shared Vision, Challenge the

Process, Enable Others to Act, and Encourage the Heart (Kouzes & Posner, 2003c). In reviewing essential leadership competencies, it was found that there are connections between the five practices of exemplary leadership and the establishment of a healthy and empowering work environment. Learning about leadership practices and translating that knowledge and those behaviours into one's work environment is the key. An effective teaching-learning strategy to promote knowledge translation of leadership practices into the workplace is storytelling. Storytelling has been used in leadership development and in nursing, and it appears that storytelling can be adapted to an online constructivist environment and used as the main communication strategy for promoting leadership development. However, shifting paradigms from a teacher-directed or passive learning environment to a student-directed and active constructivist environment where learners are self-directed and self-disciplined is not easy for either the educator or the learner.

There are numerous considerations in the development of an online learning community. Fundamental concepts include the idea that an online community passes through various stages as it develops. Members in successful online communities are supportive of one another; they trust each other and share the same values; they are connected; and they have their own needs met.

Computer literacy is an essential element in an online learning community. While several researchers have questioned the computer literacy of nurses including nurse educators, it has been found that computer skills improve after participation in an online learning environment. Closely connected to computer literacy is the computer-user interface, for the success of an online community is more dependent on the reliability and ease of use of the computer interface as opposed to state-of-the-art technology. Therefore,

basic computer skills as opposed to advanced computer skills is all that should be required from members of the community. A thorough understanding of learning preferences along with a high-quality computer-user interface that follows Shneiderman and Plaisant's (2005) eight golden rules of interface design is key to a successful online learning community.

Additional considerations in the development of an online learning community include the issues of grouping, privacy, learner support, and categories of participants. There is support for the formation of subgroups in a community if the computer-user interface allows for separation of members. In terms of privacy, it is extremely important that members feel that the environment is a safe place for reflection and that there is control over what information is shared with other members of the community. Learner support is critical whether it is in relationship to orientation to the community or technical support. In addition, learner support will vary depending on the category of participant as outlined in Knowlton's (2005) five-tiered taxonomy for asynchronous discussion.

The role of a facilitator in an online learning community is recognized as important for establishing trust, being a supportive presence, facilitating connections, and shaping a meaningful learning experience. Finding the right balance between providing too much and too little direction is essential for the facilitator. There are numerous roles that a facilitator plays, and the needs of members are met when the facilitator fulfills these roles.

Collaborative computer-user interfaces are encompassed under the category of Web 2.0 technology. In examining both blogs and wikis, it appears that the ease of use and flexibility of wiki technology is an appropriate interface for an online learning

community. The fact that a wiki allows for private group collaboration and information sharing is essential. The incorporation of podcasting as a teaching-learning strategy in an online community adds another dimension that is not possible via written text.

**Contribution of the Research**

The amount of leadership research in nursing is substantial, and while there is a growing body of knowledge pertaining to empowerment in nursing management, empowerment research in nursing education is in its infancy. There is little focus in the literature on the nurse educator as a leader within the healthcare system, and it is now only being realized the potential that nurse educators can have on identifying future nurse leaders, and providing these future leaders with leadership development opportunities.

In terms of online learning, staffs within Canadian hospitals are only recently seeing the potential of an online environment in meeting the continuing education needs of nurses. Nurse educators, however, require knowledge and experience to incorporate online learning into their array of teaching-learning strategies. Exposure of nurse educators to Web 2.0 technologies is one way to get nurse educators to realize the unlimited potential that Web 2.0 technology can play in hospitals in building communities of learning.

The potential contributions to the fields of nursing, nursing education, computing technology in education, and leadership, in particular, were considerable. Knowledge pertaining to structural and psychological empowerment and leadership practices in nurse educators was gained along with support or rejection of associated theories. The community of inquiry model was tested in an innovative manner using a Web 2.0

technology that nurse educators may have never been exposed to before. In addition, the technique of online storytelling was identified as an important leadership development strategy that could be incorporated into future online leadership development programs.

The focus of the next chapter is the methodology. The chapter is divided into nine main sections: overview; design; procedure; instrumentation; data analysis procedure; format for presenting results; resources; barriers; issues, limitations, and delimitations; and summary.

# Chapter 3

# Methodology

This chapter begins with an overview that includes the research hypotheses and questions. The design is described, and details regarding the procedure are outlined. The five instruments used in data collection are presented, and the data analysis procedure is included. The resources, and barriers, issues, limitations, and delimitations are included. The chapter concludes with a summary of highlights presented in the chapter.

## Overview

There is a shortage of nurses who possess the leadership practices required to fill current and impending nursing leadership vacancies in both management and educational sectors. The goal was to develop an online learning community where hospital-based nurse educators could develop their own nursing leadership practices through storytelling within an environment that included the elements of teaching presence, cognitive presence, and social presence. An online learning community would not only provide an educational experience that would result in learning in relationship to leadership development, but would increase nurse educators' feelings of empowerment. Nurse educators who have acquired the necessary leadership practices and feel empowered to act would then be able to mentor future nurse leaders.

The research question devised to address the problem was:

What is the effect of the type of online learning community, based on a community of inquiry model, on hospital-based nurse educators' perceptions of structural and psychological empowerment and leadership practices?

Given what was known and unknown about the problem, the research hypotheses generated included:

1. The increase in the perceived level of structural empowerment will be significantly greater for nurse educators participating in an online facilitated learning community than for nurse educators participating in a self-organizing community.
2. The increase in psychological empowerment will be significantly higher in nurse educators participating in a facilitated community compared to those in a self-organizing community.
3. The degree of increase in leadership practices will be significantly greater in nurse educators participating in a facilitated community than those in a self-organizing community.
4. Nurse educators participating in a facilitated community will rate levels of teaching, cognitive, and social presence significantly higher compared to those in a self-organizing community.

In addition, exploratory research questions included:

1. Which empowerment structures are present in nurse educators' workplaces as revealed through their participation in an online learning community?
2. What psychological empowerment dimensions are manifested in nurse educators?
3. What leadership practices are exhibited by nurse educators?

4. How does a facilitated environment compare with a self-organizing environment?

**Design**

A mixed methods design that combines quantitative and qualitative approaches was used. This design is used to understand phenomena more fully than is possible with either quantitative or qualitative methods alone (Fain, 1999; Gay, Mills, & Airasian, 2006). A pretest-posttest quasi-experimental design was used to answer the first three research hypotheses, and a posttest-only quasi-experimental design was used to answer the fourth hypothesis. A variety of instruments were used to collect pretest and posttest data. Qualitative analysis, using an ethnographic approach, of text-based stories, postings, and interactions in both the facilitated and self-organizing online learning communities was guided by the exploratory research questions.

Fain (1999) defines ethnography as "…the study and description of a culture of a particular group of people" (p. 187), and notes that it involves the investigator living among a group of people who share a common culture for an extended period. One may question whether an ethnographic approach can be used to study an online community. Thomsen, Straubhaar, and Bolyard (1998) claim that computer-mediated communication has changed the definition and concept of community, and online communities are not pseudo communities or ones that are imagined; therefore, an ethnographic approach can be used to study online communities.

Fain (1999) identifies three main stages of ethnographic research including prefieldwork, fieldwork, and postfieldwork. In the prefieldwork stage, a problem is identified, people are selected, information is gathered about the people and the problem

through a literature review, a plan of investigation is established, and preparations for the next stage are made. The fieldwork stage involves three phases. In the first phase, the investigator makes contact with the community, begins to establish a trusting relationship, and establishes a consistent role. In the second phase, the investigator begins to work more closely with individuals within the community clarifying observations, probing for cultural meanings behind observations, and identifying and coding major themes within the community. In the third phase of fieldwork, the investigator continues to collect and double-check information, while at the same time refining themes based on supporting information. In the postfieldwork stage, the analysis is finalized and the findings are written.

As a participant observer and facilitator, the investigator was able to immerse herself into the online communities. It was predicted that it would be more difficult for the investigator to study the self-organizing group ethnographically, as she would not be able to immerse herself into the community, or build a trusting relationship in the same manner as with the facilitated group. Although the investigator was a passive observer in the self-organizing community in terms of organizing wiki pages and analyzing stories, technical issues, such as reverting wiki pages back to a pervious version when an error was made, were immediately addressed by the investigator making her actively involved in the community at times. Speziale and Carpenter (2007) note that investigators need to be aware that just by becoming a member of the culture, the culture is changed, and investigators need to maintain objectivity when collecting and analyzing data. The struggle to maintain objectivity while intimately involved in the culture is unique to ethnography.

**Procedure**

The procedure included several steps including the identification of a sample, determination of the sample size, the sampling technique, recruitment strategies, development of the online environment and 12-week curriculum, and the administration of pretest and posttest questionnaires. Prior to initiating the steps in the procedure, Institutional Review Board approval was granted from Nova Southeastern University as well as the University of Manitoba (see Appendix A). Approval from the University of Manitoba was a requirement of funding from the Health Sciences Centre Foundation in Winnipeg, Manitoba, Canada.

There were two major factors to consider when determining the sample size. First, the study involved participation in an online learning community in which the size of the online community needed to be kept to a manageable level, and second, a mixed methods approach would be used involving both quantitative and qualitative analysis. Arguello et al. (2006) and Preece (2000) do not provide specific numbers needed in an online community; however, both claim that if there are too many members in an online community and too many messages to read, members may not return to participate. Alternatively, if there are too few community members it will be difficult to maintain successful interaction. Gay et al. (2006) note that for experimental studies, a minimum of 30 participants are required in each group. The initial sample size obtained for each group was below 30 participants with 26 in the facilitated community and 25 in the self-organizing community. The final sample size after withdrawals ($N = 35$) included 19 in the facilitated group and 16 in the self-organizing group.

Initially, a random sampling process was to be used to obtain the sample of nurse educators from three Canadian provinces including British Columbia, Manitoba, and Ontario. Since all active practicing nurses in these provinces must be registered with their respective licensing body, it was appropriate to use the respective Colleges of Nursing to identify potential participants. The request put forth to each college, namely, the College of Registered Nurses of British Columbia (CRNBC), the College of Registered Nurses of Manitoba (CRNM), and the College of Nurses of Ontario (CNO), was to generate a random list of 200 registered nurses that met the criteria of being a nurse educator employed in a hospital with education of nurses being their primary area of practice. The CNO was able to generate a random list of 200 nurse educators from a list of nurses who agreed during their annual registration to have their names released for research purposes. The CRNM only had 137 names in their database that met the criteria, and five nurse educators in Manitoba who reported directly to the investigator were ineligible to participate in the study. The CRNBC identified a total of 197 potential subjects with only 90 agreeing to receive external mailings from CRNBC. The CNO forwarded the list of 200 nurse educators to the investigator who then forwarded a recruitment package to all names on the list. For confidentiality reasons, the CRNBC and the CRNM required the investigator to forward recruitment packages to them directly, and they in turn forwarded the packages to the nurse educators. Ninety recruitment packages, prepared by the investigator, were sent sealed with postage applied to the CRNBC who then applied mailing labels and mailed. One hundred and thirty seven open packages with postage applied were sent to the CRNM who then sealed, labeled, and mailed the packages after inserting a note pertaining to confidentiality and indicating that the package was mailed

directly from the CRNM. Recruitment packages contained a brochure (see Appendix B), two copies of the consent form (see Appendix C), the demographic questionnaire, a participant contact information form (see Appendix D), and a pre-paid return envelope.

Two weeks after 427 recruitment packages were mailed, a response rate of only 0.03% ($N$ = 13) was achieved. At the same time, it was discovered in Manitoba that not all nurse educators in Manitoba who met the criteria received a recruitment package from CRNM. Based on the fact that potential participants were missed in the initial mailing, and a potential Canada Post mail strike was looming, it was decided that snowball sampling would be needed to increase the sample size. An email was sent to nurse educators who had already agreed to participant. In the email, a request was made to forward recruitment information to colleagues in their hospitals. In addition, a similar email was sent to key individuals in each province with a request to forward the email to nurse educators in hospitals in their regions. Interested participants then contacted the investigator by email for further study information. At the start of the study, a sample size of 51 was attained with 32 participants recruited from the initial mailing, and 19 participants recruited through snowball sampling.

Nurse educators who received the initial mailing and who were interested in the study signed the consent forms, completed the contact information form and demographic questionnaire, and returned the documents to the investigator in the pre-paid envelope. One copy of the consent form was kept by the nurse educator. Nurse educators identified through snowball sampling received electronic copies of the mailed documents via their own email system. They electronically completed the contact information form and demographic questionnaire, and emailed the documents back to the investigator noting in

their email that they agreed to participate in the study. From the responses received, the nurse educators were divided into facilitated and self-organizing groups, and then respective subgroups using a table of random numbers (see Figure 4).

Pretest questionnaires, namely, the Conditions of Work Effectiveness Questionnaire-II (CWEQ-II), the Psychological Empowerment Instrument (PEI), and the Leadership Practices Inventory (LPI) were then emailed by the investigator to all nurse educators. Nurse educators were asked to complete the questionnaires and email the completed questionnaires back to the investigator before the noted deadline. LPI data were then entered into a Microsoft Excel spreadsheet and emailed to a consultant in Ontario, Canada, deemed a master facilitator by Kouzes and Posner (http://www.leadershipchallenge.com/WileyCDA/Section/id-131069.html).

Nurse educators were identified in the spreadsheet by an anonymous name. The consultant produced a hardcopy leadership profile for each nurse educator, and couriered the completed profiles back to the investigator. The investigator then individually mailed the hardcopy leadership profiles to each nurse educator. Leadership profiles included mean scores for the five practices and 10 commitments of exemplary leadership, and a graph with percentile rankings for the five practices of exemplary leadership.

Nurse educators then participated in a 12-week online learning community. The online learning community was similar to that described by McAllister and Moyle (2006) where Australian clinical educators designed a Web-based course to assist nursing students to gain confidence and develop clinical skills. The course was designed around the concept of a village with a community hall for congregating, a classroom cottage containing course related information, and an art gallery cottage where participants were

asked to post images reflective of a community. In addition, there was a craft shop with an animated image of a patchwork quilt that grew as participants added comments related to clinical teaching.

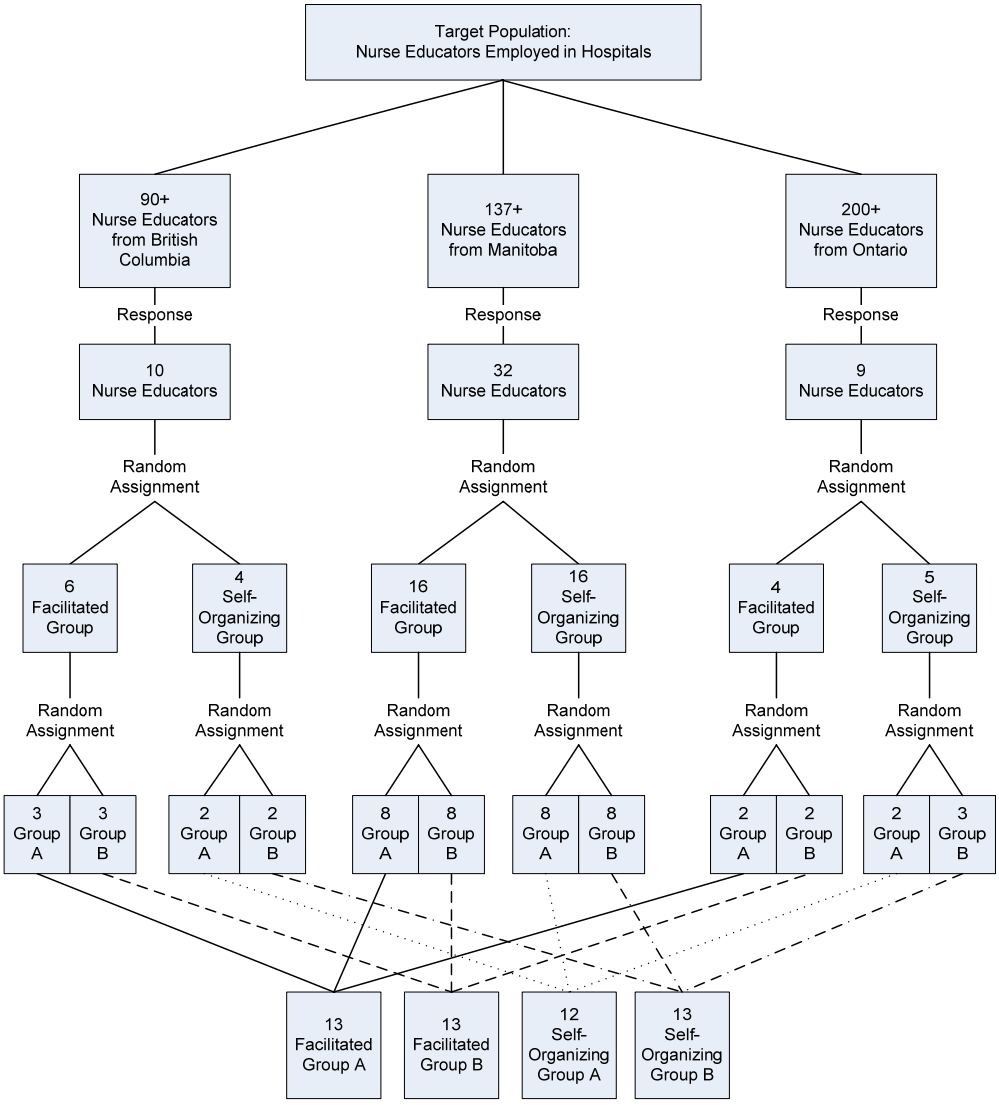


*Figure 4.* Sampling procedure.

The metaphor for the online learning community was an educational environment. One wiki interface was used, and it was separated into four main sections: gathering and sharing, library, storytelling, and socializing. Included in the gathering and sharing section was the *auditorium* for full community interaction, the *bulletin board* for

announcements, the *calendar* listing weekly activities, and the *suggestion box* for suggestions. The *library* was separated into three areas including a *reserve* section containing weekly outlines and course documents, a *resource* section where resources were posted by the facilitator as well as the nurse educators, and a *presentations* area containing numerous presentations developed by the investigator. The storytelling section included *classrooms* for smaller group interaction and private *lockers* for posting of individual stories. In the socializing section a *lounge* was included for social conversation. In addition, a *sandbox* was available for testing out the wiki. Nurse educators had easy access to each of the sections of the wiki via a sidebar on each wiki page (see Figure 5).

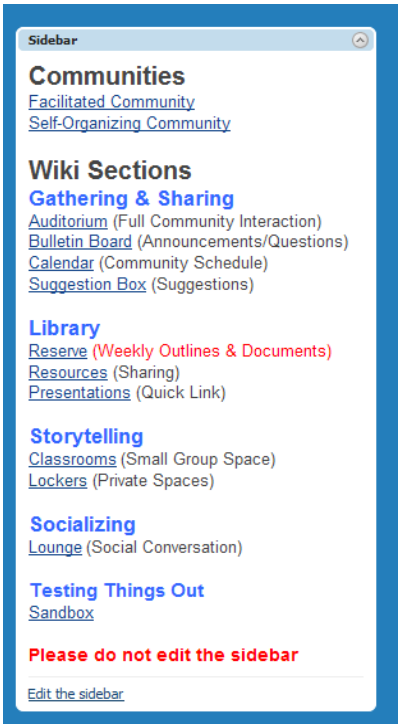


*Figure 5.* Wiki sidebar.

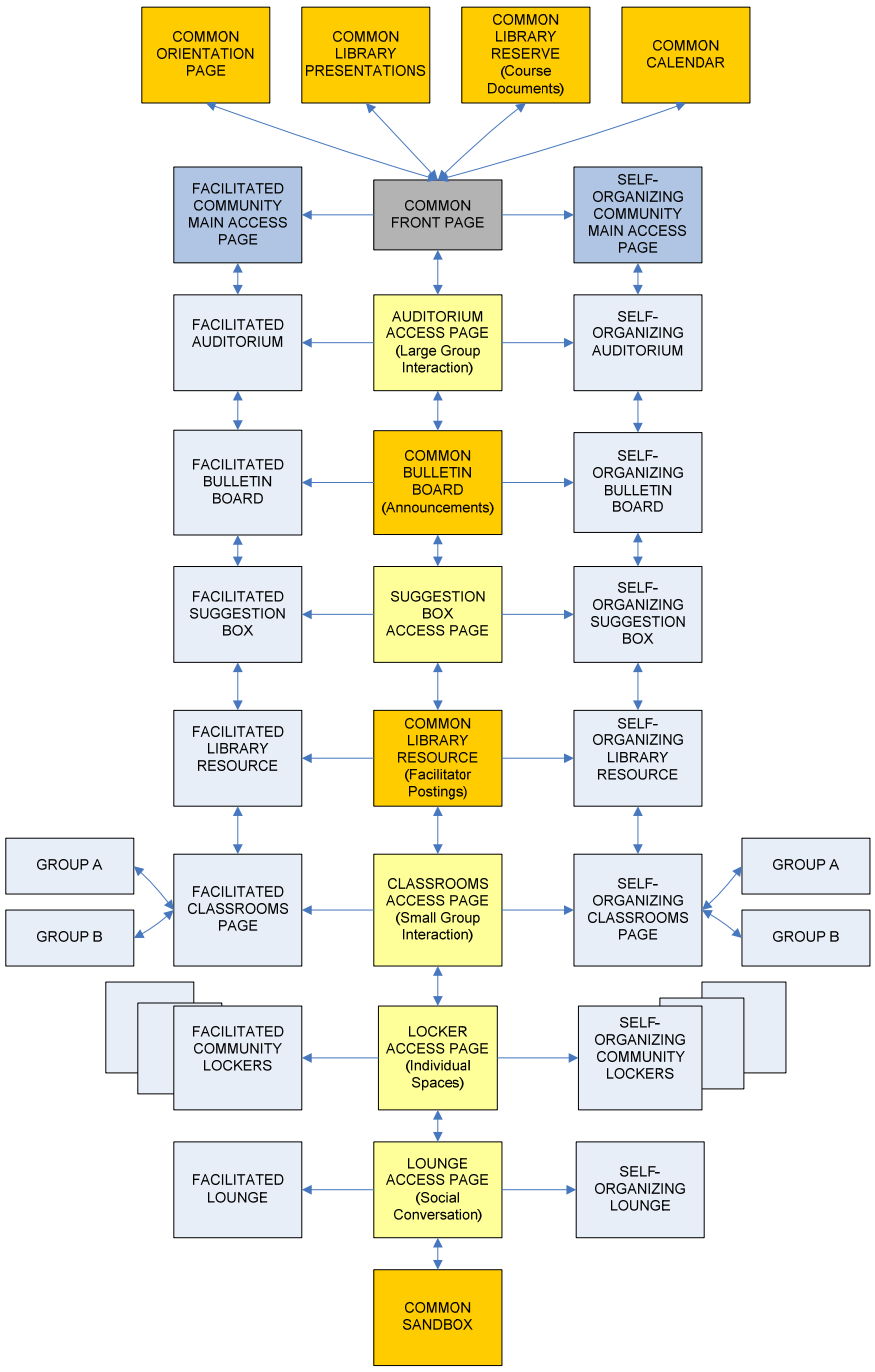


*Figure 6.* Overview of the wiki environment.

Aside from the four main sections, the wiki was further separated into pages accessible by either the facilitated community, the self-organizing community, or both

communities (see Figure 6). The cost of an encrypted wiki was a prohibiting factor for establishing two separate wikis, and having one wiki with common pages allowed the facilitator to post messages viewable by both communities, and design and upload documents once to a common orientation and presentation section.

An instructional design document outlining details regarding the development of the online learning community is included in Appendix E. Activities for the 12-week online learning community were designed using Gagne's Nine Events of Instruction (Driscoll, 2005). Events included *gaining attention*, where nurse educators had the opportunity to listen to a welcome podcast, watch a video about the investigator, review four narrated navigation movies and two print-based orientation documents, view a narrated presentation focusing on wikis, analyze their own LPIs with the help of a narrated presentation, and introduce themselves to other community members. Objectives were posted in the library to *inform learners of objectives*. Requesting that nurse educators post their personal-best leadership experiences in their lockers during the third and fourth week was aimed at *stimulating recall of prior learning*. *New content* was presented in the form of eight narrated leadership presentations and a podcast pertaining to human-computer interaction. The facilitator *provided guidance* to community members by posting, at least once a week, a common message to both communities on the main bulletin board. The events of *eliciting response*, and *providing useful feedback* were incorporated into the last six weeks when nurse educators were asked to post three additional leadership stories of their choice. It is with these two events of instruction where the communities differed. In the facilitated community, the facilitator organized the wiki pages in the classrooms, posted stories from lockers to the classrooms, and

assisted nurse educators in analyzing their own leadership stories. In the self-organizing community, community members were required to analyze their own stories and share their stories with others.

Based on the extended time nurse educators took to complete and return the pretest questionnaires, and the timing of various school breaks and vacations, the posttest questionnaires were emailed by the investigator to all nurse educators at the end of Week 10 instead of the end of Week 12 to allow for extra completion time. Nurse educators completed the posttest questionnaires, namely, the CWEQ-II, the PEI, the LPI, and the Community of Inquiry Instrument (CoII), and emailed the completed documents back to the investigator. Participant reports for the post-LPI questionnaires were managed in the same manner as the pre-LPI questionnaires with a summary report being generated by a consultant and mailed back to nurse educators by the investigator.

Three nurse educators withdrew during the study, seven notified the investigator via email after the completion of the study that they were withdrawing, and six did not respond to requests to complete the posttest questionnaires. A total of 35 (69%) nurse educators remained in the study and completed the posttest questionnaires. The final number of nurse educators in each of the subgroups included 11 in Facilitated Group A, eight in Facilitated Group B, six in Self-Organizing Group A, and 10 in Self-Organizing Group B.

The online learning community was private and accessible only to participants. A password to enter the Web site was set by participants themselves, and all pages of the wiki were encrypted. Text entered into the wiki was kept until this final report was completed and approved, then the Web pages with participant information were erased.

Privacy and confidentiality of questionnaires was maintained with a code number determined by the investigator. The investigator was the only person to have access to the code associated with participants' names. All hardcopy study documents were kept in a locked filing cabinet in the investigator's home office, while electronic documents were stored on the investigator's home computer that was password protected. To maintain the confidentiality of participants, nurse educators used an alias name in the online learning environment; however, the investigator knew the identity of participants. All hardcopy and electronic documents were either burned or erased after the final report was completed and approved.

## Instrumentation

Five instruments were used to collect data. A detailed description of each of the instruments is included in this section.

### *Measuring Empowerment*

Based on a review of the literature, it was found that the majority of researchers studying structural and psychological empowerment in nursing used two main measuring instruments. The CWEQ-II had been used to measure structural empowerment (Laschinger, Finegan, Shamian, & Wilk, 2001b), and the PEI had been used to measure psychological empowerment (Spreitzer & Quinn, 2001). In order to build upon the work of previous nurse researchers, and add to the body of nursing literature, it was important to use valid and reliable instruments that had been used with similar samples.

Laschinger et al. (2001b) developed the CWEQ-II (see Appendix F) by modifying Chandler's (1987) Conditions of Work Effectiveness Questionnaire based on Kanter's (1977) theory of workplace structural empowerment. The purpose of the CWEQ-II is to measure structural empowerment in nurses, and the questionnaire was available via the University of Western Ontario Workplace Empowerment Research Program Web site (http://publish.uwo.ca/~hkl/program.html). After completing an online request form, and agreeing to provide a brief summary of future research findings to the principal investigator of the program, permission was granted (see Appendix G), and the CWEQ-II was emailed to the investigator at no cost.

Laschinger (2001) notes that the six components of structural empowerment including opportunity, information, support, resources, formal power, and informal power are measured via 19 items in the CWEQ-II. The first 12 items measure access to opportunity, information, support, and resources, the next three items measure formal power based on Kanter's Job Activities Scale, while the last four items measure informal power based on Kanter's Organizational Relationships Scale. Two additional items are included to measure global empowerment, and are used for construct validation purposes. The questionnaire was self-administered, and although the estimated time to complete the questionnaire was not reported, respondents should not have taken longer than 5 to 10 minutes to complete the questionnaire.

Respondents completing the CWEQ-II use a 5-point Likert scale with varying statements (i.e., *None*, *Some*, *A Lot,* or *No Knowledge, Some Knowledge,* and *Know A Lot*) to report their perceived level of empowerment on each of the six subscales (Laschinger, 2001). Questionnaires can be hand-scored relatively easy, or responses can

be entered into a statistical software program for electronic scoring. Items on each of the subscales are added and averaged to produce a score of 1 to 5 for each of the subscales. As outlined on the University of Western Ontario Workplace Empowerment Research Program Web site (http://publish.uwo.ca/~hkl/program.html), scores from the CWEQ-II are indicative of low, moderate, or high levels of structural empowerment. The total empowerment score, calculated by adding the mean scores from each of the six subscales, is used to identify one's total level of empowerment. The total empowerment score ranges from 6 to 30. Low levels of empowerment range from 6 to 13, moderate levels range from 14 to 22, and high levels range from 23 to 30.

Construct validity of the CWEQ-II was substantiated by confirmatory factor analysis (Laschinger et al., 2001b). As indicated, the last two questions on the CWEQ-II that measure global empowerment are used to provide further evidence of construct validity. DeCicco et al. (2006) found that the CWEQ-II correlated with the global measure of empowerment ($r$ = .662) providing evidence of construct validity.

Internal consistency, as measured by Cronbach's coefficient *alpha* for the CWEQ-II subscales of opportunity, information, support, and resources range from .88 to .93, .70 to .82 for formal and informal power subscales, and .95 for global empowerment (Armstrong & Laschinger, 2006).

Developed by Spreitzer (1993), the PEI is used to measure the construct of psychological empowerment. Spreitzer (1995) views psychological empowerment as a motivational construct manifested in four cognitions that include meaning, competence, self-determination, and impact. Researchers have used the PEI to measure psychological

empowerment in thousands of individuals working in a multitude of industries and cultures (Spreitzer & Quinn, 2001).

The PEI was available at no cost via Spreitzer's Web site (http://webuser.bus.umich.edu/spreitze) or Spreitzer and Quinn's (2001) book, and permission for use was granted (see Appendix H). The instrument available via the Web site includes 16 items with a note indicating that four of the items can be deleted leaving 12 items with each of the four cognitions measured by three items. The version outlined in Spreitzer and Quinn is the 12 item version (see Appendix I), and in the literature reviewed, the 12 item version was used by the researchers, and was the version used in this study. Although the estimated time to complete the questionnaire was not reported, the questionnaire was self-administered, and respondents should not have taken longer than 5 to 10 minutes to complete the instrument.

Respondents completing the PEI use a 7-point Likert scale that corresponds to *Very Strongly Disagree, Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree,* and *Very Strongly Agree* to report their perceived level of empowerment. The instrument is scored by adding the items on each of the four subscales, namely, meaning (i.e., Questions B, E, J), competence (i.e., Questions A, I, L), self-determination (i.e., Questions C, G, H), and impact (i.e., Question D, F, K), and then dividing by three to produce a mean score ranging from 1 to 7 (Spreitzer & Quinn, 2001). The total empowerment score is calculated by adding the mean scores from each of the four cognition subscales. The total empowerment score can range from 4 to 28. A mean total empowerment score can be calculated by dividing the total empowerment score by four.

Responses can be hand-scored relatively easy, or entered into a statistical software program for electronic scoring.

Higher scores are representative of higher perceptions of empowerment. Spreitzer and Quinn (2001) provide a table of percentile scores ranging from 5% to 95% in each of the four subscales of empowerment as well as for total empowerment. Empowerment scores obtained from nurse educators are compared in *Chapter 4* to thousands of individuals who have completed the PEI.

Establishing discriminant and convergent validity are critical components of construct validation (Campbell & Fiske, 1959). In Spreitzer's (1995) research involving the development and validation of the PEI, second-order confirmatory factor analysis was used to establish discriminant validity that supported the hypothesis that the instrument has four distinct dimensions of psychological empowerment. Convergent validity was also established, and the hypothesis that each dimension contributes to an overall construct of psychological empowerment was supported.

The internal consistency reliability of the PEI has been reported by many researchers studying various work groups. Researchers studying nursing populations have reported high reliability of the instrument, and Cronbach's *alpha* coefficients for each of the four subscales of meaning, competence, self-determination, and impact, as well as a total psychological empowerment, range from .86 to .92 (Boudrias et al., 2004).

### *Measuring Leadership Practices*

The Leadership Practices Inventory (LPI), developed by Kouzes and Posner (2003a), was first used in 1985, and since then they have analyzed the results of over 100,000 LPI

surveys (http://www.leadershipchallenge.com/WileyCDA/Section/id-131089.html). The LPI was used to measure leadership practices (see Appendix J).

The LPI is available online (http://www.lpionline.com/) or via hardcopy. The investigator accessed the LPI via a consultant deemed a master facilitator by Kouzes and Posner (http://www.leadershipchallenge.com/WileyCDA/Section/id-131069.html). Approval was received for using the LPI for research purposes (see Appendix K).

The LPI measures the five main practices of exemplary leadership and the associated 10 commitments of leadership via 30 behavioral questions with six questions pertaining to each of the five main leadership practices (Kouzes & Posner, 2003a; 2003c). The questionnaire can be self-administered, and respondents should take approximately 10 to 20 minutes to complete the survey (http://www.leadershipchallenge.com/WileyCDA/Section/id-131089.html). For each question, respondents first need to ask themselves, "How frequently do I engage in the behavior described?" and then rate themselves on a 10-point rating scale (Kouzes & Posner, n.d.). The 10-point rating scale corresponds to the following: *Almost Never, Rarely, Seldom, Once in a While, Occasionally, Sometimes, Fairly Often, Usually, Very Frequently, and Almost Always*. *Almost Never* is given a score of one and *Almost Always* is given a score of 10.

The instrument is scored by adding the items on each of the five subscales, namely, Model the Way (i.e., Questions 1, 6, 11, 16, 21, 26) , Inspire a Shared Vision (i.e., Questions 2, 7, 12, 17, 22, 27), Challenge the Process (i.e., Questions 3, 8, 13, 18, 23, 28), Enable Others to Act (i.e., 4, 9, 14, 19, 24, 29), and Encourage the Heart (5, 10, 15, 20, 25, 30), and then dividing by six to produce a mean score of 6 to 60 on each of the

five subscales. Responses can be easily hand-scored, or entered into a statistical software program for electronic scoring.

Internal consistency reliability, as measured by Cronbach's coefficient *alpha* for the five scales of exemplary leadership range from .75 to .87 for the self-scoring version, which is the version to be used in this study (Kouzes & Posner, 2000). Construct validity for the LPI has been established using factor analysis.

*Measuring Teaching, Cognitive, and Social Presence*

Although the community of inquiry model has been in existence since approximately 2000, the challenge of incorporating the model into research studies was the lack of a common instrument to measure teaching, cognitive, and social presence (Swan, Richardson, Ice, Garrison, Cleveland-Innes, & Arbaugh, 2008). Swan et al. note that work began on the CoII in December of 2006, and by the summer of 2007, a 34-item survey was tested in four educational institutions in the United States and Canada. Version 14 of the CoII (see Appendix L) was available for download via the Community of Inquiry Web site (http://communitiesofinquiry.com/papers_method), and permission was obtained to use the instrument without cost (see Appendix M).

Items in the CoII correspond to the elements of teaching presence, cognitive presence, and social presence (http://communitiesofinquiry.com/papers_method). Within each of the three main elements, response items correspond to the main categories within the element. For example, under teaching presence, there are four items that relate to the category of *design and organization*, six items relate to *facilitation*, and three items relate to *direct instruction*. Of the 12 items related to cognitive presence, three items relate to

each of the following categories: *triggering event, exploration, integration*, and *resolution*. Within the social presence category, there are nine questions with three questions in each category (i.e., *affective expression, open communication*, and *group cohesion*).

Respondents completing the CoII use a 5-point Likert-type scale (i.e., 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree) to respond to each of the items (http://communitiesofinquiry.com/papers_method). The total mean score can be obtained by adding and averaging all of the items. Means for each of the three main elements can be calculated by adding and averaging items within each of the elements of teaching, cognitive, and social presence. Mean scores range from 1 to 5. Swan et al. (2008) found excellent internal consistency with Cronbach's coefficient *alpha* reliabilities of .94 for teaching presence, .91 for social presence, and .95 for cognitive presence. Construct validity for the CoII was confirmed via factor analysis.

*Demographic Data*

The investigator collected general demographic data from participants by requesting that the participants complete a demographic questionnaire developed by the investigator. The steps to be taken in the development of a questionnaire include: (a) specify the information sought, (b) determine the questionnaire type and administration method, (c) determine individual question content, (d) determine the form of response for each question, (e) determine the wording of each question, (f) determine the sequence of the questions, (g) determine the physical characteristics of the questionnaire, and (h) pretest the questionnaire and revise as necessary

(http://www.stat.auckland.ac.nz/~mullins/servicequality/CustomerSurveys.pdf). The first seven steps were followed in the development of the demographic questionnaire (see Appendix N). Given the nature of the questionnaire, the questionnaire was not formally pretested. The demographic questionnaire was self-administered and the completion time was approximately 2 to 3 minutes. The numbering of the responses, for example, female equals one and male equals two, facilitated the input of results into a statistical software program.

**Data Analysis Procedure**

The research hypotheses were analyzed through quantitative methods with comparisons being made between the facilitated online learning community and the self-organizing community. The first hypothesis examined the effect of the independent variable of type of online learning environment on the dependent variable of perceived structural empowerment measured by the CWEQ-II. Type of online learning environment had two levels, namely facilitated and self-organizing. The facilitated online learning community was one in which the facilitator assisted participants in organizing their online learning community and analyzing posted stories. The self-organizing community was one in which participants were responsible for organizing their own community after the initial wiki set-up and assisting each other in analyzing their own posted stories. The dependent variable of structural empowerment was measured as one global structural empowerment score, one total structural empowerment score, and as an empowerment score on each of the subscales of opportunity, information, support, resources, formal power, and informal power. Cronbach *alpha* reliabilities were calculated for each of the

subscales in the CWEQ-II. A Pearson product-moment correlation coefficient was calculated between global empowerment and total empowerment to add to the construct validity of the CWEQ-II. Multivariate analysis of variance (MANOVA), using a repeated measures design, was used to measure the differences in pretest and posttest structural empowerment scores over time within the facilitated and self-organizing groups, and between the facilitated and self-organizing groups. Terrell (2007) notes that MANOVA is used when there is more than one dependent variable. In this study, the dependent variable had two levels based on time, namely, the pretest score (i.e., time one) and the posttest score (i.e., time two).

For the second hypothesis, the independent variable remained as the type of online learning environment, while the dependent variable changed to psychological empowerment measured by the PEI. The dependent variable was measured as one total psychological empowerment score, and as an empowerment score on each of the subscales of meaning, competence, self-determination, and impact. Cronbach *alpha* reliabilities were calculated for each of the subscales in the PEI. Similar to the first hypothesis, MANOVA, using a repeated measures design, was used to measure the differences in pretest and posttest psychological empowerment scores over time within the facilitated and self-organizing groups, and between the facilitated and self-organizing groups.

The independent variable remained as the type of online learning environment for the third hypothesis, while the dependent variables changed to leadership practices as measured by the LPI. Five exemplary leadership practices were measured including Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act,

and Encourage the Heart. Consistent with the first two hypotheses, Cronbach *alpha* reliabilities were calculated for each of the subscales of the instrument, and the same MANOVA was used to measure the differences in leadership practices.

In the fourth hypothesis, the independent variable was type of online learning environment, while the dependent variables included levels of teaching presence (i.e., design and organization, facilitation, and direct instruction), cognitive presence (i.e., triggering event, exploration, integration, and resolution), and social presence (i.e., affective expression, open communication, and group cohesion) as measured by the CoII. As it was not realistic to measure the dependent variables before participation in the online community, measurement of the variables occurred only in a posttest. The difference in teaching presence, cognitive presence, and social presence scores between the facilitated and self-organizing groups was measured using an independent samples *t*-test.

The exploratory research questions guided the qualitative analysis and were used primarily in the triangulation process. Triangulation is a research strategy used to corroborate both quantitative and qualitative findings, while methodological triangulation combines quantitative and qualitative data to describe phenomena (Speziale & Carpenter, 2007). Through methodological triangulation, the main study variables, namely, structural empowerment, psychological empowerment, leadership practices, and teaching, cognitive, and social presence were examined.

The first three exploratory research questions were designed to determine which empowerment structures, psychological empowerment dimensions, and leadership practices were manifested by hospital-based nurse educators. The fourth question was

designed to determine the characteristics of an online learning community for nurse educators, and how a facilitated environment compares with a self-organizing environment. The research questions were answered by qualitatively analyzing text-based stories written online by the nurse educators, their online postings and comments, and interactions by nurse educators in both the facilitated and self-organizing communities.

The process of analyzing the qualitative data included transferring all of the written text from the wiki into NVivo, a qualitative software program. In addition, screen captures of wiki pages were transferred to NVivo for analysis. All nurse educators ($N$ = 51) who began the study were coded in NVivo as *cases*. Bradley et al. (2007) refer to case codes as *participant characteristic codes*. A deductive approach was then used to develop the code structure. Bradley et al. indicate that a deductive approach is used when codes are established from concepts in the literature with codes being referred to as *conceptual codes* and *subcodes*. The main conceptual codes used included structural empowerment, psychological empowerment, leadership, and online learning community. Under each of the conceptual codes, all subcodes associated with the concept were identified. For example, the subcodes for psychological empowerment included meaning, competence, self-determination, and impact, while the subcodes for online learning community included teaching presence, cognitive presence, and social presence. Themes were then identified within each of the subcodes.

The investigator coded all of the qualitative data independently. Bradley et al. (2007) indicate that there are varying opinions as to whether data should be coded independently or in a team; however, a single investigator coding data is sufficient and a preferred method when the study involves an ongoing relationship with participants. Since an

ethnographic approach was used, it appears that the investigator being the sole coder was appropriate.

**Resources**

The Health Sciences Centre Foundation in Winnipeg, Manitoba, Canada contributed $5,499.00 in funding that covered the majority of project costs. Cost overage was funded by the investigator. Costs included colour brochures, photocopying of questionnaires and documents, envelopes and postage, qualitative software, and the software interface called *Peanut Butter* wiki (http://pbwiki.com/). The wiki was upgraded to a platinum level that allowed for enterprise-grade encryption on all Web pages. Professional fees included those associated with the Colleges of Nursing for the generation of lists of potential participants and the distribution of recruitment packages, an external consultant that generated pre and post LPI reports that were provided to participants, and a statistician to assist with data analysis.

In terms of resources for the nurse educators, each nurse educator was required to have access to a computer with a sound card and speakers, as well as the Internet. Additional required software included Microsoft Word for completing questionnaires, Adobe Acrobat Reader for opening and reading documents, Adobe Flash Player for viewing video presentations, and an email program for communicating outside of the wiki interface.

In addition to the resources required by the nurse educators, the investigator used a microphone and a variety of computer software programs including Microsoft PowerPoint, Adobe Captivate, and Audacity to develop the podcasts and presentation

materials. A combination of Microsoft Excel, Statistical Package for the Social Sciences (SPSS) software, and Statistical Analysis Software (SAS) was used in the computation of statistics.

Online library access was a necessity from the proposal stage through to the final report. The Alvin Sherman Library, Research, and Information Technology Center at Nova Southeastern University was the main source for literature.

**Barriers, Issues, Limitations, and Delimitations**

Professional development has been identified as a key component in the succession planning process; however, there are barriers to professional development including little support for continuing education in the workplace, decreased financial resources for continuing education, and a continuing inability of nurses to attend educational sessions in the workplace (CHSRF, 2006). Those barriers are similar to the ones identified in this study. Many demands are placed on nurse educators, and several participants were unable to free up enough time during working or non-working hours to engage in the online community despite their initial desire to participate. The timeframe for the online community, which was January to March, was a delimitation as major holidays and associated events were avoided; however, the scheduling of winter vacations and the timing of March school breaks influenced participation levels. During the final weeks, emails were received from nurse educators who felt guilty or sorry about their participation level. One nurse educator noted, “As you know, I have not been able to participate nearly to the extent that I had hoped. I have been feeling so guilty…” Another commented, “I am sorry…but with my travel schedule, I have not been able to keep up

with the participation. I hope this does not foul up your study. Intentions were good but work got in the way." A third noted,

> I have been unable to participate in this study so far. This was something I was very interested in. The combination of workload demands, vacation, and a critically ill parent did not allow time to pursue the opportunities you presented. I'm sorry that I have not been able to devote some time to this project.

The concept of using the Web, as the delivery method for nursing leadership education, is in keeping with the thought that electronic programming facilitates access to education (CNA & CASN, 2006a; Jeffries, 2005); however, the use of Web technology brings opportunities as well as challenges. Although the principles of human-computer interaction were taken into consideration when developing and customizing the computer user interface, three of Shneiderman and Plaisant's (2005) eight golden rules of interface design as described in *Chapter 2*, namely, offer informative feedback, prevent errors, and support internal locus of control were compromised. It was important that any computer access issues were resolved as quickly as possible either via telephone or email; however, even after pretesting the computer user interface, namely Peanut-butter wiki (PBwiki), there were issues initially related to accessing various documents. Although online documents were saved in numerous different formats for easy access, initially, nurse educators had difficulty accessing some of the documents. The issue was resolved with the assistance of the technical support department for PBwiki; however, the initial problem may have influenced some nurse educators' feelings of trust with the online environment. In addition, the computer literacy levels of the nurse educators and their expertise in navigating and participating in an online learning community may have influenced the level of interaction among nurse educators as well as their ability to contribute resources to the learning community. One nurse educator noted,

> Personally, if I had not been on and playing around with it I never would have gotten on to it due to time constraints. I had huge frustrations during the period documents would not open. Once I had climbed the learning curve it was fun to import resources, create pages, etc

PBwiki was upgraded to include the highest level of security; however, it was discovered midway through the study that emails forwarded automatically when edits were made in selected non-private online pages included the email address of the nurse educator making the edit even though the option to not reveal one's email address to other users was enabled. The technical support department for PBwiki acknowledged that this was an error in the system and that technicians were trying to resolve the error; however, the error was never resolved. Although the facilitator offered to post messages on behalf of participants, no one accepted the offer. Stories and comments posted in private lockers remained viewable only to the investigator and the nurse educator who owned the locker. Having one's email address viewable to others may have influenced participation as anonymity was breached on selected pages. One nurse educator wrote,

> To be honest, I may have felt more comfortable if I had been using an external email address to attach to my tag rather than my work email, which obviously could be found by clicking *send message*. I can't explain why but I felt more exposed knowing that people that I work with would be able to read my self-reflection. I did not have this concern in dialogue with the researcher.

Gay et al. (2006) identify sampling error as "expected, chance variation in variables that occurs when a sample is selected from a population" (p. 601). Given that a non-random sample was used, there is a chance that the sample differed significantly from the target population on one or more variables. The variables could be related to the nurse educator's work environment, the organizational structure of the hospital, or a specific leadership characteristic. In addition, external variables as opposed to participation in the online community may have influenced the variables measured.

Two major sources of sampling bias, or systematic sampling error, include the use of volunteers and the use of available groups (Gay et al., 2006). Given that nurse educators first had to agree to participate and sign a consent form prior to the investigator completing the steps in the sampling process, sampling bias was introduced. The very low response rate to the initial recruitment mailing, the use of snowball sampling, and having only those nurse educators who were motivated to participate included in the study contributed to sampling bias. In addition, the relatively small final sample size decreases the generalizability of the findings.

Experimenter bias effect can influence the external validity of a study (Gay et al., 2006). Since the investigator was also the facilitator of the online learning community, experimenter bias effect was identified as a limitation. The investigator was cognizant of the potential for bias during interactions, and that may have influenced her comments and online interactions.

**Summary**

A mixed methods design was identified as the appropriate design to study the effect of the type of online learning community on hospital-based nurse educators' perceptions of structural empowerment, psychological empowerment, and leadership practices based on a community of inquiry model. The non-random sample ($N = 51$) was obtained from an accessible population of nurse educators who were registered nurses employed in hospitals located in British Columbia, Manitoba, or Ontario. Participants were randomly assigned to either the facilitated community ($n = 26$) or the self-organizing community ($n = 25$). After participant withdrawal during and after the study, a final sample size of 35

was obtained with 19 in the facilitated community and 16 in the self-organizing community.

Pretesting consisted of nurse educators completing the CWEQ-II, the PEI, and the LPI to measure the constructs of structural empowerment, psychological empowerment, and leadership practices. Posttest instruments included those used in pretesting along with the CoII to measure teaching presence, cognitive presence, and social presence in the online communities. Investigation into all instruments revealed good validity and reliability.

The nurse educators participated in a 12-week online learning community with a wiki as the computer interface. The wiki was designed so that some Web pages were accessible by both communities, such as the orientation and presentation pages, and other sections of the wiki were accessible only by the respective community. Activities for the 12 weeks were designed based on Gagne's Nine Events of Instruction (Driscoll, 2005).

Four research hypotheses were examined by collecting quantitative data and analyzing the data using inferential statistics. Four exploratory research questions guided the qualitative analysis and were used in the triangulation process. Demographic data was analyzed using descriptive statistics.

A main barrier to participation included a lack of time on behalf of the nurse educators. In addition, technology issues with the wiki may have influenced participation levels and trust with the system. Limitations that decrease the generalizability of the findings were a small final sample size, potential sampling error, and sampling and experimenter bias.

The results will be the focus of the next chapter. First, the sample will be described, and then an in-depth analysis of the data collected will be presented.

# Chapter 4

# Results

The effect of the type of online learning community, based on a community of inquiry model, on hospital-based nurse educators' perceptions of structural and psychological empowerment and leadership practices was examined. Four hypotheses were tested via data collected from three instruments. Four exploratory research questions guided the ethnographic approach and qualitative data obtained were triangulated with the quantitative data. The chapter begins with a description of the sample based on data collected through the demographic questionnaire. Descriptive data are presented based on the major study variables followed by qualitative findings and the test of the hypotheses.

## Demographics

Demographic data collected included gender, age, highest level of education, employment status, place of employment, general computer ability compared to other nurses, number of years as a nurse educator, and number of years of nursing experience. All nurse educators in the final sample ($N$ = 35) were female. They ranged in age from 30-34 years ($n$ = 1, 3%) to 60-64 years ($n$ = 2, 6%). The age range of 45-49 years ($n$ = 9, 26%) was the mode for the sample. The majority ($n$ = 28, 80%) of nurse educators reported a bachelor's degree as being their highest level of education. None of the nurse educators had completed a doctoral degree. Seventy-seven percent ($n$ = 27) worked in full-time positions, and the majority ($n$ = 20, 57%) worked in urban tertiary hospitals. Thirty-four percent ($n$ = 12) worked in urban community hospitals, and nine percent ($n$ =

3) worked in rural hospitals. It was expected that nurse educators would have adequate computer literacy skills to be able to participate in an online learning community. When nurse educators were asked to rate their general computer abilities compared to other nurses, the majority (*n* = 20, 57%) rated their abilities as above average, followed by 40% (*n* = 14) rating themselves as average. Only one participant rated herself as an expert. The length of time in the position of a nurse educator spanned from less than one year (*n* = 3, 9%) to between 30-35 years (*n* = 2, 6%). The mode was the 1-5 year range (*n* = 12, 34%). The minimum number of years of experience to attain a nurse educator position is approximately four years, and nurse educators had at least four years of nursing experience. Years of experience spanned from between 5-10 years (*n* = 1, 3%) to 35-40 years (*n* = 4, 11%). The mode was 25-30 years (*n* = 8, 23%).

## Descriptive Data for the Major Study Variables

In this section, descriptive data are presented according to the major study variables. The subsections include structural empowerment, psychological empowerment, leadership practices, and teaching, cognitive, and social presence.

### *Structural Empowerment*

Quantitatively, structural empowerment was measured using the CWEQ-II. Reliability of the CWEQ-II was measured by calculating Cronbach's coefficient *alpha* reliabilities for each of the subscales (see Table 1). The reliabilities were adequate and somewhat comparable to those reported by Faulkner and Laschinger (2008) who used the CWEQ-II to measure structural empowerment in Canadian staff nurses (i.e., Global

Empowerment = .90, Opportunity = .85, Resources = .78, Information = .85, Support = .81, Formal Power = .77, Informal Power = .71). The resources and formal power subscales were lower in this study.

Table 1

*CWEQ-II Cronbach's Coefficient Alpha Reliabilities*

| Scales/Subscales | Pretest $\alpha$ | Posttest $\alpha$ |
|---|---|---|
| Global Empowerment | .91 | .90 |
| Opportunity | .80 | .83 |
| Resources | .68 | .66 |
| Information | .92 | .85 |
| Support | .82 | .79 |
| Formal Power | .50 | .45 |
| Informal Power | .63 | .73 |

Evidence of construct validity of the CWEQ-II is measured by correlating global empowerment with total empowerment (Laschinger et al., 2001b). Using the Pearson product-moment correlation coefficient, it was found that there was a strong correlation between global empowerment and total empowerment ($r = .723$, $p < .0001$) on the pretest questionnaire as well as the posttest questionnaire ($r = .662$, $p < .0001$).

Nurse educators in both learning communities had moderate levels of empowerment with mean pretest scores of 19.44 and 19.50, and posttest mean scores of 20.64 and 20.89 (see Table 2). Opportunity was rated as the highest empowerment structure. The order of the remaining empowerment structures varied between power (i.e., informal and formal) and information as the second highest empowerment structure, followed by support and

resources. The empowerment structure of resources was ranked the lowest by both communities.

Table 2

*Mean and Standard Deviation Structural Empowerment Scores*

| Scale/Subscale | Pretest | | | Posttest | | |
|---|---|---|---|---|---|---|
| | *n* | *M* | *SD* | *n* | *M* | *SD* |
| | | | Facilitated Community | | | |
| Empowerment (Total) | 19 | 19.50 | 3.49 | 19 | 20.89 | 2.75 |
| Opportunity | 19 | 4.16 | 0.73 | 19 | 4.33 | 0.74 |
| Resources | 19 | 2.56 | 0.63 | 19 | 2.63 | 0.53 |
| Information | 19 | 3.44 | 0.69 | 19 | 3.53 | 0.74 |
| Support | 19 | 2.96 | 0.80 | 19 | 3.11 | 0.74 |
| Formal Power | 18 | 3.22 | 0.69 | 19 | 3.44 | 0.62 |
| Informal Power | 18 | 3.51 | 0.72 | 19 | 3.86 | 0.77 |
| | | | Self-Organizing Community | | | |
| Empowerment (Total) | 16 | 19.44 | 2.88 | 15 | 20.64 | 3.73 |
| Opportunity | 16 | 4.02 | 0.78 | 16 | 4.25 | 0.71 |
| Resources | 16 | 2.69 | 0.72 | 16 | 2.60 | 0.69 |
| Information | 16 | 3.00 | 0.81 | 16 | 3.23 | 1.09 |
| Support | 16 | 3.08 | 0.75 | 16 | 3.19 | 0.79 |
| Formal Power | 16 | 3.35 | 0.71 | 15 | 3.56 | 0.74 |
| Informal Power | 16 | 3.30 | 0.75 | 15 | 3.80 | 0.66 |

*Psychological Empowerment*

Perceived psychological empowerment in the nurse educators was measured using the PEI prior to participation in the online learning community and after participation. Internal consistency reliability of the four subscales of the PEI was strong as measured by Cronbach's coefficient *alpha* (see Table 3). Compared to the findings of Faulkner and Laschinger (2008) (i.e., Meaning = 0.91, Competence = 0.87, Self-Determination = 0.86, Impact = 0.91), the coefficient *alpha* for impact was lower, while self-determination was higher.

Table 3

*PEI Cronbach's Coefficient Alpha Reliabilities*

| Scales/Subscales | Pre $\alpha$ | Post $\alpha$ |
|---|---|---|
| Meaning | .91 | .90 |
| Competence | .84 | .89 |
| Self-Determination | .94 | .95 |
| Impact | .80 | .84 |

Nurse educators ranked meaning as the highest psychological empowerment dimension (see Table 4). Impact was the lowest ranked dimension with competence or self-determination being ranked second or third.

*Leadership Practices*

Self-reported leadership practices of the nurse educators were measured using the LPI prior to participation in the online learning community and after participation. Internal consistency reliability of the four subscales of the LPI was strong as measured by

Cronbach's coefficient *alpha* (see Table 5). The results were comparable to Cronbach *alpha* reliabilities reported by Kouzes and Posner: Model the Way = 0.77; Inspire a Shared Vision = 0.87; Challenge the Process = 0.80; Enable Others to Act = 0.75; and Encourage the Heart = 0.87 (http://media.wiley.com/assets/463/73/lc_jb_psychometric_properti.pdf).

Table 4

*Mean and Standard Deviation Psychological Empowerment Scores*

| | Pretest | | Posttest | |
|---|---|---|---|---|
| Scale/Subscale | *M* | *SD* | *M* | *SD* |
| Facilitated Community (*n* = 19) | | | | |
| Empowerment (Total) | 20.72 | 3.49 | 22.35 | 3.19 |
| Meaning | 5.88 | 0.98 | 6.00 | 0.92 |
| Competence | 5.23 | 0.92 | 5.49 | 1.17 |
| Self-Determination | 4.95 | 1.36 | 5.81 | 1.03 |
| Impact | 4.67 | 1.13 | 5.05 | 0.89 |
| Self-Organizing community (*n* = 16) | | | | |
| Empowerment (Total) | 21.23 | 2.59 | 22.60 | 2.49 |
| Meaning | 6.15 | 0.71 | 6.23 | 0.54 |
| Competence | 5.58 | 0.94 | 5.92 | 0.68 |
| Self-Determination | 5.46 | 1.13 | 5.75 | 1.32 |
| Impact | 4.04 | 1.21 | 4.71 | 1.09 |

In both pretest and posttest responses in the facilitated and self-organizing groups, nurse educators rated their own leadership practice of Enable Others to Act as the highest, followed by Encourage the Heart (see Table 6). Inspire a Shared Vision was practiced the least.

Table 5

*LPI Cronbach's Coefficient Alpha Reliabilities*

| Scales/Subscales | Pretest $\alpha$ | Posttest $\alpha$ |
|---|---|---|
| Model the Way | .75 | .81 |
| Inspire a Shared Vision | .90 | .94 |
| Challenge the Process | .81 | .88 |
| Enable Others to Act | .74 | .74 |
| Encourage the Heart | .79 | .85 |

Table 6

*Mean and Standard Deviation Leadership Practices Scores*

| | Pretest | | Posttest | |
|---|---|---|---|---|
| Subcale | *M* | *SD* | *M* | *SD* |
| Facilitated Community ($n$ = 19) | | | | |
| Model the Way | 7.01 | 0.88 | 7.77 | 1.25 |
| Inspire a Shared Vision | 5.97 | 1.19 | 6.97 | 1.49 |
| Challenge the Process | 6.70 | 1.35 | 7.81 | 1.24 |
| Enable Others to Act | 7.75 | 0.81 | 8.30 | 0.96 |
| Encourage the Heart | 7.13 | 1.22 | 7.94 | 1.34 |
| Self-Organizing Community ($n$ = 16) | | | | |
| Model the Way | 6.90 | 1.54 | 7.85 | 1.07 |
| Inspire a Shared Vision | 6.02 | 2.06 | 7.29 | 1.86 |
| Challenge the Process | 6.83 | 1.46 | 7.52 | 1.35 |
| Enable Others to Act | 7.90 | 1.01 | 8.47 | 0.62 |
| Encourage the Heart | 6.98 | 1.47 | 8.05 | 1.31 |

*Teaching, Cognitive, and Social Presence*

The CoII was used to measure levels of teaching, cognitive, and social presence in the online learning community. As reported in *Chapter 3*, Swan et al. (2008) found excellent internal consistency with Cronbach's coefficient *alpha* reliabilities of .94 for teaching presence, .91 for social presence, and .95 for cognitive presence. Cronbach's coefficient *alpha* reliabilities were lower in this study and are outlined in Table 7.

Table 7

*CoII Cronbach's Coefficient Alpha Reliabilities*

| Scales/Subscales | Posttest $\alpha$ |
|---|---|
| **Teaching Presence** | .89 |
| Design & Organization | .78 |
| Facilitation | .90 |
| Direct Instruction | .93 |
| **Cognitive Presence** | .90 |
| Triggering Event | .78 |
| Exploration | .77 |
| Integration | .82 |
| Resolution | .78 |
| **Social Presence** | .84 |
| Affective Expression | .71 |
| Open Communication | .88 |
| Group Cohesion | .60 |

Scores for each of the three subscales were above midrange (see Table 8). Teaching presence scored the highest followed by cognitive presence, and social presence.

Table 8

*Comparison of CoII Scores*

| | Facilitated Community | | | Self-Organizing Community | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Scale/Subscale | *n* | *M* | *SD* | *n* | *M* | *SD* | *df* | *t* | *p* |
| **Teaching Presence** | 18 | 4.33 | 0.36 | 16 | 3.96 | 0.66 | 32 | 1.98 | 0.06 |
| Design & Organization | 18 | 4.47 | 0.40 | 16 | 4.65 | 0.40 | 32 | -1.34 | 0.19 |
| Facilitation | 18 | 4.23 | 0.48 | 16 | 3.90 | 0.93 | 32 | 1.29 | 0.21 |
| Direct Instruction | 18 | 4.35 | 0.42 | 15 | 3.09 | 1.06 | 31 | 4.35* | 0.00 |
| **Cognitive Presence** | 18 | 3.76 | 0.52 | 16 | 3.61 | 0.55 | 32 | 0.82 | 0.42 |
| Triggering Event | 18 | 3.89 | 0.68 | 16 | 3.79 | 0.58 | 32 | 0.45 | 0.66 |
| Exploration | 18 | 3.46 | 0.64 | 15 | 3.31 | 0.92 | 31 | 0.56 | 0.58 |
| Integration | 18 | 3.81 | 0.59 | 15 | 3.56 | 0.60 | 31 | 1.25 | 0.22 |
| Resolution | 18 | 3.89 | 0.51 | 15 | 3.71 | 0.71 | 31 | 0.83 | 0.41 |
| **Social Presence** | 18 | 3.31 | 0.56 | 16 | 3.38 | 0.52 | 32 | -0.34 | 0.74 |
| Affective Expression | 18 | 3.42 | 0.61 | 16 | 3.54 | 0.73 | 32 | -0.50 | 0.62 |
| Open Communication | 18 | 3.41 | 0.86 | 16 | 3.25 | 0.66 | 32 | 0.59 | 0.56 |
| Group Cohesion | 18 | 3.11 | 0.49 | 15 | 3.33 | 0.64 | 31 | -1.13 | 0.27 |

* $p < .0001$, two-tailed

## Qualitative Data for the Major Study Variables

Speziale and Carpenter (2007) claim that there is no single way to report qualitative findings, and the purpose of writing an ethnography is to share what has been learned and to attempt to determine cultural patterns. Since culture is ever-changing, "…the discoveries of today are applicable within context" (Speziale & Carpenter, 2007, p. 220). In this section, the data are organized and presented according to the major study variables.

### *Structural Empowerment*

The nurse educators' stories, postings, and comments were analyzed qualitatively through deductive analysis using the empowerment structures of opportunity, resources, information, support, and informal and formal power as the organizing framework. Through the coding process, informal and formal power were combined into the structure of *power*. Themes were identified, and the culture of the nurse educators in terms of structural empowerment emerged.

Opportunity for growth and mobility, including access to professional development and challenges that increase skills and knowledge, was an empowerment structure identified by the nurse educators. The culture of the nurse educators was that before engaging in an opportunity, they first needed to conduct an analysis regarding the benefits. It needed to be identified as something that would benefit them, the nurses they educate, or their patients. One educator noted:

> I thought long and hard about entering this research project because of the time commitment. However, even though I think I am an experienced educator I definitely am a novice when it come to e-learning. The new staff who graduate now

> are used to that in the nursing programs and it is up to us to keep up the momentum. I am looking forward to learning from all of you.

Nurse educators' learning goals further reflected the idea of benefit and were organized around three main themes including improving one's own leadership skills, learning about wiki technology, and being a member of a circle of educators.

Opportunity was closely linked to change with nurse educators embracing challenges despite negativity and resistance from clinical nurses:

> On August 19th, 2008, we changed the Medication Delivery Process, bought blue baskets for medication delivery in preparation for PYXIS [medication delivery system] in the future, and separated the binders for each nurse on the unit instead of just one to share. We then educated by a creative movie, a PowerPoint, and a review about the correct way to give medications. The two standards to emphasize were: "Medications must remain labeled to the bedside," and "Reconciliation of medications must take place at the bedside." There was much chaos and anarchy throughout the hospital. I always listened to nurses concerns, and there were many. We are now in the process of trialing medication carts this March, as the biggest concern of staff was where to put all this stuff: binders/medication totes, etc. especially if the bedside table was not clean or clear. This change in process is long and ongoing, but by reminding staff of the expectations, and discussing with nurses why they are not following the standards and how can we improve the ease of this has been an ongoing educational pursuit. I think I need to praise more the nurses who I see doing this properly. I recognize I do not do that enough. As educators, we often focus on those that are not compliant but I realize it is important to praise those that are providing care in a safe manner.

The commitment by nurse educators to sustain enough energy to continue to work through change processes was noted:

> I definitely agree that some days are better than others for reflecting on practice. Fatigue is a common thread in our stories. Change requires so much energy and we need to 'recharge' ourselves regularly. I believe that we need to celebrate all of our successes, no matter how small it may seem. Each success will build on others. And remember not to be so hard on yourself! By being involved in this project, we are committed to making change. There will be tougher days then others and we need to support each other through this!

Despite the challenges faced by nurse educators in working through change and adversity, the opportunity for leadership development was identified:

> While I was thinking of my "best" leadership story I reflected on the changes that have come about in nursing education in the last five years or so. Many of these changes have challenged and enhanced my leadership skills. For example, the influx of nurses educated outside of Canada has increased. As a nurse educator this makes my role and responsibility as a clinical instructor both interesting and challenging.
>
> On a daily basis I have had the privilege of being part of their journey to be nurses living and working in Canada. I also have had many frustrations. I felt I was not professionally equipped or prepared for teaching a diverse group of learners. I also felt that I was being "dumped" on as I thought at the time it was the responsibility of my employer to provide me with the training and education to fulfill this role.
>
> During my first clinical group I was so delighted and impressed with the enthusiasm and willingness to learn by the nurses that I "Grabbed the bull by the horns" and explored the resources for both myself and my learners. I have since taken adult education courses including "Teaching English as a Second Language" etc. I also discovered two resources for nurses new to Canada. An accessible language lab that caters to healthcare professionals (with English as an additional language) and a support group for nurses new to the country…
>
> As a leadership story… what I want to emphasize is that I have truly grown in my role as a nurse educator. I guess this leader story will be never ending as I am continually learning and exploring…opportunities.

The term *passion* was sometimes used to describe this commitment to education and patient care:

> What struck me as I read each of these stories, was the common thread and undercurrent of "inspiring a vision" & "challenging the process." Writers had a real desire to change things from how they were to something more, and that passion was evident in the words they chose to describe their story.
>
> The passion for education and the commitment to continue to access opportunities for growth and development was particularly evident when one educator stated, "I'm looking forward to improving my leadership skills and empowering others in my field to fill my shoes as I am nearing retirement." Another noted, "I am excited about our opportunity to learn about how we as leaders can impact on future nurses so that they will be able to replace us as we retire."

Nurse educators used the term *opportunity* in the initial and final stages to describe their feelings about participating. "Thank you for the wonderful opportunity of taking part in this project. I love the wiki idea and had a blast learning how to use it." Although

several nurse educators voiced their excitement about the opportunity to participate, their initial interest was not enough to engage them in the activity for 12 weeks, and they either officially withdrew or did not respond to requests to complete the final set of questionnaires at the end of the study. There was a relationship between opportunity and resources, and without adequate resources, nurse educators were not able to engage in opportunities.

Resources, as an empowerment structure, refers to access to materials, money, supplies, time, and equipment (Laschinger et al., 2007). Overwhelmingly, nurse educators viewed themselves as not having enough time to fulfill all of their responsibilities, and they noted that they continually struggle with work demands. It was noted that time was often wasted in the workplace by being a member of committees that were not productive. Generally, finding the right balance in terms of work responsibilities was difficult as noted in this posting:

> I have not posted as many stories as I should have, but I did try to read as many of the others as I could. I find this is a multifaceted job, that seems to have a great deal of paperwork associated with it. We are always developing preprinted orders and clinical pathways for patients, patient teaching material and new forms galore. Then I feel the struggle that I am not out with the staff helping them and guiding them. When they do not see you as often they assume you are doing nothing. This is something that I wanted to see if others felt the same way and how they balance the administrative work and the staff contact. Reading this over I think I need to put more of this paperwork development out to the staff to do with committees.

> Other than work demands, reasons for a lack of time included being a mother, having sick or dying significant others, computer problems, not having the Internet at home, vacations, personal crises, or being a student themselves, to name a few. In the sample studied, lack of time had a significant impact on study participation levels as noted by one educator, “By now you may have noticed that I have not participated. I was holding out hope that a window of time would still open. It is not going to happen. I would regretfully like to withdraw from the group.”

Aside from time, nurse educators voiced their concerns with being asked to accomplish a given task with few resources. In addition, money was identified as a necessary resource for education as described by one educator:

> I was very passionate about having proper education for the nurses to work in our step down trauma unit. When it first opened up the nurses were put through a course, but the education was not sustained for new staff to take in the subsequent years. When I started in this role I identified the importance of educating and supporting the staff to work in such a high acuity area. Eventually we were given the dollars to create a program and deliver it to all existing staff members and to continue the program with each new hire.

Access to educational resources was important to the nurse educators, and in some cases was a prime reason for joining the community. However, few resources were shared by the educators, except for one nurse educator in the self-organizing community who posted numerous resources including PowerPoint presentations, YouTube videos, Web sites, books, and other documents.

Kanter (1997) notes that effective members of an organization have access to ongoing information. Interestingly, nurse educators did not focus on the empowerment structure of information as a receiver of information. Instead, nurse educators focused on themselves as being the provider of information whether it was providing information to nurses through their educational sessions, developing policies, procedures, and guidelines, or even newsletters as in the following:

> A number of years ago, I started a small weekly newsletter for the medicine nurses in our hospital (I'm the educator for the medicine wards). There were different topics each week, like cardiac, dietary, infection control, stress. I included pertinent research (in an effort to introduce staff to the world of research), interesting stories, news from the world of nursing, and also a health-related cartoon. I thought if they come to see the cartoon each week, they'll hopefully read the rest, too! And it worked ! :) If I was a bit slow to get the newsletter posted, staff would ask me where it was, so I guess they enjoyed it and I hope they benefited from it.

Emotional support, helpful advice, or hands-on assistance from others are examples of the empowerment structure of support (Laschinger et al., 2007). The culture of the nurse educators examined was one in which they welcomed and needed the support of their nurse educator colleagues. In addition to support from their colleagues, support from other staffs was essential in the development of educational sessions. The nurse educators, however, did not always receive support from their managers or their directors:

> This story is one where I stood my ground. Management at our institution has changed in the last year and we were moving into a new hospital. Our manager had been walked out before we moved. The construction company had not met the specifications to install the water lines properly in spite of our ex-managers demands. An inferior water system was installed. The new director and new manager of the renal program had no knowledge of dialysis. The nephrologists asked that all patients that developed a fever on dialysis have water sampling done to ensure that the water supply contamination was not the cause and that a policy and procedure…[be developed]. The request was made 3 times in various meetings. Management said they would think about it. After the 3rd time I worked with the technical staff, developed a draft policy and procedure for doing the water sample. I brought if forward to a meeting of management and the nephrologists. In front of everyone, I was berated and told I was insubordinate for taking this on without direct orders from management. I meet with my direct manager after the meeting to explain that I did it out of concern for the patients. The next day I was called in with all the other staff and told by the director of nursing that policies and procedures only be made when management said so. She also said that doctors did not need to be involved with policies and procedures. I kept my thoughts to myself but I knew I was the target of this meeting.
>
> I continued to do research on evidence-based practice and found that all evidence pointed to the necessity of having the policy, which we had made up. I copied the literature and gave it to my manager knowing that I stood a chance of being suspended without pay for this. I wrote on the articles that this was the evidence and that he could do what he wished with it. I filed the draft policy away and left it. I could do no more.
>
> Within a month, an investigation was completed by an outside body of regulators and demanded that the system be changed. In the meantime they stated that testing of water be done on all patients who developed fevers on dialysis. I was told to develop a policy and procedure for this. Luckily, I had not thrown out our work.

> Being strong and standing up for your beliefs, caring about your patients is what this leadership story is all about.

When they did receive management support, they were able to work together to ultimately improve patient care. Similar to the empowerment structure of information where nurse educators were frequently the provider of information, in terms of support, it was identified that a main role of the nurse educator was to support others; however, supporting others was not always easy. One educator noted, "I struggle with how to best support those nurses who are having difficulty…keeping up with technology. There are also those nurses who are whizzes, and I struggle with how to challenge them to keep them engaged."

Kanter (1977) views power as being able to mobilize resources to accomplish a goal. Formal power is related to job characteristics; whereas, informal power is gained through establishing alliances. The nurse educator position is such that they normally do not have individuals reporting to them, and their team accomplishments are achieved through influence and informal power. Informal power, for the nurse educator, was equated to expert power:

> I found…all these stories very interesting. Something that jumped out at me was the question of leadership. Early in my career I took a leadership course, and what really intrigued me was the concept of informal leadership. I recognized leadership qualities I possessed as a bedside nurse. Today, I am always impressed by the leadership qualities educators possess, and the way educators lead. I also think we are in a unique position because we can influence both front line staff and managers, as evidenced by many of the stories…We can lead others to best practices or favorable choices. We may not assume an authoritative position...but our power (in my opinion) to make a difference is a result of "expert power."

It was noted that the informal or expert power of nurse educators can make a significant difference in patient care, especially when staffs seek out the advice or assistance of an educator.

*Psychological Empowerment*

Through qualitative deductive analysis, using Spreitzer and Quinn's (2001) four dimensions of empowerment, namely, meaning, competence, self-determination, and impact, the culture of the nurse educators in terms of psychological empowerment was revealed.

Individuals gain a sense of meaning when they believe that what they are doing makes a difference (Spreitzer & Quinn, 2001). Bringing meaning to one's career was important as noted by a nurse just starting her career as an educator:

> I am a new nurse educator (Dec 2008). I have been nursing for 13 years, 11 of those years in the same department within various roles and sections. The last year in the department I found I was not being challenged in my daily work. I let it be known that I was struggling with this, but I was filling a need. Upon a discussion I had with one of the doctors, I left feeling disheartened, I decided that no one else was going to make this change for me I had to do it on my own and it meant leaving the department. SCARY!
>
> That very same day I went on line and looked at nursing job opportunities and there were 2 educator positions posted, I applied for both. The next day another nurse educator position was posted and I applied for it. I knew, through discussing my future goals and visualizing what I wanted to do with my career with a great mentor, that teaching was my passion. I was so excited, rejuvenated [and] alive about the possibility. I ended up being offered 2 of the positions! I am challenged every day and inspired to continue my education.

The culture of the nurse educators revealed a need to feel that their work and time makes a difference, otherwise they may withdraw from an activity. A lack of personal satisfaction and meaning may have been contributed to a decrease in participation of nurse educators in the community. In addition, a low sense of confidence with the wiki and the online learning community in general may have contributed to participant withdrawal. An educator who continued to the end stated:

> Reflecting on my participation in this study, I don't think I became as involved as I could have. I tended to hold back, not say much, not post anything for fear of saying

> something wrong. That is what I tend to do – hold back. I tend to sit back and watch what the crowd is doing and what they are saying. Like watching people go by in the mall. I am a people watcher. Watching to see what they will do next. I guess I bring that into my job too. I sit back and watch to see what others are doing or saying. Going with the flow. What in case I posted something that sounded "stupid" or "silly." Something others wouldn't approve of. I think my "fear" of rejection held me back so I really didn't get much out of participating in this project.

Being confident about one's abilities translates into competence (Spreitzer & Quinn, 2001). Aside from a few examples, the culture of the nurse educator community was generally one of confidence and self-assurance when referring to their own competence as a nurse and the knowledge base that they have regarding patient care. Their competence transforms the workplace into an empowering environment:

> Frequently in the critical care environment there are dilemmas created because of competing courses of therapy. One of these dilemmas for nurses occurs between adequate pain control management and weaning patients off the ventilator. I teach pain management and stress that pain is what the patient states it is. To determine the level of pain, we as nurses need to use appropriate assessment tools. In a patient who is conscious and able to communicate, asking the patient to rank the pain on a scale of 1-10 is one of the best methods.
>
> The situation involved a student who was looking after a patient who was 48 hrs post thoracoabdominal surgery and was being weaned. The patient was conscious and communicating with us. The resident had ordered that all analgesics be withheld and the patient had not received any analgesia over night. This was 1000 hrs. The student and I were distressed because the patient was demonstrating evidence of increasing pain. The student felt we were torturing the patient. I approached the issue with the student by asking him what he saw as an effective means for getting an analgesic order for the patient. We ran through the scenario of him approaching the physicians and making the request. He was reluctant, and somewhat afraid. I coached him through the process. What information did he think he needed to tell the physician that indicated the patient was having pain? The student gave me the various correct physiological indices, to which I responded with other possible causes for those changes. The student seemed lost as to what other data he could give. Finally, I went up to the patient and asked him if he was having pain. The patient replied with a nod indicating yes. I next asked the patient if on a scale of 1-10 etc., he could indicate how much pain he was having. The patient held up 8 fingers. The student was aware that our acceptable level is less than three. Just then the physicians came by to make rounds on the patient. The student presented the patient problem of pain and gave them the physiological variables which did not seem to impress them. However, when the student stated that the patient reported having a

> 8/10 level of pain, the attending immediately ordered a stat administration of analgesia. The attending then proceeded to explore appropriate pain control methods for this patient taking the opportunity to teach his residents. The smile on the student's face was great to see. He had been told by other staff that this (withholding analgesia while weaning) was the way things were and that there was not much he could do about it. But he had spoken up with the right info and was seeing favorable results. When I questioned the student as to what he felt was the turning point that changed the physician's mind, he correctly stated that it was the patient's self report of pain. Subsequently I have seen the student, now graduated, use the pain scale as the focal point for getting appropriate pain management orders for his patients and coaching others to using the pain scale. This is an example of success for me and I celebrate these moments.

Although educators revealed they were competent clinically through their stories, they were less confident in their leadership abilities. One nurse educator wrote:

> My LPI, showed me what I suspected...I have very little confidence in my own leadership abilities. I scored low across the board, and yet when I look at what I do, and how I interact with the staff I work with. I think I do fairly well. I think I am respected by my peers, they come to me for help, they confide in me, and laugh with me, and leaders in the organization also ask me what I think and seem to appreciate my offerings. I guess in my fairly new role as an educator, I am still finding it hard to believe that I am at that point in my career where I have the ability to change or modify the path for nursing practices in our organization. I remember 10 years ago, my manager at the time telling me in a performance appraisal that she saw me becoming a clinical educator one day and that I would do well in that role. I was pleased by her comments but didn't quite see it in myself yet.

Individuals who take the initiative to make decisions exhibit self-determination (Spreitzer & Quinn, 2001). In the culture of the nurse educators examined, there was a self-determination to develop educational programs, policies and procedures, and other material even if they did not receive as much support in developing the product as they would have wanted. The following story is a personal best leadership story:

> I don't know if I even have a personal best leadership story. The only thing that really comes to mind is "central lines" and that happened several years ago. I had been in the job of educator for only a year or two. At that time our central line procedures were a mess. They were outdated and poorly written (in my estimation). Since one of the areas that I cover is TPN [total parenteral nutrition], I thought that I should take the "bull by the horns" and get these procedures cleaned up. I had asked a couple of other educators to help me with it but they were not interested for

> whatever reason, so I just jumped in by myself. I did an extensive literature search and contacted other sites (far and wide) to determine best practice. I rewrote all the procedures so that they were clear and concise. I did ask for feedback from people along the way and received some helpful comments. When I had finished I felt very proud of the finished product and disseminated the new procedures through out the building. I received many compliments on them and staff felt that they were "user friendly" and workable. Alas, since that time they have gone through many revisions but I can still recognize my input into some of the procedures. I feel that it was my initial procedures that started the serious focus on central lines in our facility and am confident that if staff follow them they are providing the best care possible for those devices.

If development support was received, then in the overall success of the project was increased.

Impact is seeing oneself as making a difference and believing that one can shape the direction of the workplace (Spreitzer & Quinn, 2001). Through their stories, the nurse educators demonstrated without a doubt that they had a positive influence on the nurses they worked with, the patient care units they were associated with, and ultimately the patients being cared for in the hospitals. One educator wrote about how her presence in the Emergency Department made a positive impact:

> My final story is not what I had expected it to be - it just evolved. I have spent a lot of time of late in the clinical area, mostly because it has been extremely busy and I wanted to show the staff some support - rather than sit in our "ivory tower" as we (educators) have been known to be described as doing. Interestingly enough I have found myself both practicing and analyzing leadership practices while I am there.
>
> A couple of days ago a new student doing her practicum was discussing a situation with another nurse. They referred the situation to me for my advice. A young female patient was scheduled for an ultrasound and the resident had ordered an intravenous fluid bolus for her because she had just voided and she needed a full bladder. "Why can't she drink" the student said to me. And my response was "Well why can't she?" The student responded saying that "she could - but I asked the resident and he still wants her to have the bolus" We decided to bypass the resident and review the order with the EMO [emergency medical officer] in charge who easily agreed to cancel the order for the IV [intravenous] and have her drink instead. Brilliant I thought and very impressive for a young student - thinking critically to prevent an unnecessary intervention that would have been invasive for the patient and time spending for the nurse. We talked a lot about that - challenging orders, advocating for your patient

> and I was very open about how impressive I thought it was for her to be thinking at this level at this point in time.
>
> With being in the ED [Emergency Department] a lot clinically over the past couple of months I have had the opportunity to work on some of the leadership qualities that I have been lacking. The staff has become more reliant on me for information. I often hear them say "Well let's ask (me) she'll know." I have had more opportunities to challenge processes - I am now working with an issue involving the lack of pharmacy support for infusion preparation in the ED - and to role model and empower nurses. And I have come to realize that this can't be done from a distance. I see how effective I can be when I am with them and that I have to have a "presence" to lead. For me that has made a difference.

*Leadership Practices*

Kouzes and Posner (2003c) found that when leaders are at their personal best they engage in the five practices of exemplary leadership, namely, Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act, and Encourage the Heart. Kouzes and Posner identified these five practices by asking thousands of people to tell their personal best leadership stories. Similarly, nurse educators were asked to post their best personal leadership story in the wiki, and then post three additional stories after analyzing their results from their LPI and reviewing presentations that focused on the five practices of exemplary leadership. The stories told by nurse educators demonstrated engagement in more than one of the five practices, and at times, all of the five practices were included in their stories. The stories reveal the culture of the nurse educators in terms of their leadership practices.

The two commitments of leadership associated with Model the Way include find your voice by clarifying your personal values, and set the example by aligning actions with shared values (Kouzes & Posner, 2003c). The nurse educators demonstrated their

ability to Model the Way using both commitments of leadership. In 33 of the 80 stories posted, nurse educators talked about how they Model the Way. Examples included:

- leading unit based and hospital-wide projects;
- identifying the need for and developing policies, procedures, clinical guidelines, learning packages, workshops, programs, and other educational material based on evidence in the literature to change, monitor, and evaluate nursing practice;
- collaborating with nursing colleagues in other hospitals and across the country to identify best practices in clinical care;
- collaborating with professionals in other health disciplines to establish best practices;
- facilitating the orientation and transition of new graduates and internationally educated nurses into the workplace;
- working with nurses who are experiencing difficulties in the workplace;
- sharing their clinical expertise with nurses in the clinical areas to improve processes and practices;
- challenging nurses to question current clinical practices;
- working well in difficult and crisis situations;
- promoting the use of wiki technology after learning about it in this study;
- designing e-learning Web sites for nurses;
- incorporating the use of audience response systems into classroom teaching and high-fidelity simulation in laboratory practice sessions;
- supporting and promoting the use of computerized clinical systems;
- presenting to colleagues using the five practices of leadership as a framework; and

- furthering their own education through continuing education opportunities or formal education.

In the following story, the nurse educator describes how she was able to Model the Way and assist in changing a student's thought processes:

> The student was a young, smart, quick learner - part of the new breed that go by the beat of their own drum. She had already irritated the other educators and had been branded as having "attitude." I was teaching a class and every time I glanced her way, her body language said to me that she was bored. Rather than listening she would talk with her colleague. I tried to involve her in the class by posing questions directly of her. She would answer with short superficial answers. She was never wrong. After class I approached her and commented on her showing disinterest. I inquired as to what I could do to create interest for her. She said that she did not see the benefit of knowing details and just wanted to learn end points. I responded that knowing only the end point was only the start and that I was hoping to assist her in becoming a critical thinker. Though frustrated and not knowing how to proceed I knew in my heart that I needed to assist this young lady. In clinical I used every opportunity to gently guide her through thinking about the detailed aspects of her patients' pathophysiology, medical management or nursing care. I would assist her in finding answers to her own questions by taking her through a question-answer process. There were times she would say "Can't you just give me the right answer!" In post conferences, I would play the devil's advocate to stimulate not only her but the other students' thinking; and ability to critique. Gradually I saw a change in the student: a spark, a desire to engage, questions of a greater depth, expression of thoughts indicating critical thinking. After graduation I received a thank you card on which she wrote, "I only now understand what you were trying to teach me. Thank you for not giving up on me." The last time I saw her she told me that she was now a Nurse Educator and hoped to one day be like me. Needless to say, I was thrilled.

To Inspire a Shared Vision is to envision a future and then enlist others to share in that common vision (Kouzes & Posner, 2003c). Twenty of the stories told by nurse educators referred to the exemplary practice of Inspire a Shared Vision. The commonality in the stories was the vision of quality patient care being achieved through education and the support of nurses in clinical practice. In the following story, the educator speaks of how a vision that started with a smaller group grew:

> I am struck with the "Inspire a shared vision" as it really encompasses what I feel I struggle with and am constantly working towards. I work on a team which is just one

> piece of three sites trying to have a shared vision. Living your life backwards is exactly what the various groups of the team are trying to do. In discussion with members from junior to senior or expert, we have the idea of what we want as our end goal but articulating what that means or actions we need to take becomes the harder part. I have been working closely with a junior nurse who has energy, excitement and a willingness to work towards a developmental care practice model. This excitement for developmental care is our shared vision of how much we can improve care for infants and families. It changes and challenges a lot of previous beliefs and practices and really makes the other nurses we work with somewhat defensive about how they have done their "nursing work" in the past. But the more each one of us talks about how we see our care of premature infants respecting a developmental model, the more our vision starts to shape into present day needs for change and practical things on a shift or day to day basis we can do to improve. It's this dialogue of things we need to change in our approach which started with the junior nurse and me that is flowing like lava through the nurse to nurse shift conversations on a daily basis. We talk about it at every opportunity and after a multidisciplinary workshop was provided, the vision of better developmental care of our patients spread like wildfire. Our passion was indeed ignited. I feel it is a very exciting time because what started as a "shared vision" between a small group has now many staff willing to work and problem solve towards making this vision a reality. A truly exciting time for everyone! It is not going to be easy to change the old practices but with so many people on board it is fast becoming a true reality!

Kouzes and Posner (2003a) claim, “the work of leaders is change” (p. 5). Stories of change were included within the empowerment structure of *opportunity*, and the stories within this section illustrate that the culture of nurse educators is that of taking risks and sometimes questioning those in authoritative positions in order to improve patient care. Nurse educators, however, struggle with challenging authority figures. The common theme was that of challenging policies, procedures, guidelines, outdated nursing practices, and equipment purchases. Fifteen of the 80 stories written alluded to the exemplary practice of Challenge the Process. One nurse educator reflected on her ability to Challenge the Process and her resulting frustration:

> Challenge the Process was my low score on the LPI and since then I have thought about it and tried to determine why. I remember being confident and readily speaking up, but something happened along the way. I recall taking on an “Endotracheal Suctioning Policy and Procedure” when I found discrepancies between the literature and what our procedure prescribed nurses do. Despite the

> evidence, numerous discussions and proceeding up the hierarchal levels, I could get no one to change the existing document and therefore the practice, which I was required to teach. I was left confused, discouraged, frustrated and tired after the lengthy process and the energy I had expended. It seemed no one wanted to recognize what we have now come to know as “evidence based practice.” The attitude was “do not rock the boat;” “do as we say;” you have no voice or power here. The emotional scars remain, as even today I can vividly recall the incident.
>
> This unfortunate response reoccurred on numerous occasions with other issues. I was labeled as being a perfectionist and counseled to watch myself as individuals were resistant to change and did not like being reminded that things could be done better.
>
> However, I do not believe my past silenced me. It changed my approach in that now, not only do I collect my evidence, I present it better and I also have allies on board for support. The challenge is not as much "in your face" but has a gentler approach. In a way I have learned to play the game. Experience, trial and error, is a wonderful teacher that has helped my development.
>
> I also believe and frequently voice that I am being paid the “Big Bucks” to offer contrary opinions if I see potential problems occurring. I remind others that a devil’s advocate assists in making better decisions. As a nurse educator I believe I have the responsibility to validate that what we are doing or teaching is evidence based and provides for safe patient care practices. I probably challenge the process more in a covert as opposed to overt manner, but I do challenge it.
>
> Being involved in this forum has provided me the opportunity to reflect on my leadership behavior of challenging the process, increased my confidence in doing it and brought a new focus to my work.

Twenty nine of the 80 stories written illustrated the exemplary practice of Enable Others to Act. Kouzes and Posner (2003c) claim that by fostering collaboration and strengthening others, one can Enable Others to Act. The culture of the nurse educator group examined was one in which they enabled clinical nurses to act through education and support. One educator described how she enabled a clinical nurse to act through involvement in a project:

> Over the past few months our team has begun a new initiative to start early rehydration in children that present with symptoms of acute gastroenteritis. I am passionate about this project because I believe in it’s possibilities and know it will accomplish more than one goal - to educate parents about the benefits of oral replacement therapy, to help reduce the length of stay for these children, and to

> reduce the cost associated with unnecessary IV [intravenous] starts. The project leader (not myself) organized a working group with representation from nursing, acute and community medicine and the quality team. I did a literature search to ensure we were using evidence based research and linked with my colleagues in other pediatric ED's [Emergency Departments] across Canada. We began to formulate a plan with time lines and responsibilities.
>
> One day a couple of weeks ago one of the nurses in the department came to me and said that she wanted to be involved in something in the department. This was the perfect opportunity for her. I invited her to join the group and provided her with all of the information. Right now we are at the stage where we are developing forms and her input has been very valuable. She has communicated with the staff, gotten their feedback, and made great suggestions. The form is becoming very usable and we are making quick progress. She will be assisting with piloting the project when it is ready. We have thanked her for her input, for taking the time to be a part of the project and she has been a brilliant addition to the group.

In many of the stories presented, the nurse educators revealed that they had the self-determination to move forward with a project even if they needed to do it on their own. This self-determination, however, is often in opposition to Enable Others to Act.

The fifth exemplary practice of leadership is Encourage the Heart. Recognizing contributions and showing appreciation for individual excellence, as well as celebrating values and victories by creating a spirit of community are the two commitments associated with this leadership practice (Kouzes & Posner, 2003a). It was evident in the comments nurse educators made to each other that they were comfortable practicing within a caring compassionate culture; however, they realized that they could Encourage the Heart more in their everyday nursing practice:

> I think I need to praise more of the nurses - I recognize I do not do that enough. As educators, we often focus on those that are not compliant but I realize it is important to praise those that are providing care in a safe manner.

Only 16 stories reflected the practice of Encourage the Heart; however, several of the nurse educators identified it as a leadership practice to focus on for the duration of the study:

> One of my goals for leadership would be to Encourage the Heart. Today I came to work and could not speak (I have laryngitis, the end result of a flu bug I've been nursing for a week). I had a week of daily basic life support renewals and "in house" advanced cardiac life support competencies planned. The basic life support and part of the ACLS [advanced cardiac life support] were video assisted learning so not much of a problem, but the scenario practice and testing for ACLS were not going to happen unless I recruited help. The clinical resource nurse in ICU [intensive care unit] graciously offered to help me out in a pinch. As I am retiring in a few months it was probably a good opportunity for this individual to "take over." She did a great job and offered to follow up with one of the staff members who had problems with some of the skills related to inexperience with the monitor/defibrillator/pacer unit. Following her teaching we had a discussion about guidelines and how to handle physicians that directed codes in conflict with the guidelines. In addition, we talked about how she felt when attempting to promote the correct course of action. I offered her some advice and encouraged her to keep promoting the correct course of action in a professional manner, even though it was difficult to do. I expressed my appreciation for helping me in a pinch. However, I thought about "encouraging the heart" and went to the gift shop in the afternoon to purchase a humorous card thank you card. While browsing, I also found a little fridge magnet that read, "Everyone is entitled to my opinion" so I bought it as well and popped it in the card. I left the card and magnet in an envelope on her desk while she was in the midst of helping with two new admissions.

*Teaching, Cognitive, and Social Presence*

Based on the community of inquiry model, there are three core elements essential for an educational experience: teaching presence, cognitive presence, and social presence (Garrison et al., 2000). Learning occurs at the intersection of the elements within a constructivist learning environment. Using an ethnographic approach, the online learning community for hospital-based nurse educators was analyzed. Although a deductive approach was used to analyze the community using the core elements of the community of inquiry model as the initial organizing framework, the evolving culture of the online community is best presented using *time* as the primary organizing principle. Sandelowski (1998) notes that when time is used as the organizing principle to re-present qualitative data, the findings are organized according to the activities and processes as they

unfolded. The phases in which the online community evolved forms the organizing framework for the report. The three phases include the introduction and familiarization phase, the working phase, and the disengagement phase.

The introduction and familiarization phase lasted approximately one month in both the facilitated community and the self-organizing community. There were nurse educators in both communities that accessed the wiki even before the official launch date as access was provided to participants a few days early. Others waited approximately three to four weeks to announce their online presence. During this period, nurse educators logged onto the wiki with the assistance of hardcopy orientation material, they introduced themselves to their peers, and started to become familiar with the wiki technology by navigating through the various sections, viewing narrated navigation movies, and exploring the capabilities of the wiki.

In both communities, nurse educators were initially excited about the online community, “Hey Brenda! What awesome Internet technology!! You have done an amazing job! I have spent a few days looking through everything and now feel more comfortable to post.” Although excited, there was a hesitation about the technology and they needed to somewhat master the technology before posting a comment. Others expressed that they were overwhelmed and hesitant to use the technology in fear of making a mistake. One educator noted the following in the first week:

> I feel so confused and lost right now. It is all so overwhelming to me. So much to see and learn. I am feeling very anxious about this whole thing. Worried about screwing it up. What if I do something wrong? I know it will all fall into place but with anything new - I feel overwhelmed.

Interestingly, although some of the educators may have been overwhelmed, they managed to access the wiki, locate the correct page for posting, and post a comment; thereby, demonstrating basic mastery of the technology at a very early stage.

During this phase, nurse educators began to cognitively engage in the community by identifying their own learning goals. As noted in the *opportunities* section of the qualitative analysis of structural empowerment, learning goals focused upon improving one's leadership skills, learning about wiki technology, and being a member of a circle of educators.

In both communities, nurse educators began to get familiar with each other through their introductory remarks about themselves. Overall, 41 of the 51 nurse educators who joined the community posted an introductory message on the wiki. Nurse educators announced their presence and revealed a little bit about themselves including their nursing specialty, how long they had been an educator, what connection they had to their anonymous online name, and their eagerness to participate. Although they posted introductory remarks, there was no interaction among members in either group, meaning that they posted their messages, but did not post a return respond to one another's postings.

Social engagement became evident in the self-organizing community with a few nurse educators posting vacation pictures in the *lounge* and chatting about dream vacations. There was minimal social engagement in the facilitated community, and the facilitator tried to initiate conversation; however, only four members responded. It would appear that with limited time available to nurse educators for their own professional development, their focus was on meeting their own learning goals and not on social

conversation. In the common *bulletin board* viewable to both communities, the facilitator, for example, tried to encourage interaction by asking members to post in their own *suggestion boxes* points that the facilitator could include in an upcoming speech that she was going to deliver in Grenada, West Indies; however, only two responses were posted. Despite minimal interaction, the facilitator continued to post messages of encouragement on the common bulletin board. The following is a portion of the facilitator's message posted at the end of Week 4:

> First, well done to everyone who has managed to log-on, navigate, introduce yourself, and even post a story. Some participants are still joining us, and that is okay as some are on or just coming back from vacations, or cleaning up after the Christmas break. The weekly outlines that I provided (under the "Reserve" page) is a guide for the 12 Weeks, so don't feel that you need to follow it exactly – time is a factor for everyone. The minimum I am requesting is that you Introduce yourself, write your personal best leadership story, and then 3 other stories. Give yourself a *pat on the back* for starting to learn this new technology! I am sure many of you are already thinking about how you can use this in your own facilities!

A main focus for nurse educators during the introduction and familiarization phase was mastering the technology. There was a technical issue preventing some of the presentation documents from opening, and much of the online discussion in the self-organizing community focused on the inability to open selected documents. Interestingly, the same conversation did not take place in the facilitated community. The facilitator provided updates regarding technical issues on the common bulletin board so both communities were aware of the progress being made to resolve the issue. This technical incident may have been a major turning point in the community, for those who were willing to work through the technical challenges persisted, while those that may have been hesitant initially with the technology withdrew from participation.

The facilitator intervened in both communities on a regular basis in this phase to restore wiki pages to original or previous versions when members accidentally erased all or some of the content on the pages. The quick intervention on the part of the facilitator instilled a trust that if some type of error was made that they could rely on the facilitator to fix the problem.

The working phase was the period when the nurse educators analyzed their own LPIs, reviewed narrated leadership presentations, and posted their leadership stories. Educators were appreciative of the work that went into the design and organization of the wiki, as well as the direct instruction that occurred via the presentations. One educator noted, “I really appreciated your voice over PowerPoints. It was like you were sitting in front of me.” Another stated, “Kudos to you for making the site come alive for all types of learners with visuals, text and your voice - I want to learn how to do this.”

The nurse educators were self-directed in working through their learning activities, and cognitively, it was evident that the educators gasped the leadership concepts of the five exemplary practices of leadership, for they began to use Kouzes and Posner’s (2002) leadership terminology in their stories and comments. In addition, they began to transfer their leadership skills and knowledge to their workplaces. The following story exemplifies this knowledge transfer:

> How It All Came Together for Me.....Today we had a "Capstone Event" with all of the members in my "Frontline Next Generation Clinical Leadership Cohort" in attendance. We were all given the opportunity to speak to our leadership experiences over the past 6 months. It was "Appreciative Inquiry" at its' best.
>
> The frontline leaders involved in my project & my manager were there. So when I stood to speak - I seized the opportunity to speak authentically from my heart about the project and about how I feel "it takes a team to lead" - I conveyed how much I appreciated and valued their support and their skills and what a privilege it has been

> to experience this journey with them - as we are truly "building the bridge as we walk on it" as we engage staff to move towards changing the "Care Delivery Model."
>
> I chose to tell my stories framed by the 5 practices of "Leadership" (Kouzes & Posner) as I truly feel the leaders I work with emulate these qualities but do not hear enough about how exceptional they are as individuals. The manager of the unit I had spoken about in my very first story came up to me afterwards and thanked me for all that I said. She said she constantly feels self-doubt and like there is so much more she could be doing. We spoke again about our past problems - and we both agreed if we hadn't run into that barrier we would not be as strong as we are today - there is a professional, respectful bond between us all & I will continue to constantly take those moments to make them aware of their awesome skills as leaders as we go forward.
>
> I also highlighted how my involvement with this online leadership community had enriched my leadership skills & promoted the use of "Wiki Online Technology" - with our Chief Nursing Officer & a member of the Board in the room - I emphasized how important it was for our online community - to provide feedback about our stories - as we are so humble about what we have done - and how it takes someone not as close to our work to show us we are leading from where we are. So I was proud to address my goal of raising the profile of online learning in my health authority! So I did the Wiki proud today!
>
> It was an exceptional day - there were many overlaps and much common ground to be found in all of the stories that were told. I was able to show the inspirational leadership video I posted on this Wiki at the end of the day - it was a wonderful way to affirm the reason we had all gathered there for the day.

Although nurse educators were engaged with the cognitive learning process; there was little social engagement with each other or the facilitator. Members from both communities recognized the lack of engagement and social presence among members. One nurse educator from the self-organizing community noted at the end of the study, “I was extremely dissatisfied by the lack of interaction/participation within my community - I was hoping to gain back shared resources from others.” A member of the facilitated community commented:

> In the beginning when I had more time at work, I found there was little input from others as far as chatting or resources or discussions in our facilitated group. I guess I was visiting the site hoping others would have posted something new or begun a dialogue that I could add to. Instead of leading the charge, I sat back and waited. I

> never felt that our facilitated group really ever did get really active and fully engaged. Not sure why? I too could have put more effort into starting up conversations and yet I did not - for some reason I felt like I wanted to be passenger in the experience rather than a driver I guess. I wonder if that was because we knew we were facilitated and somehow felt that we didn't have to put the extra work in???? More of a classic teacher vs. student mentality rather than a collaborative effort????

Although levels of interaction were low in both communities, the self-organizing community displayed greater interaction among members than the facilitated community. The greatest interaction in the self-organizing community occurred during Weeks 4 to 6 when six members discussed how they would organize their stories:

> Has anyone been thinking about how we will present our leadership stories to the group? Maybe we could each create a separate page in the classroom, post our story & the rest of the group could add their feedback. Any other thoughts? We have lots of time to figure this out - my competencies with walking the wiki are a bit challenged - you probably noticed that I dove in and tried stuff out - made some mistakes - but the beauty is Brenda can tidy up the rough edges. I am excited about the possibilities associated with this type of learning.

Discussion then ensued regarding the actual creation of the pages and the technical difficulties in doing so; however, one of the members went ahead and created pages for everyone in the self-organizing community and essentially became the unofficial facilitator of the self-organizing community. In addition, the self-organizing community supported and encouraged each other through their comments to stories that were posted. The following is an example of an encouraging and positive response to a story in the self-organizing community:

> Wow - what an awesome leadership story!!! - "You modeled the way" - you went to the wall ("challenged the process") for frontline staff as "you found your voice" & held management accountable to their assurances that all jobs would be secure. You were transparent with no hidden agendas - it was no surprise to read that they all chose to ride the wave of change with a leader who valued "authenticity." You "inspired a shared vision" & "enabled them to act" by bringing the whole team together for the ed [education] day - to envision and own their future state -

> appreciative inquiry at its finest!!! Well done - you emulated all of the 5 Practices as outlined in Kouzes & Posner!!!

In the facilitated community, the facilitator assisted nurse educators in analyzing their stories based on Kouzes and Posner's (2002) leadership practices. However, there was a low level of interaction between the educators themselves, and the educators and the facilitator in both personal locker spaces and the classroom where the facilitator posted the stories of members of the community and tried to initiate discussion. The frequencies of facilitator and educator comments are outlined in Table 9.

Table 9

*Frequencies of Facilitator and Educator Comments*

| Section | Facilitator Comments* | Educator Comments | |
|---|---|---|---|
| | Facilitated Community | Facilitated Community | Self-Organizing Community |
| Private Lockers | 77 | 21** | 0 |
| Classroom | 12 | 14 | 21 |
| Bulletin Board | 7 | 5 | 11 |
| Suggestion Box | 2 | 1 | 29 |
| Lounge | 3 | 4 | 24 |

*In addition, facilitator intervened 23 times in the self-organizing community and made 26 postings/announcements in the common bulletin board

**Return comments to the facilitator

The disengagement phase varied from educator to educator, and it was the period when nurse educators began to interact less with members of the community or either stopped posting stories or comments. An analysis of the levels of participation for all nurse educators who entered the study, and for those who either withdrew during the study, withdrew after the study not completing the posttest questionnaires, or those who

did not respond to requests to complete the posttest questionnaires (see Table 10) was completed. It was found that participation began to wane after nurse educators posted their best personal leadership story (see Table 11). None of the nurse educators who withdrew posted a leadership story after posting their best leadership story. Participation continued to decline with only nine educators posting a third leadership story.

Table 10

*Level of Participation of Nurse Educators Who Withdrew*

| | VW During ($n$ = 3) | | VW After ($n$ = 7) | | No Response ($n$ = 6) | |
|---|---|---|---|---|---|---|
| Participation | Posted | Not Posted | Posted | Not Posted | Posted | Not Posted |
| Introduction of Self | 2 | 1 | 4 | 3 | 2 | 4 |
| Learning Goals | 1 | 2 | 3 | 4 | 0 | 6 |
| Best Leadership Story | 1 | 2 | 2 | 5 | 0 | 6 |
| Story #1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Story #2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Story #3 | 0 | 0 | 0 | 0 | 0 | 0 |
| No Posting | - | 2 | - | 3 | - | 4 |

*VW: Voluntary Withdrawal

Table 11

*Level of Participation: Frequency of Posting Required Assignments*

| | Overall ($N$ = 51) | | Facilitated Community ($n$ = 26) | | Self-Organizing Community ($n$ = 25) | |
|---|---|---|---|---|---|---|
| Participation | Posted | Not Posted | Posted | Not Posted | Posted | Not Posted |
| Introduction of Self | 41 | 10 | 22 | 4 | 19 | 6 |
| Learning Goals | 23 | 28 | 14 | 12 | 9 | 16 |
| Best Leadership Story | 33 | 18 | 19 | 7 | 14 | 11 |
| Story #1 | 20 | 31 | 13 | 13 | 7 | 18 |
| Story #2 | 18 | 33 | 11 | 15 | 7 | 18 |
| Story #3 | 9 | 42 | 5 | 21 | 4 | 21 |
| No Posting | - | 10 | - | 4 | - | 6 |

In the self-organizing group, it was identified that seven members did not share any of their stories with other members of the community, and one member did not share her personal best story. The stories were written in their private lockers with only the facilitator and the nurse educator having access. A summary of the themes is outlined in Table 12.

Table 12

*Online Learning Community Themes Summary*

| Phase | Themes |
|---|---|
| Introduction and Familiarization | Mixed feelings about the online community including:<br>• excitement;<br>• hesitation to use the technology;<br>• feelings of being overwhelmed; and<br>• a fear of making errors.<br>Signs of cognitive and social engagement.<br>Focus on mastering the technology.<br>Strong teaching presence. |
| Working | Focus on completing learning activities in a self-director manner.<br>Knowledge transfer of leadership skills to the workplace.<br>Minimal social interaction.<br>Continued support and encouragement among community members.<br>Continued teaching presence. |
| Disengagement | Decrease or ceasing of interaction among community members.<br>Continued self-engagement, but disengaged from the online community.<br>Decrease in teaching presence in terms of trying to initiate discussion.<br>Feelings of guilt among members who did not fully participate. |

**Tests of the Hypotheses**

Inferential statistics were used to test the hypotheses, and the triangulation of quantitative and qualitative data was used to corroborate statistical findings. In this section, results of inferential statistics will be presented, and qualitative data and themes collected via the exploratory research questions will be triangulated with the quantitative data.

*Structural Empowerment*

MANOVA, using a repeated measures design, was used to measure the differences in pretest and posttest structural empowerment scores within the facilitated and self-organizing groups, and between the facilitated and self-organizing groups. It was found that there were no significant differences between the groups on any of the six subscales of the CWEQ-II. When determining whether there was a significant difference within the groups over time, that is from pretest scores to posttest scores, there were two significant results. Opportunity increased significantly ($F = 7.80$, $p < .05$), and informal power increased significantly ($F = 20.35$, $p < .0001$) in both groups over time. However, the effect of time was not significantly different for the facilitated group compared to the self-organizing group.

Through the analysis of nurse educators' stories, themes were generated that correspond to each of the subscales of structural empowerment as measured by the CWEQ-II. The subscales of informal and formal power were combined into one, namely, power. The generation of themes in each of the subscales provided evidence that the empowerment structures of opportunity, resources, information, support, and power (i.e., informal and formal power) were present in nurse educators' workplaces at a moderate level.

By triangulating data related to opportunity, it was identified that quantitative findings were supported by qualitative data and vice versa (see Table 13). The stories told by nurse educators revealed that they had many opportunities in their workplaces, and this finding was supported quantitatively by ranking opportunity as the highest empowerment structure.

Table 13

*Comparison of Quantitative Data and Qualitative Themes: Opportunity*

| Quantitative Data | Qualitative Themes |
|---|---|
| Highest empowerment structure score in both groups.<br><br>Facilitated group pretest ($M$ = 4.16, $SD$ = 0.73) and posttest ($M$ = 4.33, $SD$ = 0.74) scores.<br><br>Self-organizing group pretest ($M$ = 4.02, $SD$ = 0.78) and posttest ($M$ = 4.25, $SD$ = 0.71) scores.<br><br>Significant increase ($F$ = 7.80, $p < .05$) in both groups over time.<br><br>No significant difference between the groups. | Nurse educators have a passion for education and are committed to accessing opportunities for own growth and development.<br><br>Change is closely linked to opportunity.<br>Nurse educators:<br>• embrace and are committed to change;<br>• struggle with resistance to change; and<br>• view change as an opportunity for leadership development.<br><br>They identify a relationship between opportunity and resources.<br><br>Nurse educators conduct an analysis before engaging in an opportunity.<br>Ensure benefit to:<br>• themselves;<br>• nurses; and<br>• patients.<br><br>Learning goals of nurse educators focus on:<br>• improving own leadership practices;<br>• learning about wiki technology; and<br>• being a member of circle of educators. |

The nurse educators indicated that opportunity was closely related to resources. If resources were not available, then opportunities for nurse educators were reduced. As outlined in Table 14, the quantitative finding of resources being the lowest ranked empowerment structure was consistent with qualitative themes. Lack of time, struggling with work demands, and being asked to accomplish tasks with few resources were signs

of disempowerment in the nurse educators. Although educators were initially excited about participating in the online community, 31% withdrew citing lack of time as the number one reason.

Table 14

*Comparison of Quantitative Data and Qualitative Themes: Resources*

| Quantitative Data | Qualitative Themes |
|---|---|
| Lowest empowerment structure score in both groups. | Nurse educators do not have enough time to fulfill their numerous responsibilities. |
| Facilitated group pretest ($M$ = 2.56, $SD$ = 0.63) and posttest ($M$ = 2.63, $SD$ = 0.53) scores. | They struggle with work demands and finding the right balance in the workplace. |
| Self-organizing group pretest ($M$ = 2.69, $SD$ = 0.72) and posttest ($M$ = 2.60, $SD$ = 0.69) scores. | Nurse educators are asked to accomplish tasks with few resources. |
| No significant change over time. | They identify money as a necessary resource for education. |
| No difference between the groups. | Access to resources was a reason for nurse educators joining the study. |
| | Nurse educators have numerous demands outside the workplace. |
| | Lack of time impacted study participation. |

When triangulating data related to information, the middle ranking of the empowerment structure, and the fact nurse educators talked about their role as a provider of information as opposed to a receiver of information, supports the notion that access to information is a *given* for nurse educators (see Table 15). Their position within the organizational hierarchy is such that they are generally aware of important information with the hospital, and it was not identified as an issue that the educators focused on in their stories.

Table 15

*Comparison of Quantitative Data and Qualitative Themes: Information*

| Quantitative Data | Qualitative Themes |
|---|---|
| Ranked third or fourth out of six empowerment structures. | Nurse educators are providers of information as opposed to receivers. |
| Facilitated group pretest ($M$ = 3.44, $SD$ = 0.69) and posttest ($M$ = 3.53, $SD$ = 0.74) scores. | |
| Self-organizing Group pretest ($M$ = 3.00, $SD$ = 0.81) and posttest ($M$ = 3.23, $SD$ = 1.09) scores. | |
| No significant change over time. | |
| No difference between the groups. | |

The ranking of support was the second lowest empowerment structure. This ranking was supported by the qualitative findings that nurse educators have mixed feelings regarding support and do not always feel supported in the workplace (see Table 16).

Since nurse educators talked more about informal power in their stories as opposed to formal power, the subscales of informal and formal power were combined into one during the qualitative analysis. In some cases, educators did talk about their powerlessness in the workplace in trying to change policies and procedures; however, a common theme was that educators' accomplishments were achieved through informal power or what they referred to as *expert* power. Perceived informal power increased significantly in nurse educators participating in the online community; however, there was no difference between the groups (see Table 17).

Table 16

*Comparison of Quantitative Data and Qualitative Themes: Support*

| Quantitative Data | Qualitative Themes |
|---|---|
| Second lowest empowerment structure score in both groups. | Nurse educators welcome and need the support of their nurse educator colleagues. |
| Facilitated group pretest ($M$ = 2.96, $SD$ = 0.80) and posttest ($M$ = 3.11, $SD$ = 0.74) scores. | Support from healthcare staffs is essential in the development of educational sessions. |
| Self-organizing group pretest ($M$ = 3.08, $SD$ = 0.75) and posttest ($M$ = 3.19, $SD$ = 0.79) scores. | Nurse educator support is not always received from managers and directors. |
| No significant change over time. | Management support to the nurse educator results in collaboration and improved patient care. |
| No significant difference between the groups. | The role of nurse educators is to support others but they struggle in the role. |

*Psychological Empowerment*

Similar to the analysis for the CWEQ-II, MANOVA, using a repeated measures design, was used to measure the differences in pretest and posttest psychological empowerment scores within the facilitated and self-organizing groups, and between the facilitated and self-organizing groups. It was found that there were no significant differences between the groups on any of the four subscales of the PEI. However, when determining whether there was a significant difference within the groups over time, there were significant differences in three of the four subscales. Competence increased significantly ($F$ = 5.63, $p$ < .05), self-determination increased significantly ($F$ = 16.90, $p$ < .001), and impact increased significantly ($F$ = 10.81, $p$ < .05) in both groups. Although there were significant increases in both the facilitated and self-organizing group, the

effect of time was not significantly different for one group compared to the other. Self-determination in the facilitated group was close to being significantly higher ($F = 4.11$, $p = .0507$) than that of the self-organizing group.

Table 17

*Comparison of Quantitative Data and Qualitative Themes: Power*

| Quantitative Data | Qualitative Themes |
|---|---|
| Varied as the second highest empowerment structure score. | Accomplishments of nurse educators are achieved through informal power or expert power. |
| **Formal Power**<br>Facilitated group pretest ($M = 3.22$, $SD = 0.69$) and posttest ($M = 3.44$, $SD = 0.62$) scores. | Expert power of nurse educators makes a difference in patient care. |
| Self-organizing group pretest ($M = 3.35$, $SD = 0.71$) and posttest ($M = 3.56$, $SD = 0.74$) scores. | |
| No significant change over time. | |
| No significant difference between the groups. | |
| **Informal Power**<br>Facilitated group pretest ($M = 3.51$, $SD = 0.72$) and posttest ($M = 3.86$, $SD = 0.77$) scores. | |
| Self-organizing group pretest ($M = 3.30$, $SD = 0.75$) and posttest ($M = 3.80$, $SD = 0.66$) scores. | |
| Significant increase ($F = 20.35$, $p < .0001$) in both groups over time. | |
| No significant difference between the groups. | |

When nurse educators were asked via the PEI whether their own work was important and meaningful, and whether their job activities were personally meaningful, they responded by ranking meaning as the highest psychological empowerment structure. The

quantitative findings were supported qualitatively by nurse educators indicating that they may withdraw from an activity if it is not meaningful (see Table 18).

Table 18

*Comparison of Quantitative Data and Qualitative Themes: Meaning*

| Quantitative Data | Qualitative Themes |
|---|---|
| Highest ranked psychological empowerment dimension.<br><br>Facilitated group pretest ($M$ = 5.88, $SD$ = 0.98) and posttest ($M$ = 6.00, $SD$ = 0.92) scores.<br><br>Self-organizing group pretest ($M$ = 6.15, $SD$ = 0.71) and posttest ($M$ = 6.23, $SD$ = 0.54) scores.<br><br>No significant change over time.<br><br>No significant difference between the groups.<br><br>Percentile ranking increased in the facilitated group (i.e., 40th to 55th percentile) and stayed the same in the self-organizing group (i.e., 65th percentile). | Nurse educators need to feel that their work and time makes a difference otherwise they may withdraw from an activity.<br><br>Decreased online participation may have resulted from a lack of personal satisfaction and meaning with the activity. |

In terms of competence, nurse educators were asked if they were confident about their ability to do their job, whether they have mastered the necessary skills for the job, and their self-assurance about their capabilities to perform work activities. Given that the dimension of competence increased significantly after participating in the online community, it was assumed that nurse educators felt that they had gained important knowledge and skills necessary for their jobs. Through their stories, nurse educators revealed that they were confident and self-assured about their skills and knowledge regarding patient care; however, they were not confident about their leadership abilities (see Table 19).

Table 19

*Comparison of Quantitative Data and Qualitative Themes: Competence*

| Quantitative Data | Qualitative Themes |
|---|---|
| Varied as the second highest psychological empowerment dimension.<br><br>Facilitated group pretest ($M$ = 5.23, $SD$ = 0.92) and posttest ($M$ = 5.49, $SD$ = 1.17) scores.<br><br>Self-organizing group pretest ($M$ = 5.58, $SD$ = 0.94) and posttest ($M$ = 5.92, $SD$ = 0.68) scores.<br><br>Significant increase ($F$ = 5.63, $p$ < .05) in both groups over time.<br><br>No significant difference between the groups.<br><br>Percentile ranking increased in the self-organizing group (i.e., 30th to 55th percentile) and stayed the same in the facilitated (i.e., 30th percentile). | Nurse educators are confident and self-assured when referring to their own competence as a nurse and the knowledge base that they have regarding patient care.<br><br>Their competence transforms the workplace into an empowering environment.<br><br>Nurse educators are not confident about their leadership abilities.<br><br>A low sense of confidence may have contributed to withdrawal from the study. |

Self-determination was measured via the PEI by asking questions related to one's autonomy in determining how their job is done, whether they can decide on their own how to do their work, and if they have the opportunity for independence and freedom in how they do their job. Self-determination was ranked high by nurse educators and qualitative findings supported the quantitative data (see Table 20). Nurse educators wrote about how they determined how to approach a problem in the clinical areas, and how they went forth and developed educational programs and materials, or policies and procedures to solve clinical problems. Sometimes, through self-determination, they solved the problem with little support.

Table 20

*Comparison of Quantitative Data and Qualitative Themes: Self-Determination*

| Quantitative Data | Qualitative Themes |
|---|---|
| Varied as the second highest psychological empowerment dimension.<br><br>Facilitated group pretest ($M$ = 4.95, $SD$ = 1.36) and posttest ($M$ = 5.81, $SD$ = 1.03) scores.<br><br>Self-organizing group pretest ($M$ = 5.46, $SD$ = 1.13) and posttest ($M$ = 5.75, $SD$ = 1.32) scores.<br><br>Significant increase ($F$ = 16.90, $p$ < .001) in both groups over time.<br><br>No significant difference between the groups.<br><br>Percentile ranking increased in the facilitated group (i.e., 25th to 60th percentile) and the self-organizing group (i.e., 45th to 60th percentile). | Even without support, nurse educators are self-determined to develop a wide range of educational programs and materials, and policies and procedures.<br><br>If development support is received, then the overall success of a project increases. |

When triangulating the results of impact, the qualitative themes did not match the quantitative data (see Table 21). It was evident through the stories told by nurse educators that they had a positive influence on the nurses, their patient care units, and ultimately the patients being cared for in the hospitals. However, the nurse educators did not rank impact high; in fact, impact was the lowest ranked dimension by both groups each time it was measured. However, it was found that impact increased significantly over time.

Table 21

*Comparison of Quantitative Data and Qualitative Themes: Impact*

| Quantitative Data | Qualitative Themes |
|---|---|
| Lowest psychological empowerment dimension.<br><br>Facilitated group pretest ($M$ = 4.67, $SD$ = 1.13) and posttest ($M$ = 5.05, $SD$ = 0.89) scores.<br><br>Self-organizing group pretest ($M$ = 4.04, $SD$ = 1.21) and posttest ($M$ = 4.71, $SD$ = 1.09) scores.<br><br>Significant increase ($F$ = 10.81, $p$ < .05) in both groups over time.<br><br>No significant difference between the groups.<br><br>Percentile ranking increased in the facilitated group (i.e., 35th to 55th percentile) and the self-organizing group (i.e., 35th to 40th percentile). | Nurse educators have a positive impact on the nurses they work with, the patient care units they are associated with, and the patients being cared for in the hospitals.<br><br>A nurse educator's presence in the clinical area has a positive impact. |

*Leadership Practices*

Consistent with the analyses used for the CWEQ-II and the PEI, MANOVA, using a repeated measures design, was used to measure the differences in pretest and posttest self-reported leadership practices within the facilitated and self-organizing groups, and between the facilitated and self-organizing groups. It was found that there were no significant differences between the groups on any of the five exemplary practices of leadership. When determining whether there was a significant difference within the groups over time, there were significant increases in all five subscales: Model the Way ($F$ = 15.10, $p$ < .001), Inspire a Shared Vision ($F$ = 34.78, $p$ < .0001), Challenge the Process ($F$ = 28.01, $p$ < .0001), Enable Others to Act ($F$ = 14.83, $p$ < .001), and Encourage the

Heart ($F = 17.04$, $p < .001$). Similar to the findings with the CWEQ-II and the PEI, the effect of time was not significantly different for one group compared to the other.

In reading the nurse educators' best personal leadership stories, and other leadership stories, it was clear that to varying degrees, nurse educators employed the five exemplary practices of leadership in their everyday work lives. Based on pretest percentile rankings, it was revealed that there was much room for improvement, and after participating in the online learning community, it was found that percentile rankings improved, and there were significant increases in all five leadership practices.

Through methodological triangulation, it was found that quantitative findings of the leadership practice of Model the Way were supported by the qualitative themes (see Table 22). In their stories, they revealed that they indirectly Model the Way for clinical nurses.

Table 22

*Comparison of Quantitative Data and Qualitative Themes: Model the Way*

| Quantitative Data | Qualitative Themes |
|---|---|
| Third or fourth ranked leadership practice.<br><br>Facilitated group pretest ($M = 7.01$, $SD = 0.88$) and posttest ($M = 7.77$, $SD = 1.25$) scores.<br><br>Self-organizing group pretest ($M = 6.90$, $SD = 1.54$) and posttest ($M = 7.85$, $SD = 1.07$) scores.<br><br>Significant increase ($F = 15.10$, $p < .001$) in both groups over time.<br><br>No significant difference between the groups.<br><br>Percentile ranking increased in the facilitated group (i.e., 20th to 40th percentile) and the self-organizing group (i.e., 10th to 40th percentile). | Nurse educators Model the Way through:<br>• educational endeavors;<br>• collaborative activities;<br>• their own clinical knowledge and expertise;<br>• the promotion of educational and clinical technology; and<br>• furthering their own education. |

The leadership practice of Inspire a Shared Vision was ranked the lowest (see Table 23). Although nurse educators revealed in their stories that they have a vision for quality patient care, they frequently do not voice their vision, and that was consistent with the quantitative ranking of the practice.

Table 23

*Comparison of Quantitative Data and Qualitative Themes: Inspire a Shared Vision*

| Quantitative Data | Qualitative Themes |
|---|---|
| Lowest ranked leadership practice.<br><br>Facilitated group pretest ($M$ = 5.97, $SD$ = 1.19) and posttest ($M$ = 6.97, $SD$ = 1.49) scores.<br><br>Self-organizing group pretest ($M$ = 6.02, $SD$ = 2.06) and posttest ($M$ = 7.29, $SD$ = 1.86) scores.<br><br>Significant increase ($F$ = 34.78, $p < .0001$) in both groups over time.<br><br>No significant difference between the groups.<br><br>Percentile ranking increased in the facilitated group (i.e., 20th to 30th percentile) and the self-organizing group (i.e., 10th to 40th percentile). | Nurse educators have a vision for quality patient care achieved through education and support of nurses in clinical practice. |

Nurse educators shared that being able to Challenge the Process is difficult at times, and there was congruence between the qualitative findings and the quantitative data (see Table 24). Quantitatively, it was revealed that the practice of Challenge the Process ranked third or fourth. In addition, percentile rankings were low.

Enable Others to Act was ranked as the highest leadership practice. The high ranking was supported by the qualitative theme that nurse educators enable clinical nurses to act through education and support (see Table 25).

Table 24

*Comparison of Quantitative Data and Qualitative Themes: Challenge the Process*

| Quantitative Data | Qualitative Themes |
|---|---|
| Third of fourth ranked leadership practice.<br><br>Facilitated group pretest ($M$ = 6.70, $SD$ = 1.35) and posttest ($M$ = 7.81, $SD$ = 1.24) scores.<br><br>Self-organizing group pretest ($M$ = 6.83, $SD$ = 1.46) and posttest ($M$ = 7.52, $SD$ = 1.34) scores.<br><br>Significant increase ($F$ = 28.01, $p < .0001$) in both groups over time.<br><br>No significant difference between the groups.<br><br>Percentile ranking increased in the facilitated group (i.e., 20th to 40th percentile) and the self-organizing group (i.e., 20th to 40th percentile). | Nurse educators will take risks and question authority figures to improve patient care.<br><br>They struggle with challenging authority figures.<br><br>Nurse educators will challenge policies, procedure, guidelines, outdated nursing practices, and equipment purchases. |

Table 25

*Comparison of Quantitative Data and Qualitative Themes: Enable Others to Act*

| Quantitative Data | Qualitative Themes |
|---|---|
| Highest ranked leadership practice.<br><br>Facilitated group pretest ($M$ = 7.75, $SD$ = 0.81) and posttest ($M$ = 8.30, $SD$ = 0.96) scores.<br><br>Self-organizing group pretest ($M$ = 7.90, $SD$ = 1.01) and posttest ($M$ = 8.47, $SD$ = 0.62) scores.<br><br>Significant increase ($F$ = 14.83, $p < .001$) in both groups over time.<br><br>No significant difference between the groups.<br><br>Percentile ranking increased in the facilitated group (i.e., 30th to 40th percentile) and the self-organizing group (i.e., 30th to 50th percentile). | Nurse educators enable clinical nurses to act through education and support. |

The second highest ranking leadership practice was Encourage the Heart. There was qualitative evidence in the responses by nurse educators that they were able to Encourage the Heart of their colleagues in the online environment supporting the quantitative finding (see Table 26). Although Encourage the Heart was highly ranked, qualitatively, nurse educators indicated that it was one practice that they needed to develop. Significant increases were seen over time in this leadership practice.

Table 26

*Comparison of Quantitative Data and Qualitative Themes: Encourage the Heart*

| Quantitative Data | Qualitative Themes |
|---|---|
| Second highest ranked leadership practice.<br><br>Facilitated group pretest ($M$ = 7.13, $SD$ = 1.22) and posttest ($M$ = 7.94, $SD$ = 1.34) scores.<br><br>Self-organizing group pretest ($M$ = 6.98, $SD$ = 1.47) and posttest ($M$ = 8.05, $SD$ = 1.31) scores.<br><br>Significant increase ($F$ = 17.04, $p$ < .001) in both groups over time.<br><br>No significant difference between the groups.<br><br>Percentile ranking increased in the facilitated group (i.e., 20th to 40th percentile) and the self-organizing group (i.e., 20th to 50th percentile). | Online, nurse educators Encourage the Heart through their written responses to their colleagues.<br><br>They realize that they could Encourage the Heart more in their everyday nursing practice. |

*Teaching, Cognitive, and Social Presence*

The differences in mean teaching, cognitive, and social presence scores between the facilitated community and the self-organizing community were examined using an independent samples $t$-test. The only significant difference identified between the two communities was that of direct instruction ($t$ = 4.35, $p$ < .0001).

The exploratory research question dealing with teaching, cognitive, and social presence compared the facilitated online learning environment with the self-organizing environment. Through qualitative analysis, it was identified that there were three main phases to the online community: (a) Introduction and Familiarization Phase, (b) Working Phase, and (c) Disengagement Phase. Outlined in Tables 27 to 29, are comparisons between the facilitated community and the self-organizing community organized according to the phase of the study. Essentially, there were more similarities between the communities than differences.

Table 27

*Comparison of Facilitated and Self-Organizing Communities: Introduction and Familiarization Phase*

| Facilitated | Self-Organizing |
|---|---|
| **Teaching Presence** | |
| Facilitator addressed technology issues and posted common bulletin board messages. | Same |
| Facilitator attempted to initiate social conversation by posting messages in the lounge and in the suggestion box. | Facilitator not involved in social conversation. |
| **Cognitive Presence** | |
| Nurse educators posted learning goals. | Same |
| Focus on mastering the technology. | Same |
| Demonstrated basic mastery by accessing the wiki and posting comments. | Same |
| **Social Presence** | |
| Accessed the wiki prior to the start date. | Same |
| Initial feelings included:<br>• excitement;<br>• hesitation about the technology;<br>• being overwhelmed; and<br>• a fear of making errors. | Same |
| No response to individuals' introductory remarks. | Same |
| Minimal social engagement. | Increased social presence. |

Table 28

*Comparison of Facilitated and Self-Organizing Communities: Working Phase*

| Facilitated | Self-Organizing |
|---|---|
| **Teaching Presence** | |
| Facilitator continued to address technology issues and posted common bulletin board messages. | Facilitator intervened 23 times for technology issues. |
| Facilitator assisted with the analysis of stories. | No facilitator involvement. |
| Facilitator moved stories from private lockers to a common page for discussion. | Community members organized stories. Seven members did not share their stories with community members. |
| **Cognitive Presence** | |
| Focus on completing learning activities in a self-directed manner. | Same |
| Use of Kouzes and Posner's (2002) leadership terminology in stories and comments. | Same |
| Knowledge transfer of leadership skills to the workplace. | Same |
| No interaction in terms of organization of the wiki. | Interaction and conversation regarding the organization of the wiki. |
| Limited feedback to stories posted. | Feedback regarding the analysis of stories posted. |
| **Social Presence** | |
| Expressed appreciation for the design and organization of the wiki and presentations. | Same |
| Minimal interaction among community members. | Provided ongoing support and encouragement to community members that posted stories. |
| Limited social engagement. | Same |

In terms of overall teaching presence, there was no significant difference between the communities ($t = 1.98$, $p < .06$), although teaching presence was higher in the facilitated community ($M = 4.33$, $SD = 0.36$) compared to the self-organizing community ($M = 3.96$, $SD = 0.66$). There are three subscales that contribute to overall teaching presence, namely, design and organization, facilitation, and direct instruction. Although not

significant, the design and organization of the wiki was rated higher by the self-organizing community (*M* = 4.65, *SD* = 0.40) compared to the facilitated community (M = 4.47, SD = 0.40). Facilitation was ranked higher by the facilitated community (*M* = 4.23, *SD*, 0.48) compared to the self-organizing community (*M* = 3.90, *SD* = 0.93), but the difference was not significant. The only significant difference found was in the subscale of direct instruction. Direct instruction was significantly higher ($t = 4.35$, $p < .0001$) in the facilitated community (*M* = 4.35, *SD* = 0.42) compared to the self-organizing community (*M* = 3.09, *SD* = 1.06).

Table 29

*Comparison of Facilitated and Self-Organizing Communities: Disengagement Phase*

| Facilitated | Self-Organizing |
|---|---|
| **Teaching Presence** | |
| Facilitator continued to address technology issues and posted common bulletin board messages. | Same |
| Decreased attempts to initiate discussion. | No facilitator involvement. |
| **Cognitive Presence** | |
| Continued self-engagement, but disengaged from the online community. | Same |
| **Social Presence** | |
| Decrease or ceasing of interaction among community members especially after posting their best personal leadership story. | Same |
| Feelings of guilt among members who did not fully participate. | Same |
| Recognition by community members that there was limited social engagement. | Same |

Quantitatively, there was no significant difference between the communities when examining cognitive presence ($t = 0.82$, $p = 0.42$). Qualitative findings support the quantitative data, for both groups were able to grasp the concepts of the five exemplary

practices of leadership, they incorporated the leadership terminology into their stories, and they were both able to talk about how they were able to transfer their knowledge to the workplace.

Qualitatively, the level of social interaction among self-organizing community members was higher. Quantitatively, the overall social presence level was higher in the self-organizing community ($M$ = 3.38, $SD$ = 0.52) compared to the facilitated community ($M$ = 3.31, $SD$ = 0.56); however, the difference was not significant ($t$ = -0.34, $p$ = .74). If the unofficial facilitator had not come forward, it is possible that the outcome in terms of level of interaction would have been different with lower participation levels in the self-organizing community.

**Summary**

The nurse educators that participated were female and ranged in age from 30-34 years to 60-64 years. The majority had a bachelor's degree and worked in full-time positions. Educators from both urban and rural hospital settings participated, and the majority rated their own computer abilities compared to other nurses as average or above average. The length of time in the position of a nurse educator ranged from less than 1 year to between 30-35 years. Years of nursing experience ranged from 5-10 years to 35-40 years.

Nurse educators reported having moderate levels of structural empowerment as measured by the CWEQ-II. Significant results included increases in opportunity and informal power in both groups from the time the pretest questionnaire was administered to the time the posttest questionnaire was administered. In terms of psychological

empowerment, there were significant increases over time in three of the four subscales, namely, competence, self-determination, and impact in both the facilitated community and the self-organizing community. All five exemplary practices of leadership increased significantly over time in both communities. The only significant difference measured between the communities was that of direct instruction, within the teaching presence element. Direct instruction was significantly higher in the facilitated community. Eighty stories written by nurse educators, along with their general comments and online postings were analyzed using ethnography. Numerous themes were identified under the headings of structural empowerment, psychological empowerment, and leadership practices, and it was identified that there were three phases to the online learning community, namely, the introduction and familiarization phase, the working phase, and the disengagement phase. Except for the psychological empowerment dimension of impact, qualitative data supported the quantitative findings.

The fact that all five leadership practices improved provides supportive evidence that hospital-based nurse educators could develop their own leadership practices in an online learning community. Via direct instruction, the facilitator was able to provide the necessary teaching presence for nurse educators to learn about the five practices of leadership. Nurse educators were able to reflect on their own nursing practice and write their leadership stories. Through cognitive presence, they analyzed their own stories and the stories of others. They interacted with each other on a social level that supported learning, and ultimately felt more empowered. Indirectly, through their stories, they revealed empowerment structures in their workplaces and the contributions that they

make in creating an empowering work environment for themselves, their colleagues, and the nurses that they work with on a daily basis.

A discussion of the findings is presented in the next chapter. Conclusions, implications, recommendations will be presented. The chapter will end with a summary of the entire report.

# Chapter 5

## Conclusions, Implications, Recommendations, and Summary

The problem was that there is a shortage of nurses who possess the leadership practices required to fill current and impending nursing leadership vacancies. Nurse educators are in a prime position to foster a leadership mindset within nurses, and seek out potential nurse leaders; however, nurse educators first need to develop their own leadership practices and feel empowered to take on the role of mentoring future nurse leaders. The goal was to develop an online learning community where hospital-based nurse educators could develop their own nursing leadership practices through storytelling within an environment that included the elements of teaching presence, cognitive presence, and social presence. The online learning community would be considered an empowering environment and nurse educators would improve their own feelings of empowerment.

In this chapter, it will be identified whether the research hypotheses were supported. Implications applicable to education, computing technology in education, and leadership development will be outlined, and recommendations for best practices and further research will be identified. The chapter will conclude with a summary of the report.

### Conclusions

This section is divided into five subsections corresponding to the four research hypotheses and the overall research question. Qualitative findings from the exploratory

research questions were included in Chapter 4, and were used in the triangulation of data to corroborate statistical findings.

*Research Hypothesis One*

In the first hypothesis, it was hypothesized that nurse educators' own perceptions of structural empowerment would increase after participating in an online learning community, and that the increase for those in the facilitated community would be significantly greater compared to those in the self-organizing community. This hypothesis was not supported. Of the six subscales of structural empowerment, namely, opportunity, resources, information, support, formal power, and informal power, the levels of opportunity and informal power were the only subscales to increase significantly over time in both the facilitated community and the self-organizing community. There were no significant differences between the two groups when measuring levels of structural empowerment.

The significant increase in perceived opportunity in nurse educators in both the facilitated and self-organizing communities may be indicative that either participation in the online community was viewed as a chance to gain new skills and knowledge, or that through shared stories nurse educators realized how many opportunities for growth and mobility they do have in their current role.

Opportunity was rated as the highest empowerment structure, which is consistent with the findings of Sarmiento et al. (2004) who examined empowerment in Canadian college nurse educators, and Davies et al. (2006) who studied Canadian hospital-based clinical nurse educators. It should be noted that both Sarmiento et al. and Davies et al.

used an earlier version of the Conditions of Work Effectiveness Questionnaire. The order of the empowerment structures were similar to those reported by Davies et al. These similar rankings lend support to the findings.

There was no significant change in terms of resources, and comments related to a *lack of time* were frequently cited by the nurse educators. It is not believed that any of the nurse educators were provided with dedicated time for this professional development opportunity, and nurse educators needed to manage their time effectively in order to fit the activity into their workday, otherwise, they needed to devote personal time. If the direct supervisors of the nurse educators would have encouraged involvement and allowed for dedicated time for participation in the online community then a significant increase in resources may have been measured. In addition, one would have thought that the online community itself was a resource source; however, the questions asked in the CWEQ-II pertaining to resources focus on time and acquiring assistance when needed and not access to external resources such as an online learning community.

Concerning information, the position of nurse educators within the organizational hierarchy is such that they are generally aware of important information within the hospital, and it was not identified as an issue that the educators focused on in their stories. If lack of information was a continuing problem in their role, then it is believed that they would have talked about the issue in their stories. The fact that there was no change in this empowerment structure is indicative that the information nurse educators received over the time of the intervention did not change; however, one would have thought that the online community itself would have been a source of information that would have resulted in a significant increase in this empowerment structure. Questions in the CWEQ-

II that referred to access to information focused on having access to hospital related information; therefore, the online community as a source of information was not measured.

No significant change was measured in terms of support; however, it was predicted that the online community would have been perceived as a supportive environment where online colleagues could assist with problem solving or provide helpful advice when needed. The fact that social presence was the lowest ranking element of the three elements within the community of inquiry model may be a contributing factor as to why nurse educators did not feel that the online community was a source of support.

Nurse educators referred to their power as being expert power as opposed to formal power. There was no change in perceived formal power over time; however, it was evident in the stories written by nurse educators that they were employed in positions that yielded a fair amount of informal power. The significant increase in informal power may be explained by the fact that just reading the stories of others nurse educators realized how much informal power they actually have in the workplace. Another explanation may be that the online community may have been considered a source of informal power in terms of establishing connections outside of one's organization.

When comparing total empowerment scores to those reported in the literature, total empowerment scores were higher than those of hospital staff nurses in Ontario as reported by Greco, Laschinger and Wong (2006), and Young-Ritchie, Laschinger, and Wong (2009). Compared to middle level Canadian nurse managers (Patrick & Laschinger, 2006), the nurse educators' total empowerment scores were slightly lower. Given the role, responsibilities, and position within the hospital (i.e., normally between a

staff nurse and either reporting to a nurse manager or a support for a nurse manager), it is not surprising that the nurse educators would have higher perceived structural empowerment scores compared to staff nurses, and lower perceived structural empowerment scores compared to middle level nurse managers.

The findings add support to Kanter's (1977; 1997) theory, particularly concerning informal power and opportunity. Kanter views power as having control and the ability to get things done. Informal power is gained from effective relationships and communication channels with individuals inside and outside an organization. As per Figure 2, Laschinger (1996) illustrated the relationship among concepts in Kanter's theory. As informal power increased significantly in both communities, Kanter would propose that there would be a resulting influence on opportunity structures, and indeed, perceived opportunity increased significantly.

*Research Hypothesis Two*

It was hypothesized that psychological empowerment levels would be significantly higher in nurse educators participating in a facilitated online community compared to those in a self-organizing community, and levels in both communities would increase over time. This hypothesis was not supported, as only three of the four subscales of psychological empowerment increased significantly. In both groups, increases were noted over time in the dimensions of competence, self-determination, and impact; however, there were no significant differences between the groups.

The only psychological empowerment dimension to not increase significantly was that of meaning; however, it was already the highest-ranking dimension of the four

subscales. The static measurement of this dimension may be explained by the fact that both workplace activities and participation in the online learning community were already viewed as highly meaningful activities. If scores were included from those nurse educators who did not view the online learning community as meaningful and withdrew, or those who needed to withdraw as their workplace activities were more important, then the results may have been different.

The significant increase in competence levels may be explained by the nurse educators' increased confidence in their leadership abilities. Their increased knowledge and understanding of online technology and their ability to participate in an online learning community may have also contributed to increased competence levels.

The increase in self-determination may be attributed to storytelling, and the fact that nurse educators were able to generate their own ideas about how to approach problems and their jobs in general based on the stories of other educators. For the most part, nurse educators have freedom and autonomy in their work, and sometimes it takes others to point out just how much autonomy they do have in their workplace.

Similar to self-determination, it is possible that nurse educators realized the significant impact that they have in the hospital by reading the stories of other nurse educators. Surprisingly, impact was the lowest ranking dimension; however, it was evident in the nurse educators' stories that they had a tremendous impact on the hospital. The wording of the questions in the PEI may have contributed to a lower ranking, as the questions focused on one's impact in their *department*. The position of the nurse educator within an organizational hierarchy varies; however, many times educators are associated

with more than one department, and this may dilute their feelings of having a significant impact in one specific area of the hospital.

No reported studies measuring psychological empowerment in the nurse educator population were located; however, Faulkner and Laschinger (2008) recently measured psychological empowerment in acute care nurses in Ontario using the PEI. The acute care nurses had lower levels of psychological empowerment compared to the nurse educators in this study. Given the nurse educator's role, responsibilities, and position within a hospital, it would be expected that the educator would have higher levels of psychological empowerment compared to an acute care nurse/staff nurse. In addition, Faulkner and Laschinger found that meaning was ranked as the highest dimension while impact was the lowest. Faulkner and Laschinger's findings were similar to those of Laschinger et al. (2001b) and Laschinger, Finegan, and Shamian (2001a) who examined psychological empowerment in Canadian staff nurses. Although there may be varying degrees of psychological empowerment in Canadian nurses, there is consistency in terms of the ranking of the variables.

Spreitzer and Quinn (2001) outline percentile scores for each of the subscales on the PEI. Percentiles are based on researchers measuring thousands of psychological empowerment scores in frontline to executive level positions in a variety of industries including healthcare, automotive, aerospace, insurance, computing, and financial services in the United States and Asia. The mean psychological empowerment scores of the nurse educators were benchmarked to the percentile scores, and it was found that the nurse educators had low to moderate levels of empowerment compared to other occupations. These lower levels of empowerment may be explained by Spreitzer and Quinn's claim

that there are five factors that contribute to the failure of empowerment, namely, ambivalence, culture, conflict, personal time constraints, and a misunderstanding of how empowerment is achieved. It was found that these five factors are present in the nurse educators' work environments. In terms of ambivalence, for a nurse educator to feel empowered, their direct supervisor must demonstrate leadership, have the courage to relinquish control, and trust that the educator will act appropriately. In several of the stories, it was revealed that this was not the case, and although an educator may have felt that she had the autonomy to go forth and develop a policy, for example, she later felt ambivalent when a supervisor quashed the idea even though it was appropriate for safe patient care. Regarding bureaucratic culture, hospitals are prime examples of organizations with layers of bureaucracy. The thought in itself that a potential educational initiative may need to pass through several approval stages before being delivered may stop many nurse educators from going forth with an idea and putting in development time into a project that may not get approved. In terms of conflict, conflict can be exacerbated when divisions between areas are created. For the most part, in Canadian hospitals, the organizational structure evolves around clinical programs; therefore, a nurse educator is associated with a clinical program as opposed to one nursing department. Either way, conflict between clinical programs or departments is a reality, and that conflict may be a contributing factor to less than optimal levels of empowerment in nurse educators. The fourth reason for the failure of empowerment is that of personal time constraints. The stories told by the nurse educators indicated that they are under pressure in terms of time management that results in decreasing levels of empowerment. The final impediment to empowerment is that there is a fundamental misunderstanding about the concept of

empowerment and that it is less accurate to think in terms of an *empowering workplace*, instead one should think in terms of *releasing the power* in the workplace. In hospitals, what chief nursing officers and nursing directors need to do is create an environment that allows nurse educators to choose to empower themselves.

*Research Hypothesis Three*

In terms of leadership practices, it was hypothesized that the degree of increase in leadership practices would be significantly greater in nurse educators participating in a facilitated online community than for those in a self-organizing community. This hypothesis was not supported, for although there were significant increases in all five exemplary leadership practices over time, nurse educators in the facilitated community did not score significantly higher on their perceived leadership practices compared to the self-organizing community.

Since hospital-based nurse educators generally do not have direct supervisory responsibilities, nurse educators *indirectly* Model the Way for clinical nurses. This indirect modeling was likely the reason for the mid-level ranking compared to other leadership practices. Direct instruction via a narrated presentation on the leadership practice of Model the Way, along with reading leadership stories containing clear examples of how nurse educators Model the Way, may have contributed to the significant increase in the practice over time.

It was not surprising that the leadership practice of Inspire a Shared Vision was ranked the lowest of the five leadership practices as the nurse educators did not voice their visions in their stories. Nurse educators may not feel comfortable voicing their

vision when they do not have supervisory responsibilities, a captive audience, and the perceived authority. Nurse educators need to lead through influence as opposed to direct authority, and it is sometimes difficult to lead in this manner. Online education/direct instruction and storytelling may have contributed to the significant increases in the leadership practice over time. In addition, the increases may be due to nurse educators understanding that it is actually expected that they have a vision and voice that vision.

The significant increase in the Challenge the Process scores may be a result of educators realizing that it is *okay* to Challenge the Process, and similar to visioning, it is actually an expected leadership practice. Through the stories told, there were good examples of how a nurse educator could Challenge the Process and which strategies were most effective. It is believed that through storytelling, they were able to identify ways in which they could challenge processes in their own workplaces.

Given the role of the hospital-based nurse educator, it was not surprising that Enable Others to Act was ranked as the highest leadership practice. Essentially, the prime role of the nurse educator is to Enable Others to Act, and it was interesting to find that even though it was ranked high prior to participating in the online community, nurse educators were able to find ways to improve this leadership practice. The significant increase in the practice over time may be attributed to online education/direct instruction and storytelling that helped nurse educators identify strategies to Enable Others to Act.

Encourage the Heart was the second highest ranked leadership practice, and the significant increases may be attributed to online education/direct instruction, the storytelling strategy, or just being cognizant of the practice and following through given the opportunity. Compared to the other leadership practices, being able to Encourage the

Heart is probably one of the most spontaneous and easiest practices to act on and improve in a short period.

No studies examining the leadership practices of hospital-based nurse educators were located; however, the top three leadership practices of advanced practice nursing students with nursing experience were Enable Others to Act, followed by Encourage the Heart, and Model the Way (Ferrara, 2008). Similarly, Porter-O'Grady (2007) found that the top three practices of chief nurse executives were Enable Others to Act, followed by Model the Way, and Encourage the Heart. These findings are similar to those in this study, and are indicative of the profession of nursing in general in terms of helping and caring for people.

Although the percentile ranking of all leadership practices improved over the intervention period, the scores remained relatively low. It is suspected that nurse educators did not always view themselves as being in a leadership role and were not aware of exemplary leadership practices. With education and incorporation of the leadership practices into their everyday work lives, it is predicted that rankings will rise if measured in the future.

The findings support Kouzes and Posner (2005) claim that credibility is the foundation of leadership, and anyone, regardless of their position within an organization, can be a leader. In the case of hospital-based nurse educators, it was clear that they had attained source credibility through their own competence and self-determination, and that they significantly impacted the working lives of clinical nurses. Through their stories, they demonstrated that they employ the five practices of exemplary leadership and revealed that they are indeed leaders.

*Research Hypothesis Four*

In the fourth hypothesis, it was hypothesized that nurse educators participating in a facilitated community would rate levels of teaching, cognitive, and social presence significantly higher compared to those in a self-organizing community. This hypothesis was not supported. There was only one significant difference identified between the two communities and that was the subscale of direct instruction under the teaching presence element. Direct instruction was significantly higher in the facilitated community compared to the self-organizing community.

Given that teaching presence was essentially the main independent variable, it was expected that there would be a significant difference between the two communities. When examining the reasons why teaching presence was not significantly higher in the facilitated community, it was important to probe further into the teaching presence subscales. There are three subscales that contribute to overall teaching presence, namely, design and organization, facilitation, and direct instruction. Although not significant, the design and organization of the wiki was rated higher by the self-organizing community compared to the facilitated community. The result may be indicative of the facilitator being able to design the wiki in such a manner that it established a solid framework for the self-organizing community, and nurse educators were able to build upon the framework without major difficulties. Facilitation was ranked higher by the facilitated community compared to the self-organizing community, but again the difference was not significant. The fact that common bulletin board messages were posted for both communities, and that the facilitator intervened in the self-organizing community when technical issues arose was probably one of the reasons why the difference between the

two communities was not significant. The self-organizing community knew that they could rely on the facilitator to assist them when issues arose. It would have been futile for the facilitator not to intervene for technical issues, as it probably would have led to the collapse of the self-organizing community. In addition, one self-organizing community member stepped forth and became the unofficial facilitator of the self-organizing community. She posted the majority of educational resources in the community, led some of the discussions, and organized the majority of pages on the self-organizing side of the wiki. If the unofficial facilitator had not come forward, it is possible that the outcome in terms of level of interaction would have been significantly different with lower participation levels in the self-organizing community. It is not surprising that direct instruction was significantly higher in the facilitated community, as the facilitator only assisted those community members in analyzing their stories. Direct instruction in terms of leadership development was essentially the same between the two communities as members of both communities had access to the same orientation materials, narrated presentations, hard copy documents, podcasts, and other resources.

Given the educational level of the nurse educators and their ability for independent learning, it is not surprising that there was no difference between the communities concerning cognitive presence. Both communities had the same educational materials to draw from, and essentially, they had similar leadership experiences and consequently, similar stories to analyze and learn from in terms of leadership development.

It was predicted that the facilitator in the facilitated community would have been able to encourage significantly more social interaction than in the self-organizing community; however, the unofficial facilitator in the self-organizing community did a

tremendous job in encouraging social interaction, in fact, she probably did a better job at it than the official facilitator. In addition, it was evident in the interactions among self-organizing community members that they realized from the start that additional effort was probably going to be required for the community to be successful. In the facilitated community, the members had more of a passive approach expecting that the facilitator would do much of the work. Another possible explanation for the lack of differences between the communities was the nature of the set-up of the wiki. Some pages, specifically the main bulletin board, were viewable by both communities, and encouraging comments from the facilitator, for example, were viewable in both communities.

*Research Question*

The overall research question was as follows: What is the effect of the type of online learning community, based on a community of inquiry model, on hospital-based nurse educators' perceptions of structural and psychological empowerment and leadership practices?

Through teaching presence, nurse educators were able to identify their current leadership practices, and as a collective community, they were able to continue to develop their practices through direct instruction and cognitive engagement by writing their own leadership stories, and reading and responding to leadership stories presented by other nurse educators. Community members provided enough social presence to support learning, and through online participation, the following was achieved:

- an increase in two of the six subscales of structural empowerment (i.e., opportunity and informal power),
- increases in three of the four dimensions of psychological empowerment (i.e., competence, self-determination, and impact),
- increases in all of the five practices of exemplary leadership, and
- a difference between the two communities in terms of direct instruction.

Through their stories, nurse educators revealed the types of empowerment structures in their workplace and divulged their own dimensions of psychological empowerment. Given increases in structural empowerment, psychological empowerment, and leadership practices, it was assumed that the wiki environment was an effective platform for the online community. In addition, the teaching-learning strategy of storytelling was a valuable strategy that led to increases in cognitive understanding of leadership practices. Although social presence was ranked the lowest out of the three elements of a community of inquiry, all three elements were present and ranked in the mid to upper ranges in both communities. As a result, the general premise put forth by Garrison et al. (2000) that teaching presence, cognitive presence, and social presence leads to learning within a constructivist environment was supported.

**Implications**

As described in the goal statement, there were essentially five main anticipated outcomes: (a) an online learning community would be established that included the elements of teaching, cognitive, and social presence; (b) storytelling would be used as one of the main teaching-learning strategies; (c) nurse educators would develop their own

leadership practices; (d) nurse educators would increase their own feelings of empowerment; and (e) the online community itself would be an empowering environment. Based on the anticipated outcomes, and the results and conclusions, implications for education, computing technology in education, and leadership development were identified.

The use of the community of inquiry model as outlined by Garrison et al. (2000) has implications for the development of future online learning communities. Educators need to be cognizant that teaching, cognitive, and social presence are critical in the establishment and building of online communities, and educators need to design online communities that allow for and promote each element. The fact that teaching presence did not have as a significant affect as expected has major implications when considering the establishment of an online learning community for professional development, At a first glance, one would believe that it would be feasible to offer professional development in a non-facilitated online environment. Caution, however, needs to be taken when considering the offering of non-facilitated online programs, for the facilitator played a major role in the self-organizing community, specifically in terms of technical support and general facilitation through common bulletin board postings.

Educators need to be aware of the power of storytelling and recognize that it can be a useful strategy in the teaching-learning process. The cognitive learning that occurred concerning leadership practices supports the authors and researchers identified in the *Review of the Literature* section that claim that storytelling is an effective teaching-learning strategy. The stories told by the nurse educators were very powerful and through their stories they were able to reveal not only their leadership practices, but they were

able to transmit their own shared values and beliefs about nursing and nursing education, the types of empowerment structures in their workplaces, and their own psychological empowerment. Writing the stories required the nurse educators to reflect on their practice as well as the practice of their colleagues. The commonalities in the stories revealed that nurse educators in different provinces and hospitals were actually more alike than different, and probably contributed to social presence and a feeling of community as they could personally relate to the situations described.

Given that all five exemplary practices of leadership increased in both communities has implications for offering leadership development in an online environment. It is possible to teach and learn about leadership development in an online learning community by employing direct instruction to present leadership concepts and then using storytelling to consolidate the learning and transfer the learning to real work environments. Leadership behaviors transferred to the workplace revolve around the five practices of exemplary leadership as described by Kouzes and Posner (2003a). When leaders Model the Way in the workplace they will:

- set a personal example;
- spend time and energy making certain that agreed upon principles and standards are adhered to;
- follow through on the promises and commitments;
- ask for feedback on how their actions affect other people's performance;
- build consensus around a common set of values; and
- be clear about their own philosophy of leadership.

To Inspire a Shared Vision means that individuals will:

- talk about future trends that will influence how work gets done;
- describe a compelling image of what the future could be like;
- appeal to others to share an exciting dream of the future and show others how their long-term interests can be realized by enlisting in a common vision;
- paint a *big picture* of what is aspired to be accomplished; and
- will speak with genuine conviction about the higher meaning and purpose of work.

When leaders in the workplace Challenge the Process they will:

- seek out challenging opportunities that test their own skills and abilities;
- challenge people to try out new and innovative ways to do their work;
- search outside the formal boundaries of the organization for innovative ways to improve;
- ask “What can we learn?” when things do not go as expected;
- ensure that achievable goals are set, concrete plans are made, and measureable milestones are established for the projects and programs; and
- experiment and take risks, even when there is a chance of failure.

To Enable Others to Act means that leaders will:

- develop cooperative relationships;
- actively listen to diverse points of view;
- treat others with dignity and respect;
- support the decisions that people make on their own;
- give people freedom and choice in deciding how to do their work; and

- ensure that people grow in their jobs by learning new skills and developing themselves.

The final leadership behaviors to be transferred to the workplace are those of Encourage the Heart. When leaders Encourage the Heart they will:

- praise people for a job well done;
- make it a point to let people know about the confidence they have in their abilities;
- make sure that people are creatively rewarded for their contributions to the success of projects;
- publicly recognize people who exemplify commitment to shared values;
- find ways to celebrate accomplishments; and
- give members of the team lots of appreciation and support for their contributions.

It was assumed that the online community itself would be an empowering environment where nurse educators would have access to information and resources, and the opportunity to gain support from community members with similar professional interests and work responsibilities. Nurse educators would enhance their own informal power through the establishment of collegial relationships and a general increase in psychological empowerment would be seen. The fact that there were significant increases in both structural and psychological empowerment may lead one to believe that the online community was somewhat of an empowering environment, or their own workplace environment changed over the duration of the treatment. A general awareness by educators of the effect that an online environment may have on structural and psychological empowerment is an important consideration.

**Recommendations**

Based on the experience and results of establishing an online learning community for hospital-based nurse educators to develop their own leadership practices and feel empowered, recommendations were generated that focus on the establishment of online learning communities, the use of Web 2.0 technology for education, and further research. The recommendations are applicable to nursing, nursing education, and computing technology in education.

When contemplating the establishment of an online learning community, there are several critical factors to consider:

- the ease of use and reliability of the computer-user interface is of utmost importance to the success of the community;
- expect that there will be technology issues despite thorough testing and preplanning;
- a wiki can be an effective computer-user interface;
- ensure that the principles of human-computer interaction and the eight golden rules of interface design as described by Shneiderman and Plaisant (2005) are followed when designing and building the computer-user interface;
- ensure that the elements of teaching presence, cognitive presence, and social presence are incorporated into the design;
- design activities that allow for a variety of learning preferences;
- consider storytelling an effective teaching-learning strategy in an online environment;

- a facilitator is required for establishing trust, engaging members, scaffolding discussions, providing feedback, and organizing the online environment;
- a restricted and password protected environment is important for establishing trust and a sense of community;
- an RSS feed or email notification is important so that members can continue to follow activities in the online community without having to access the community directly;
- an asynchronous environment ignores time zones and busy work lives and may be the preferred method of communication;
- learner support is essential and orientation presentations, preferably narrated, and hardcopy documents will help members orientate themselves to the community and can be used as a reference if technical problems arise;
- ongoing technical support is crucial and may be handled by the facilitator if the facilitator is technically savvy and external technical support is cost prohibitive;
- if one-on-one ongoing feedback is expected from a facilitator, then the group size should be limited to approximately 30 to 40 participants with participants divided into subgroups of 15 to 20;
- accept that all members will not participate and that there will be lurkers who will gain valuable information without sharing in return; and
- expect additional learner outcomes such as a sense of individual empowerment.

In order for Web 2.0 technology to be incorporated into an educator's toolbox of teaching-learning strategies, and embraced by those who are partners in the teaching-learning process, the following recommendations need to be addressed:

- management needs to ensure that computer hardware is easily accessible;
- management at all levels must embrace the concept of using interactive communications technologies and ensure that applicable Web sites are unblocked and available for use;
- funding and human resources must be available to all involved for orientation and training, technical support, and infrastructure support;
- educators must shift their paradigm of instruction to one of constructivism;
- educators must be aware of basic principles of instructional design, human-computer interaction, learning preferences, and facilitation in order to adequately design and manage continuing and professional education sessions via interactive communications technologies; and
- educators must be willing to take risks, learn from failure, and never give up!

Regarding further research, the study should be replicated; however, given the limitations in terms of potential sampling error, a small sample size, and experimenter bias, a number of changes should be considered to the sampling procedure and the design. One method of sampling should be used, and the facilitator should be external to the research team. It would be interesting to extend the length of the study to at least six months to allow for evolution of the community and possible identification of additional stages of community development. In order for participants to receive greater feedback on their own leadership competencies, the LPI should be delivered in a 360-degree format, meaning that colleagues, supervisors, and other individuals assess the leadership practices of the participant. Participants would then be able to compare their own ratings

on leadership practices with those assigned by others. In addition, interviewing participants upon completion of the study would add clarity to the findings.

Completion of a similar study with different nursing populations, such as non-hospital-based nurse educators, or managers or directors would be interesting. Moving beyond the nursing profession, leadership development in all professions is important, and completing a similar study with other professional groups may yield different findings.

Regarding instrument development, the CWEQ-II was initially developed to measure structural empowerment in the nursing management population. Further refinement of the tool to make it more specific to the nurse educator population and possibly an online environment would be beneficial for future studies. In addition, the CoII was developed for online courses of an academic nature as opposed to a professional development focus. Further refinement of the CoII to make it more specific to an online professional development environment would be beneficial.

Further research and development into the use of a wiki platform for professional development is needed. Much attention has been paid to the development of course management systems and learning management systems for the educational communities, as well as social networking Web sites for the public; however, more focus needs to be on the development of effective computer interfaces for use in corporate organizations. The interface would allow for effective collaboration, development of organizational materials, and the continuing education of employees within the organization.

**Summary**

There is concern within the healthcare field that there are limited numbers of nurses prepared to assume current and impending leadership vacancies. Hospital-based nurse educators are in prime positions to foster the leadership development of nurses; however, they first need to develop their own leadership practices and feel empowered to act. An online learning community was established where nurse educators could develop their own leadership practices within a constructivist learning environment that used storytelling as the main teaching-learning strategy. A facilitator provided the necessary teaching presence to assist nurse educators in determining their own learning needs in terms of leadership development, and assisted them in developing their leadership practices. Through direct instruction and the analysis of leadership stories, community members were cognitively engaged. In addition, community members provided enough social presence to support learning.

There are two types of empowerment, namely, structural empowerment and psychological empowerment. According to Kanter's theory of workplace empowerment (1977; 1997), structural factors such formal and informal power, information, support, resources, and opportunity empower individuals more than their own leadership styles and skills. Psychological empowerment has four dimensions including self-determination, meaning, competence, and impact, and all four dimensions must be present for individuals to feel psychologically empowered (Spreitzer & Quinn, 2001).

Upon completion of a review of the literature, it was hypothesized that after participation in an online learning community, levels of structural empowerment, psychological empowerment, and leadership practices would significantly increase. In

addition, levels of structural and psychological empowerment, leadership practices, and teaching, cognitive, and social presence would be higher in those nurse educators assigned to a facilitated community as opposed to a self-organizing community.

A mixed methods design was used, and the non-random sample ($N$ = 51) of nurse educators was obtained from an accessible population of educators who were employed in Canadian hospitals located in British Columbia, Manitoba, or Ontario. Participants were randomly assigned to either the facilitated community ($n$ = 26), or self-organizing community ($n$ = 25). After participant withdrawal, a final sample size of 35 was obtained with 19 in the facilitated community and 16 in the self-organizing community.

Pretesting consisted of nurse educators completing three questionnaires including the CWEQ-II, the PEI, and the LPI to measure the constructs of structural empowerment, psychological empowerment, and leadership practices respectively. Nurse educators then participated in a 12-week online learning community with a wiki as the computer-user interface. Learning preferences and principles of human-computer interaction were taken into consideration when designing the wiki, orientation materials, and online leadership presentations. Online narrated presentations focused on the five practices of exemplary leadership, namely, Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act, and Encourage the Heart as identified by Kouzes & Posner (2003c). Upon completion of the 12-week period, nurse educators completed posttest instruments that included those used in pretesting along with the CoII to measure teaching presence, cognitive presence, and social presence.

A combination of descriptive and inferential statistics were used to analyze quantitative data from the demographic questionnaire and the four instruments. Eighty

stories written by nurse educators, along with their general comments and online postings were analyzed using ethnography. Numerous themes were identified under the headings of structural empowerment, psychological empowerment, and leadership practices. It was identified that there were three phases to the online learning community, namely, the introduction and familiarization phase, the working phase, and the disengagement phase.

None of the hypotheses were supported, as there were no significant differences between nurse educators in the facilitated community compared with the self-organizing community. However, after participation in the online community, there was a significant increase in nurse educators' perceived levels of structural empowerment, specifically, opportunity, which is the chance to learn and grow, and informal power, which is the development of effective relationships. The psychological empowerment dimensions of competence, self-determination, and impact increased significantly, along with all five exemplary practices of leadership. Direct instruction, a component of teaching presence, was the only variable that increased significantly of those measured with the CoII. Through methodological triangulation, it was found that qualitative data supported quantitative data and vice versa, except for the psychological dimension of impact.

Limitations that decrease the generalizability of the findings included potential sampling error, sampling bias, a relatively small sample size, and experimenter bias as the facilitator was the investigator. Technical difficulties were encountered with the wiki interface, and this may have contributed to participant withdrawal, a lack of trust in the technology, and a decline in social interaction. Lack of time was noted as the number one reason for decreased participation and withdrawal.

Implications applicable to education, computing technology in education, and leadership development were identified. Main implications included the following:

- educators need to be cognizant that teaching, cognitive, and social presence are critical in the establishment and building of online communities;
- caution needs to be taken when considering the offering of non-facilitated online programs, for the facilitator played a major role in the self-organizing community;
- educators need to be aware of the power of storytelling and recognize that it can be a useful strategy in the teaching-learning process;
- it is possible to teach and learn about leadership development in an online learning community by employing direct instruction to present leadership concepts and then using storytelling to consolidate the learning and transfer the learning to real work environments;
- leadership behaviors transferred to the workplace revolve around the five practices of exemplary leadership; and
- an online environment may effect structural and psychological empowerment.

Recommendations applicable to nursing, nursing education, and computing technology in education focused on several critical factors in the establishment of online learning communities, and ensuring that educators have the tools and support to incorporate Web 2.0 technology into their toolbox of teaching-learning strategies. Recommendations for further research included replication of the study with changes to the sampling procedure and design, and the refinement of instruments used to measure structural empowerment and teaching, cognitive, and social presence. In addition, the

development of computer interfaces that allow for effective collaboration, development of organizational materials, and the continuing education of employees in non-educational organizations was identified as a need.

The five anticipated outcomes outlined in the goal statement included the following: (a) an online learning community would be established that included the elements of teaching, cognitive, and social presence; (b) storytelling would be used as one of the main teaching-learning strategies; (c) nurse educators would develop their own leadership practices; (d) nurse educators would increase their own feelings of empowerment; and (e) the online community itself would be an empowering environment. As outlined in this report, each of the anticipated outcomes, to a more or lesser degree, were achieved. The stage was set for nurse educators to further transfer their learning as they mentor future nurse leaders. Now it is up to them to embrace the challenge.

# Appendix A

## Institutional Review Board and Employer Approvals

UNIVERSITY OF MANITOBA | OFFICE OF RESEARCH SERVICES
Office of the Vice-President (Research)

CTC Building
208 - 194 Dafoe Road
Winnipeg, MB R3T 2N2
Fax (204) 269-7173
www.umanitoba.ca/research

**APPROVAL CERTIFICATE**

07 October 2008

HSC Foundation

(Advisor G. Abramson)

**TO:** **Brenda J. Stutsky**
Principal Investigator

**FROM:** **Stan Straw, Chair**
Education/Nursing Research Ethics Board (ENREB)

**Re:** **Protocol #E2008:086**
**"Empowerment and Leadership Development in an Online Story-based Learning Community"**

Please be advised that your above-referenced protocol has received human ethics approval by the **Education/Nursing Research Ethics Board**, which is organized and operates according to the Tri-Council Policy Statement. This approval is valid for one year only.

Any significant changes of the protocol and/or informed consent form should be reported to the Human Ethics Secretariat in advance of implementation of such changes.

**Please note:**

- **if you have funds pending human ethics approval, the auditor requires that you submit a copy of this Approval Certificate to Kathryn Bartmanovich, Research Grants & Contract Services (fax 261-0325), including the Sponsor name, before your account can be opened.**

- **if you have received multi-year funding for this research, responsibility lies with you to apply for and obtain Renewal Approval at the expiry of the initial one-year approval; otherwise the account will be locked.**

**The Research Ethics Board requests a final report for your study** (available at: http://umanitoba.ca/research/ors/ethics/ors_ethics_human_REB_forms_guidelines.html) **in order to be in compliance with Tri-Council Guidelines.**

*Bringing Research to Life*

**NOVA SOUTHEASTERN UNIVERSITY**
Office of Grants and Contracts
Institutional Review Board

# MEMORANDUM

**To:** Brenda Stutsky

**From:** Ling Wang, Ph.D.
Institutional Review Board

**Date:** Oct. 27, 2008

**Re:** *Empowerment and Leadership Development in an Online Story-Based Learning Community*

**IRB Approval Number:** wang10150801

I have reviewed the above-referenced research protocol at the center level. Based on the information provided, I have determined that this study is exempt from further IRB review. You may proceed with your study as described to the IRB. As principal investigator, you must adhere to the following requirements:

1) CONSENT: If recruitment procedures include consent forms these must be obtained in such a manner that they are clearly understood by the subjects and the process affords subjects the opportunity to ask questions, obtain detailed answers from those directly involved in the research, and have sufficient time to consider their participation after they have been provided this information. The subjects must be given a copy of the signed consent document, and a copy must be placed in a secure file separate from de-identified participant information. Record of informed consent must be retained for a minimum of three years from the conclusion of the study.

2) ADVERSE REACTIONS: The principal investigator is required to notify the IRB chair and me (954-262-5369 and 954-262-2020 respectively) of any adverse reactions or unanticipated events that may develop as a result of this study. Reactions or events may include, but are not limited to, injury, depression as a result of participation in the study, life-threatening situation, death, or loss of confidentiality/anonymity of subject. Approval may be withdrawn if the problem is serious.

3) AMENDMENTS: Any changes in the study (e.g., procedures, number or types of subjects, consent forms, investigators, etc.) must be approved by the IRB prior to implementation. Please be advised that changes in a study may require further review depending on the nature of the change. Please contact me with any questions regarding amendments or changes to your study.

The NSU IRB is in compliance with the requirements for the protection of human subjects prescribed in Part 46 of Title 45 of the Code of Federal Regulations (45 CFR 46) revised June 18, 1991.

Cc: Protocol File
Office of Grants and Contracts (if study is funded)

3301 College Avenue • Fort Lauderdale, FL 33314-7796 • (954) 262-5369
Fax: (954) 262-3977 • Email: *inga@nsu.nova.edu* • Web site: www.nova.edu/cwis/ogc

Health Sciences Centre
Winnipeg

Office of the Director of Research

Dial Direct 204-787-2404
Fax 204-787-4547

October 8, 2008

Ms Brenda J. Stutsky
Principal Investigator
111 Stevens Ave. West, Lockport MB R1A 2S4

Dear Ms Stutsky

**RE: EMPOWERMENT AND LEADERSHIP DEVELOPMENT IN AN ONLINE STORY-BASED LEARNING COMMUNITY.**

**ETHICS #: E2008:086**
**RIC #: RI08:172**

The above-named protocol, **has been evaluated and approved** by the HSC Research Impact Committee.

The HSC Finance Specific Purposes Account Application Form will be signed by the Director of Research and forwarded to Finance. Upon receipt, you will be notified of your new account number by the Finance Department.

Our sincere best wishes for much success in your study.

Sincerely

Karen Shaw-Allan
Research Protocol Officer
Department of Research

cc: Director of Research
Ancillary Services, Finance

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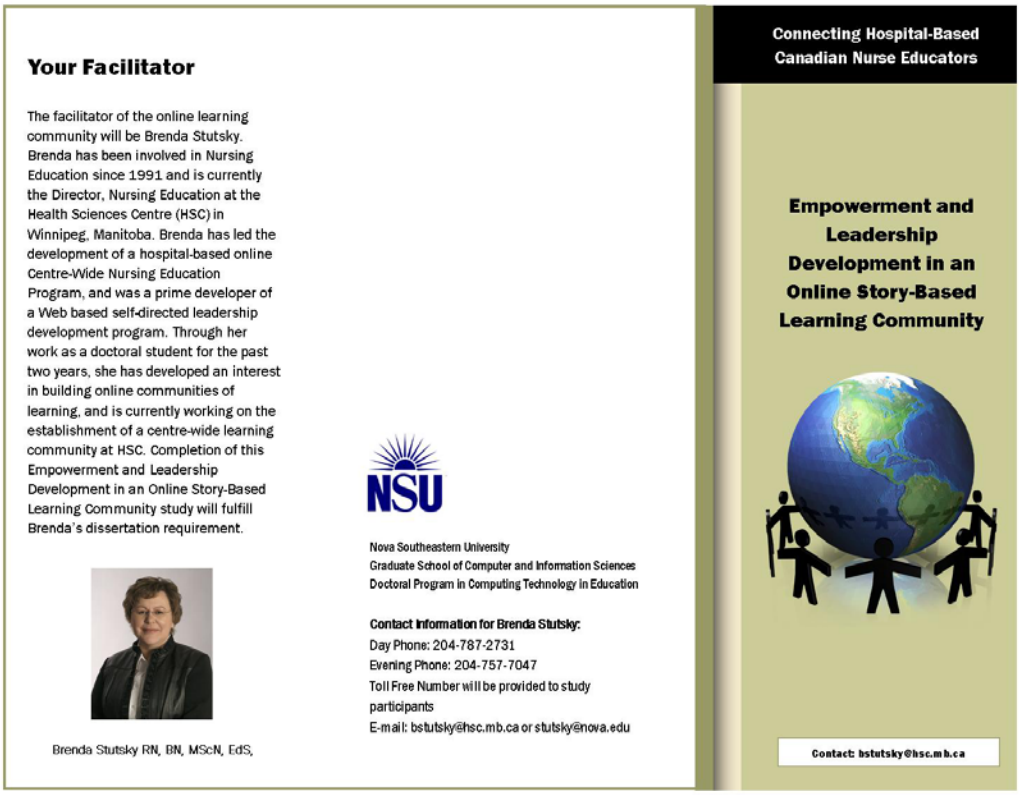
# Appendix B

## Recruitment Brochure



**Your Facilitator**

The facilitator of the online learning community will be Brenda Stutsky. Brenda has been involved in Nursing Education since 1991 and is currently the Director, Nursing Education at the Health Sciences Centre (HSC) in Winnipeg, Manitoba. Brenda has led the development of a hospital-based online Centre-Wide Nursing Education Program, and was a prime developer of a Web based self-directed leadership development program. Through her work as a doctoral student for the past two years, she has developed an interest in building online communities of learning, and is currently working on the establishment of a centre-wide learning community at HSC. Completion of this Empowerment and Leadership Development in an Online Story-Based Learning Community study will fulfill Brenda's dissertation requirement.





Nova Southeastern University
Graduate School of Computer and Information Sciences
Doctoral Program in Computing Technology in Education

**Contact Information for Brenda Stutsky:**
Day Phone: 204-787-2731
Evening Phone: 204-757-7047
Toll Free Number will be provided to study participants
E-mail: bstutsky@hsc.mb.ca or stutsky@nova.edu

**Connecting Hospital-Based Canadian Nurse Educators**

**Empowerment and Leadership Development in an Online Story-Based Learning Community**

# Join an Online Community of Learning for Hospital-Based Canadian Nurse Educators!

**You are invited** to join an online learning community of nurse educators as part of a research study entitled, "Empowerment and Leadership Development in an Online Story-Based Learning Community." Since you are employed in a hospital in British Columbia, Manitoba, or Ontario, and your main role is education, you are in a prime position to be fostering the leadership development of nurses in your hospital. By participating in this study, you will have the opportunity to develop your own leadership skills by sharing your leadership stories with others in the same position. You will also gain valuable experience related to online learning communities that you can use in your own practice.

You will have access to either a facilitated or non-facilitated private Web site called a wiki. A random sampling process will be used to determine which learning community you will be able to join. If there is an overwhelming response to this request another non-facilitated community will be established, however, no data from that community will be included in the study.

## Your Schedule

Your time commitment in this online learning community will depend on how much you wish to communicate with others and share resources. Below is your online learning community schedule.
**Start Date: Week 1 - January 5, 2009.**

Prior to Start
- Complete a 30 question survey to assess your own leadership skills (10-20 minutes). A leadership profile based on your answers will be mailed back to you.
- Complete a 19 question survey and a 12 question survey that measures empowerment (10-20 minutes).

Weeks 1-2
- Review orientation materials posted on the wiki (i.e., podcast welcome, navigation to the wiki, roles and procedures).
- Get to know others in the community.
- Identify your own learning goals.

Weeks 3-4
- Post one story that describes your best personal leadership experience (15-30 minutes to write your story).

Weeks 5-6
- Review podcasts and online documents related to exemplary leadership practices (30-60 minutes).

Weeks 7-12
- Post 3 stories regarding your leadership experiences (15-30 minutes to write each story).

The Week After
- Complete the same three surveys that you completed prior to the start of the online portion, and one additional 34 question survey that assesses your experience in the community (Total 30-60 minutes).

## How to Join

- **Read the Consent Form and sign (Note: Keep one copy for yourself).**
- **Complete the enclosed Demographic Questionnaire.**
- **Complete the Participant Contact Information Form**
- **Contact Brenda Stutsky if you have any questions**
- **Send back the Consent Form, the Demographic Questionnaire, and the Participant Contact Information Form in the pre-paid envelope.**

**Note: Only very basic computer skills are required. If you can access the Internet and send an email you should have no problems!**

# Appendix C

## Consent Form

**NOVA SOUTHEASTERN UNIVERSITY**
Graduate School of Computer and Information Sciences

## Consent Form for Participation in the Empowerment and Leadership Development in an Online Story-Based Learning Community Study

**Funding Source:** Health Sciences Centre Research Foundation, Winnipeg, Manitoba. Canada.

**IRB approval #** wang10150801

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**Institutional Review Board**
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**Description of the Study:**

This project involves research and is being conducted as one of the requirements for Brenda J. Stutsky's doctoral program. The purpose of this study is to examine the effect of facilitation and participation in an online/Internet story-based learning community on hospital-based nurse educator's perceptions of empowerment and leadership competence. You are invited to participate because you are employed in the role of a nurse educator in a hospital in British Columbia, Manitoba, or Ontario.

If you agree to be involved, you will be assigned to one of two online learning communities: one that is facilitated by Brenda J. Stutsky, or one that does not have a formal facilitator. The length of the study is 12 weeks. Prior to the study, you will be required to complete four questionnaires

that should take you about 25 to 45 minutes in total to complete. After being orientated to the online learning community, you will be exposed to information related to leadership development, and you will be required to post at least four short stories that portray your own leadership experiences. It should take you about 15 to 30 minutes to write each of your stories. If you are in the facilitated community, Brenda J. Stutsky will help you analyze your own stories to determine what leadership competencies you are describing. Your stories will be further analyzed by Brenda J. Stutsky after the study is completed. After the study, you will be required to complete three of the same questionnaires you completed prior to the start of the study, and an additional questionnaire that was not completed prior to the study. The length of time to complete the final questionnaires is about 30 to 50 minutes. Prior to the start of the study and at the end of the study, you will be mailed a copy of your own leadership profile. Your total time commitment in the online learning community will depend on your own participation level and how much time you want to communicate with other members of the community and share resources.

**Risks/Benefits to the Participant:**

Any risks associated with this study are thought to be minimal. If you have any concerns about the risks or benefits of participating in this study, you can contact Brenda J. Stutsky, Trudy Abramson, or the Institutional Review Board office at the numbers indicated above. There are no direct benefits.

This project has also been approved by the Education/Nursing Research Ethics Board at the University of Manitoba, and should you have any concerns or complaints about the project you may contact Brenda J. Stutsky, Trudy Abramson, or the University of Manitoba Human Ethics Secretariat at (204) 474-7122, or via email Margaret_Bowman@umanitoba.ca.

**Costs and Payments to the Participant:**

There are no costs to you, and no remuneration or payments made for participating in this study. You will need to have access to a computer with a sound card and speakers, as well as the Internet. Additional required software includes Microsoft Word, Adobe Acrobat Reader, Adobe Flash Player, and an email program. Adobe Acrobat Reader and Adobe Flash Player are available at no cost.

**Confidentiality and Privacy:**

All information obtained in this study is strictly confidential unless disclosure is required by law. The Institutional Review Board and regulatory agencies may review research records.

The online learning community is a Web site called PBwiki that is private and accessible only to participants of this study. A password to enter the Web site will be set by you, and all pages of the Web site will be encrypted for security purposes. To maintain your anonymity to other participants, you will not use your real name in online discussions, however, the investigator,

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Brenda J. Stutsky will know your real identity. Text entered into the Web site will be kept within the PBwiki system until the final report for the study is completed, and then the Web pages will be erased. Text from the Web site will be included in the Appendix of the report with any reference to identity being removed.

Your privacy and confidentiality will be protected in questionnaires through the use of a code number that will be assigned to you. Brenda J. Stutsky will be the only person to have access to the code associated with your name. For one of the questionnaires, a consultant in Ontario will be entering your information into a computer system and then generating a hardcopy report of your own leadership profile. The questionnaires will be couriered to the consultant, and the consultant will only have access to your code number. The consultant will then courier the reports back to Brenda J. Stutsky, who will mail them via Canada Post to the address you provide. All study documents will be kept in a locked filing cabinet in Brenda J. Stutsky's office. Your name will never appear in any published report and you will be provided with an electronic copy of the final report.

**Participant's Right to Withdraw from the Study:**

You have the right to refuse to participate or to withdraw at any time, without penalty. If you do withdraw, it will not affect your employment in any way. If you choose to withdraw, you may request that any of your data that has been collected be destroyed unless prohibited by provincial or federal law. You can withdraw by calling Brenda J. Stutsky.

**Other Considerations:**

If significant new information relating to the study becomes available which may relate to your willingness to continue to participate, this information will be provided to you by Brenda J. Stutsky.

**Voluntary Consent by Participant:**

**I have read the preceding consent form, or it has been read to me, and I fully understand the contents of this document and voluntarily consent to participate in the research study entitled "Empowerment and Leadership Development in an Online Story-Based Learning Community." All of my questions concerning the research have been answered. I hereby agree to participate in this research study. If I have any questions in the future about this study, they will be answered by Brenda J. Stutsky. A copy of this form has been given to me. This consent ends at the conclusion of this study.**

Participant's Signature: _____ Date: _____

Witness's Signature: _____ Date: _____

**Initials: _____ Date: _____** **Page 3 of 3**

# Appendix D

## Empowerment and Leadership Development in an Online Story-Based Learning Community

## Participant Contact Information Form

Please complete all sections below. Please print clearly.

| | |
|---|---|
| First Name: | Last Name: |
| Name to be used in the community Web site: | |
| Name of Workplace: | |
| Primary Email Address: | |
| Secondary Email Address: | |
| Phone Number: Area Code (  )  - | |
| Mailing Address (Required to Mail Back Questionnaire Results) | |
| Institution: | |
| Room Number: | Street: |
| City: | Province: |
| Postal Code: | |

# Appendix E

## Instructional Design Document

### Instructional Design Model

Morrison, Ross, and Kemp (2007) outline an instructional design model that includes nine elements: (a) instructional problem, (b) learner characteristics, (c) task analysis, (d) instructional objectives, (e) content sequencing, (f) instructional strategies, (g) designing the message, (h) development of instruction, and (i) evaluation. Two other encompassing features of the model include feedback and management. Morrison et al. note that their instructional design model is flexible and does not have a specific starting point; therefore, instructional designers or educators can determine the order in which to address the various elements. In this design document, each of the elements in Morrison et al.'s model will be addressed, and the document will be used in the development and implementation of an online learning community for nurse educators.

### Instructional Problem

Details pertaining to the problem, the background to the problem, and the goal are outlined in *Chapter 1*.

*Performance Assessment*

To confirm that an online learning community is an appropriate intervention for leadership development, the investigator's decision was guided by Mager and Pipe's (1984) human performance model. Using Mager and Pipe's flowchart, the investigator begins with the performance discrepancy. Following the flowchart, it is determined that the performance discrepancy of nurse educators needing leadership development education is important. The next decision is to determine whether the performance discrepancy is a skill deficiency. In the situation being described, it is determined that the performance discrepancy is a result of a skill deficiency that nurse educators are not *used to doing*; therefore, formal training is an appropriate option for the investigator to pursue.

### Learner Characteristics

Characteristics of the nurse educators are outlined in the *Demographics* section of *Chapter 4*. Through observation and experience in working directly with nurse educators since 1991, the investigator is able to identify additional learner characteristics of interest to an instructional designer. These characteristics include the expectation that most of the nurse educators are at an advanced beginner or competent level in terms of leadership competencies (i.e., second to third level on a five-point scale). It is expected that the nurse educators will have a mixture of personalities, learning styles, field dependencies, and right versus left-hemispheric dominant learning preferences. The nurse educators will have above average intelligence quotient scores, and generally have a higher-level locus of control when in professional nursing situations. The anxiety level of the nurse educators will be in the normal range for day-to-day professional nursing situations.

The characteristics of adult learners, as outlined in Morrison et al. (2007), adequately describe the nurse educators. They are independent and self-directed in determining their leadership needs and goals. Generally, the motivational level of the nurse educators towards developing their own leadership practices will be high. The nurse educators will welcome a systematically structured leadership course that is relevant to their current positions, and would be able to identify the advantages of participating in such a course. The nurse educators will prefer a facilitator to guide their learning as opposed to an authoritarian leader. The nurse educators will have a broad range of work experiences that can be shared with their peers. With extremely busy work schedules, family commitments, and out-of-work activities, time is precious for the target audience, and a major factor to consider when designing the course.

**Task Analysis**

Instructional designers can complete a task analysis in a variety of ways including topic analysis, procedural analysis, or by using the critical incident method (Morrison et al., 2007). Topic analysis provides two types of information, namely, the content and the structure of the identified components. Topic analysis was selected as the method of task analysis, for the necessary content and structure for a leadership development course is provided through the resources developed by Kouzes and Posner (2003a; 2003b; 2003c). The key components of Kouzes and Posner's theory (2002) are that when leaders are at their personal best, they engage in the five practices and 10 commitments of exemplary leadership.

**Instructional Objectives**

Grounded in behaviorism, instructional objectives are designed to "…express in behavioral terms the instructional outcomes we desire students to achieve. In fact, behaviorists would argue the only evidence we have of learning comes from the students' behavior; they can do something after instruction that they could not do before" (Driscoll, 2005, p. 58). Interestingly, there is the thought that instructional objectives actually destroy the essence and holistic perspective of learning, and have a deleterious effect on incidental learning (Driscoll). This view is especially true if one adheres to a constructivist viewpoint where learners are encouraged to identify their own learning goals. Regardless of whether objectives are of value to the learner, Driscoll notes that instructional objectives are useful to instructional designers when developing a course, and are an important element in most instructional design models such as the one presented by Morrison et al. (2007). The objectives for this course include:

- To assess own leadership behaviors.
- To reflect on own leadership behaviors and experiences and present reflections in the form of a written story.
- To critique own leadership stories using a given framework.

**Content Sequencing**

Content may be sequenced through either conceptual sequencing or theoretical elaboration sequencing (Morrison et al., 2007). Conceptual sequencing refers to the arrangement of concepts based on superordinate, coordinate, and subordinate relationships. Kouzes and Posner (2003c) suggest conceptual sequencing when

examining the five practices of exemplary leadership, starting with Model the Way, then Inspire a Shared Vision, Challenge the Process, Enable Other to Act, and Encourage the Heart. There is allowance, however, to deviate from the sequence if one wishes to focus on a particular exemplary practice first. The same is true for the 10 commitments of leadership where two commitments are associated with each exemplary practice.

Elaboration theory focuses on moving from simple to complex tasks (Morrison et al., 2007). Similar in concept, is that of scaffolding, in which facilitators provide guidance to learners and "…bridge the gap between their current skill levels and a desired skill level" (Driscoll, 2005, p. 258). As learners are able to complete tasks without assistance, then the guidance is withdrawn. Although it is important to make connections among ideas, and summarize discussions before moving forward (Garrison, 2006), it may also be important to present the big picture or concepts to learners first, and then sequence material in order to promote meaningful learning (Bolliger, 2006; Roberts, 2002). Given the content that forms the basis for the course, and what is known in regard to elaboration theory and scaffolding, a nurse educator would need to be familiar with the meaning of the five practices and ten commitments of exemplary leadership before being able to generate examples of how they demonstrate the five exemplary practices of leadership.

When sequencing content, the instructional designer must also consider how information is coded into memory. Driscoll (2005) notes that constructivists do not adhere to one model of memory; therefore, it is important to draw from the work of cognitive theorists and information-processing theory. Information processing models can be traced back to the work of Atkinson and Shiffrin (as cited in Driscoll), who conceptualized three stages of memory including sensory memory, working memory, and long-term memory, along with processes that assist with the transfer of information from one stage to another. Based on information-processing theory, elaboration theory, scaffolding, and conceptual sequencing, the content in the online learning community will be sequenced accordingly.

**Instructional Strategy**

Consistent with constructivism, storytelling will be the main teaching-learning strategy. Storytelling has been used for leadership development in the business community (Ready, 2002), for the development of a community healthcare management course (Schwartz & Abbott, 2007), in the diagnosis of health problems with medical students (D'Alessandro, Lewis, & D'Alessandro, 2004), and in a graduate level nurse educator practicum (Cangelosi & Whitt, 2006). Details regarding storytelling are outlined in the *Online Storytelling* section in *Chapter 2*.

When examining the learning outcomes of constructivism, namely, reasoning, critical thinking, understanding and use of knowledge, self-regulation, and mindful reflection (Driscoll, 2005), it becomes evident that through the effective use of storytelling, guided by a facilitator, the proposed learning outcomes can be achieved. Storytelling will challenge learners with differing learning styles and preferences. For example, it is proposed that the underlying artistic abilities of right-hemispheric dominant learners will be of benefit in generating the stories, while the left-hemispheric dominant

learners will prefer analyzing the stories. Learners with a preference for feeling over thinking will be better able to add a *human* perspective to their stories; however, the thinkers will be better at finding patterns within the stories. Learners with a diverging learning style should excel in delivering the stories, and convergers, similar to the thinkers, will thrive when analyzing the stories.

**Designing the Message**

As outlined in the *Procedure* section of *Chapter 2*, the online learning community will occur in a wiki environment, namely, Peanut Butter wiki (PBwiki). The wiki will be organized metaphorically into an educational environment within a hospital.

Using Gagne's Nine Events of Instruction (Driscoll, 2005) (see Table E1), the investigator provides the framework for designing the message. The course will be 12 weeks in duration not including the pre-course and post-course time to complete questionnaires. The course will be segmented allowing for time between learning tasks so that participants are able to process information prior to proceeding to the next learning task (Tempelman-Kluit, 2006). Segmenting can reduce cognitive load or allow the learner to manage the load more efficiently.

**Development of Instruction**

Given the learner characteristics, specifically, that the learners have multiple demands on their time, varied computer literacy levels, and the course is a non-credit voluntary professional development course, it is important that the online learning interface be developed in such a manner that it minimizes cognitive load, allows for effective human-computer interaction in terms of navigation and ease of use, and allows for effective information-processing. Keeping the wiki interface organized into discrete sections, and housing all required resources within one area, should decrease cognitive overload, and decrease the disorientation that field dependent learners sometimes experience in an online learning environment (Alomyan, 2004). Cognitive load and disorientation will also be minimized by containing external links within the *library resource* section, allowing for documents to be easily downloaded and printed, and highlighting content and wiki sections with appropriate headings, bullets, fonts, colors, and visual cues where appropriate (Alomyan, 2004; Chang & Ley, 2006; Gilbert, Morton, & Rowley, 2007; Oh & Lim, 2005; Mayer, 1999). Incorporating an ever-expanding resource section into the wiki caters to the needs of field independent learners who thrive in environments in which they have the freedom to choose their own learning paths (Alomyan). Information-processing will be enhanced for all types of learners through chunking material appropriately within the various sections of the wiki (Driscoll, 2005; Roberts, 2002). The facilitator will continually monitoring the wiki and synthesize and organize information as needed to prevent the wiki from becoming unwieldy.

Table E1

*Events of Instruction and Timeline*

| **Event** | **Process** |
|---|---|
| Gain attention<br>(Weeks 1-2) | <u>Prior to Start of Course</u><br>• Nurse educators complete the LPI as a self-evaluation of their own leadership practices.<br>• A profile of the nurse educators' leadership practices, based on the LPI results, is mailed back to each nurse educator.<br><br><u>Start of Course</u> (Week 1-2)<br>• Nurse educators review orientation material posted in the *library reserve*:<br>  • A podcast welcome from the facilitator.<br>  • A computerized narrated orientation to the wiki environment including navigation, wiki features, and general instructions for posting and editing text, and uploading and downloading documents.<br>  • Static orientation documents (see sample Figures E1 to E19).<br>  • Outline of all of the processes to be followed including the role of the facilitator and learner, learning activities and methods, and general rules for communication.<br>• Facilitator organizes the introduction process in the *auditorium*.*<br>• Nurse educators introduce themselves to their small groups in the *classroom,* and post their profiles and personal learning goals in their *locker*. |
| Inform learners of objectives<br>(Week 1) | Objectives posted in the library reserve include:<br>• To assess own leadership behaviors.<br>• To reflect on own leadership behaviors and experiences and present reflections in the form of a written story.<br>• To critique own leadership stories using a given framework. |
| Stimulate recall of prior learning<br>(Weeks 3-4) | • Nurse educators post their personal-best leadership experience within their *locker*. |
| Present the new content<br>(Weeks 5-6) | • Nurse educators access the *library reserve* for content documents related to exemplary leadership practices.<br>• A narrated presentation related to each of the five exemplary leadership practices is included. |
| Provide guidance<br>(All Weeks)* | • Ongoing guidance to occur throughout the lesson.* |

| Event | Process |
|---|---|
| Elicit response, performance (Weeks 7-12) | • Once every two weeks, nurse educators' reflect on their leadership performance and post stories regarding their leadership experiences.<br>• A minimum of three stories are to be posted by nurse educators. |
| Provide useful feedback (Weeks 7-12)* | • Within individual *lockers* of the wiki, stories are analyzed and dialogue occurs between the facilitator and nurse educators, and transfers stories to the classrooms for further discussion.*<br>• The facilitator provides weekly overall feedback and encouragement to nurses educators in the main *bulletin board*. |
| Assess learning (Weeks 7-12)* | • An informal assessment of learning occurs through dialogue during the analyses of stories.*<br>• Given that the lesson is a professional development lesson, there is no formal evaluation of the nurse educator's performance by the facilitator; however, nurse educators will be asked to revisit their personal learning goals (Week 12), and they will again complete the LPI between Weeks 11 & 13. |
| Generalize experience (Weeks 11-12)* | • Facilitator will synthesize total group learning and observations, and reflect on how the five practices of exemplary leadership can be applied to all future leadership encounters.* |
| Note: * Refers to the facilitated online learning community only. | |

*Minimum Computer System Requirements*

IBM Compatible Computer

| | |
|---|---|
| Processor | Pentium II 266 MHz processor or faster |
| Operating System | Windows 95/98/ME/NT/2000/XP |
| Memory | 64 MB of RAM |
| Disk Space | 20 MB of free disk space |
| Connection | 28.8 kbps Internet connection |
| Internet Browser | Internet Explorer 4.0 OR Netscape 4.7 |
| Software | Microsoft Word, Adobe Acrobat Reader, Macromedia Flash Player, and an Email program |

Macintosh

| | |
|---|---|
| Processor | G3 233 MHz |
| Operating System | OS 9.0/9.1/9.2, OSX 10.1, 10.2 |
| Memory | OS9: 64 MB RAM OR OSX: 128 MB RAM |
| Disk Space | 20 MB of free disk space |
| Connection | 28.8 kbps Internet connection* |
| Internet Browser | Internet Explorer 4.0 OR Netscape 4.7 |
| Software | Microsoft Word, Adobe Acrobat Reader, Macromedia Flash Player, and an Email program |

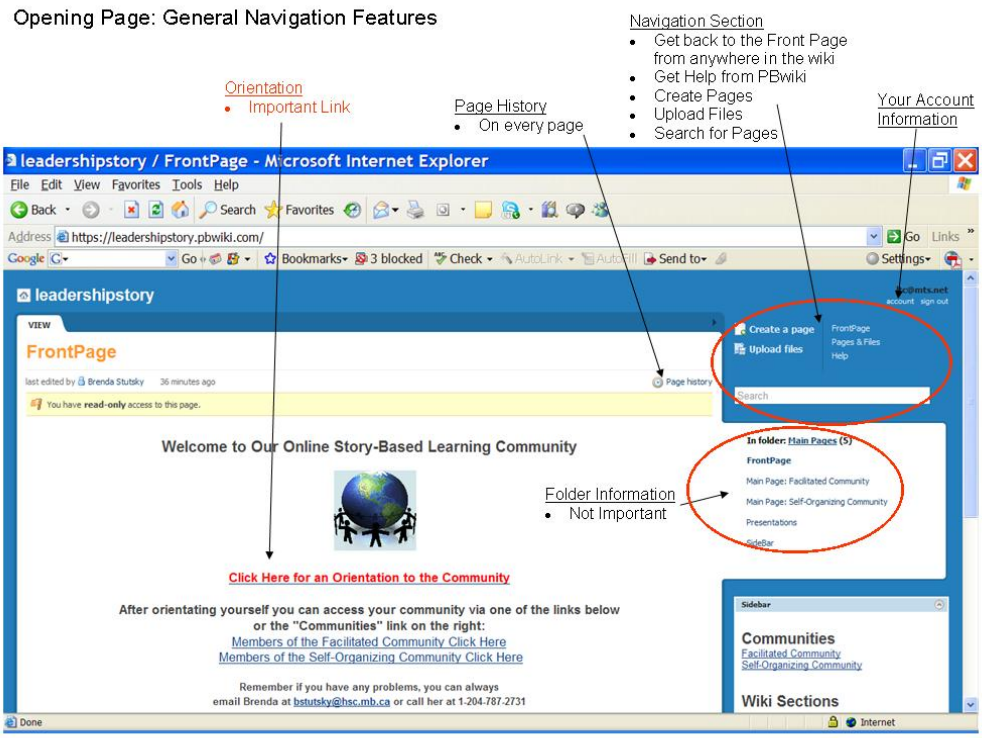


*Figure E1*. General navigation features.

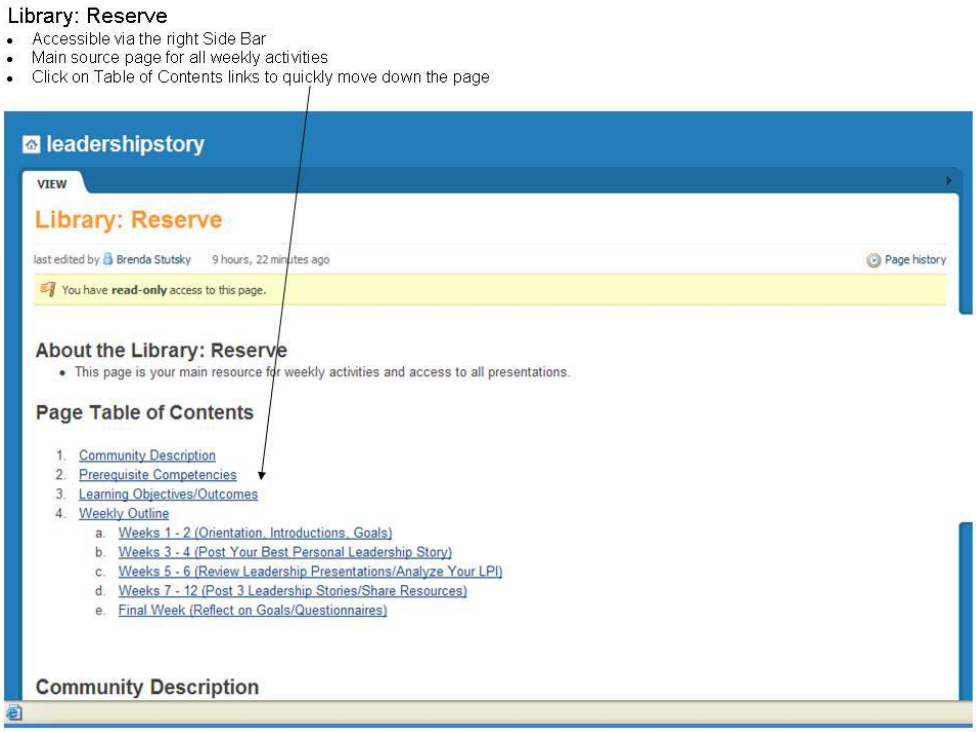


*Figure E2*. Library reserve.

Library: Resources
- Accessible via the right Side Bar
- Section to share your own teaching/learning resources
- Brenda's Resource List

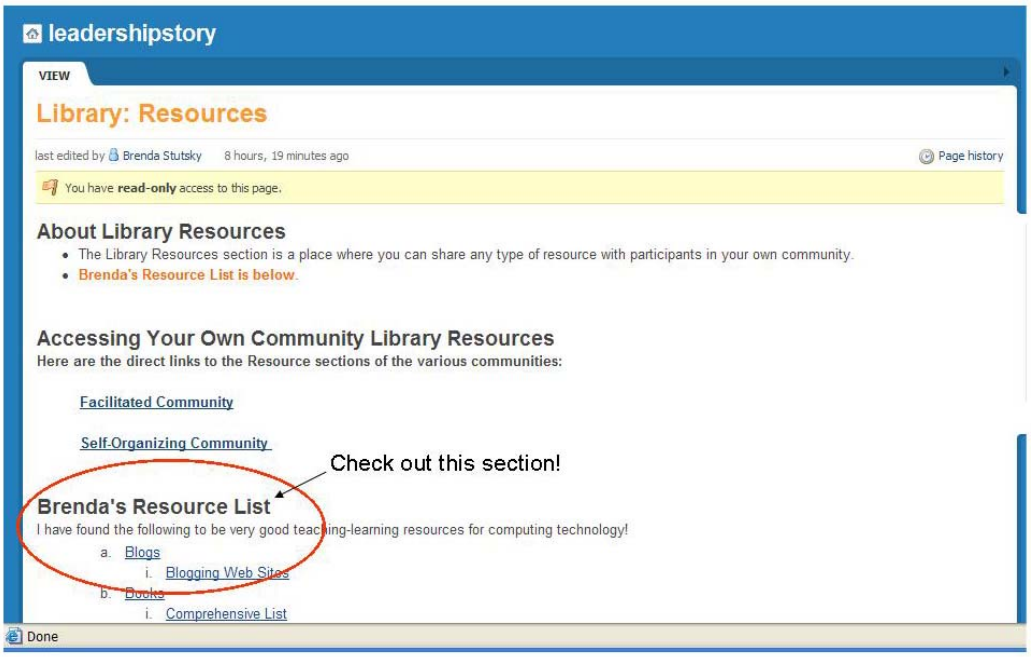


*Figure E3*. Library resources.

Presentations
- Accessible via the right Side Bar
- Links to all presentations

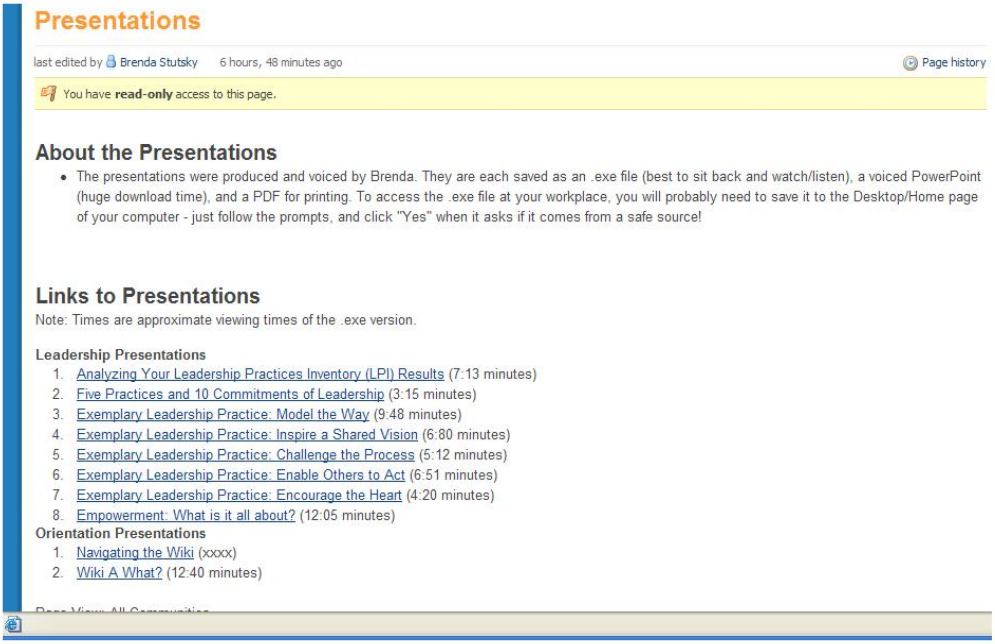


*Figure E4*. Presentation page.

Lockers
- Accessible via the right Side Bar
- Your own private space

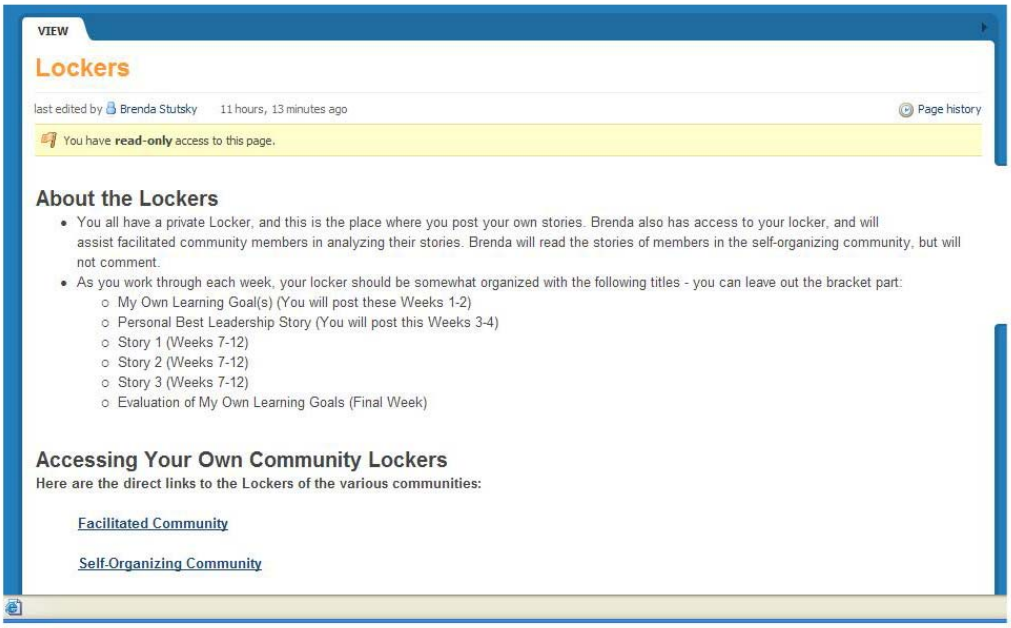


*Figure E5*. Locker page.

Suggestion Box: Community Specific
- Accessible via the main Suggestion Box page
- Post in 2 places—in the main section or comment section

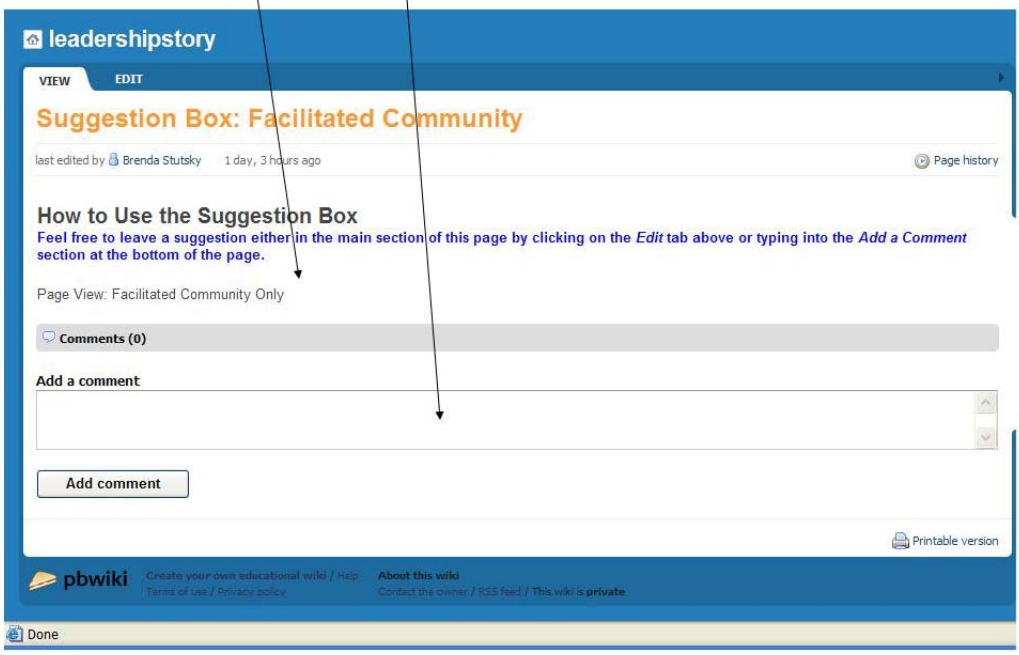


*Figure E6*. Suggestion box.

**Evaluation**

In regard to evaluation of the course, nurse educators will be encouraged to post ongoing evaluative course feedback to the *suggestion box.* In terms of learner evaluation, and consistent with a constructivist perspective, the focus of evaluation will not be specifically on whether a nurse educator did or did not achieve the objectives of the course, for the instructional objectives will be used to facilitate the instructional design process as opposed to determining participant learning. In the first two weeks, nurse educators will be asked to post their personal learning goals. In Week 12, nurse educators will be asked to refer back to their initial goals and identify whether they achieved their personal learning goals.

**Summary**

Outlined in this instructional design document is an online leadership development course for nurse educators using Morrison et al.'s (2007) instructional design model to guide the process. Grounded in constructivism, the course is designed to develop not only the leadership practices of nurse educators, but ultimately, to facilitate nurse educators transferring their own learning to future nurse leaders. Through a constructivist learning approach, and adhering to design principles that take into consideration the differing learning styles and preferences of participants enrolled in the course, it is hoped that nurse educators will achieve their own learning outcomes that focus on reasoning, critical thinking, understanding and use of knowledge, self-regulation, and mindful reflection.

# Appendix F

## Conditions of Work Effectiveness Questionnaire – II

HOW MUCH OF EACH KIND OF OPPORTUNITY DO YOU HAVE IN YOUR PRESENT JOB?

| | None | | Some | | A Lot |
|---|---|---|---|---|---|
| 1. Challenging work. | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 2. The chance to gain new skills and knowledge on the job. | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 3. Tasks that use all of your own skills and knowledge. | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |

HOW MUCH ACCESS TO INFORMATION DO YOU HAVE IN YOUR PRESENT JOB?

| | No Knowledge | | Some Knowledge | | Know A Lot |
|---|---|---|---|---|---|
| 1. The current state of the hospital. | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 2. The values of top management. | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 3. The goals of top management. | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |

HOW MUCH ACCESS TO SUPPORT DO YOU HAVE IN YOUR PRESENT JOB?

| | None | | Some | | A Lot |
|---|---|---|---|---|---|
| 1. Specific information about things you do well. | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 2. Specific comments about things you could improve. | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 3. Helpful hints or problem solving advice. | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |

HOW MUCH ACCESS TO RESOURCES DO YOU HAVE IN YOUR PRESENT JOB?

| | None | | Some | | A Lot |
|---|---|---|---|---|---|
| 1. Time available to do necessary paperwork. | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 2. Time available to accomplish job requirements. | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 3. Acquiring temporary help when needed. | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |

IN MY WORK SETTING/JOB:

| | None | | Some | | A Lot |
|---|---|---|---|---|---|
| 1. The rewards for innovation on the job are | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 2. The amount of flexibility in my job is | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 3. The amount of visibility of my work-related activities within the institution is | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |

HOW MUCH OPPORTUNITY DO YOU HAVE FOR THESE ACTIVITIES IN YOUR PRESENT JOB?

| | | None | | Some | | A Lot |
|---|---|---|---|---|---|---|
| 1. | Collaborating on patient care with physicians. | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 2. | Being sought out by peers for help with problems. | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 3. | Being sought out by managers for help with problems. | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 4. | Seeking out ideas from professionals other than physicians, e.g., Physiotherapists, Occupational Therapists, Dieticians. | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |

| | | Strongly Disagree | | | | Strongly Agree |
|---|---|---|---|---|---|---|
| 1. | Overall, my current work environment empowers me to accomplish my work in an effective manner. | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |
| 2. | Overall, I consider my workplace to be an empowering environment. | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐ |

Code Number: _____

# Appendix G

## Permission to Use the Conditions of Work Effectiveness Questionnaire - II

From:Work: bstutsky@hsc.mb.ca, Student: stutsky@nova.edu
To:hkl@uwo.ca
Subject:Empowerment Questionnaire Request Form
CC:jmalmost@uwo.ca, mcbpics@rogers.com

NURSING WORK EMPOWERMENT SCALE
Request Form

I request permission to copy the Nursing Work Empowerment Scale as developed by Dr. G. Chandler and Dr. Heather K.
Spence Laschinger. Upon completion of the research, I will provide Dr. Laschinger with a brief summary of the results,
including information related to the use of the Nursing Work Empowerment Scale used in my study.

Questionnaires Requested:
Conditions of Work Effectiveness-I (includes JAS and ORS): Yes
Conditions of Work Effectiveness-II (includes JAS-II and ORS-II): Yes

Please complete the following information:

Date: February 1, 2007
Name: Brenda J. Stutsky
Title: Director, Nursing Education
Doctoral Student
University/Organization: Director: Health Sciences Centre, Winnipeg, Manitoba
Student: Nova Southeastern University, Fort Lauderdale, Florida
Address: Home: 111 Stevens Ave. West, Lockport, Manitoba, R1A 2S4
Phone: Work: 204-787-2731, Home: 204-757-7047
E-mail: Work: bstutsky@hsc.mb.ca, Student: stutsky@nova.edu

Permission is hereby granted to copy and use the Nursing Work Empowerment Scale.

Dr. Heather K. Spence Laschinger, Professor
School of Nursing, University of Western Ontario
London, Ontario, Canada N6A 5C1
Tel:519-661-4065 Fax: 519-661-3410
E-mail: hkl@uwo.ca

# Appendix H

## Permission to Use the Psychological Empowerment Instrument

From: Brenda Stutsky [BStutsky@EXCHANGE.HSC.MB.CA] Sent: Wed 03/09/2008 16:46
To: bstutsky@HSC.MB.CA
Cc:
Subject: FW: Permission to Use Psychological Empowerment Instrument

**From:** Spreitzer, Gretchen [mailto:spreitze@bus.umich.edu]
**Sent:** Wed 9/3/2008 4:37 PM
**To:** Brenda Stutsky
**Subject:** RE: Permission to Use Psychological Empowerment Instrument

Hello Brenda, thank you very much for your email. Your research sounds interesting. Of course you are most welcome to use my instrument in your research. Please share your findings with me so I can learn from you... Best wishes.

Gretchen M. Spreitzer
Professor of Management and Organizations
Ross School of Business
University of Michigan
(734) 936-2835
spreitze@umich.edu

**Permission to Use Psychological Empowerment Instrument**

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**From:** stutsky@nsu.nova.edu
**Date:** Tuesday, August 05, 2008 1:40 PM
**To:** spreitze@umich.edu
**Subject:** Permission to Use Psychological Empowerment Instrument

Hi Dr. Spreitzer:

My name is Brenda Stutsky and I am currently a doctoral student in the Graduate School of Computer and Information Sciences at Nova Southeastern University. I am working on my dissertation proposal entitled, "Empowerment and Leadership Development in an Online Story-Based Learning Community." I am a nurse, and the participants will be Canadian nurse educators working in tertiary hospitals in three provinces. I have purchased your book A Company of Leaders, and would like permission to use the Psychological Empowerment Instrument as outlined in the book.

My dissertation chair is Dr. Trudy Abramson, and committee members include Dr. Steven Terrell, and Dr. Heather Laschinger.

I look forward to your response.

Sincerely,
Brenda Stutsky RN, MScN, EdS

# Appendix I

## Psychological Empowerment Instrument

Using the following scale, please indicate the extent to which you agree or disagree that each statement describes how you see yourself in relation to your workplace.

| | | | | | |
|---|---|---|---|---|---|
| 1. | Very strongly disagree | | | 5. | Agree |
| 2. | Strongly disagree | 4. | Neutral | 6. | Strongly agree |
| 3. | Disagree | | | 7. | Very Strongly agree |

| | | |
|---|---|---|
| | a. | I am confident about my ability to do my job. |
| | b. | The work that I do is important to me. |
| | c. | I have significant autonomy in determining how I do my job. |
| | d. | My impact on what happens in my department is large. |
| | e. | My job activities are personally meaningful to me. |
| | f. | I have a great deal of control over what happens in my department. |
| | g. | I can decide on my own how to go about doing my own work. |
| | h. | I have considerable opportunity for independence and freedom in how I do my job. |
| | i. | I have mastered the skills necessary for my job. |
| | j. | The work I do is meaningful to me. |
| | k. | I have significant influence over what happens in my department. |
| | l. | I am self-assured about my capabilities to perform my work activities. |

Code Number: _____

# Appendix J

## Leadership Practices Inventory

**INSTRUCTIONS**
On the opposite side of the page, you will find thirty statements describing various leadership behaviors. Please read each statement carefully, and using the RATING SCALE on the right, ask yourself:

**"How frequently do I engage in the behavior described?"**

- Be realistic about the extent to which you actually engage in the behavior.
- Be as honest and accurate as you can be.
- DO NOT answer in terms of how you would like to behave or in terms of how you think you should behave.
- DO answer in terms of how you typically behave on most days, on most projects, and with most people.
- Be thoughtful about your responses. For example, giving yourself 10s on all items is most likely not an accurate description of your behavior. Similarly, giving yourself all 1s or 5s is most likely not an accurate description either. Most people will do some things more or less often than they do other things.
- If you feel that a statement does not apply to you, it's probably because you don't frequently engage in the behavior. In that case, assign a rating of 3 or lower.

For each statement, decide on a response and then record the corresponding number in the box to the right of the statement. After you have responded to all thirty statements, go back through the LPI one more time to make sure you have responded to each statement. *Every* statement *must* have a rating.

The RATING SCALE runs from 1 to 10. Choose the number that best applies to each statement.

1 = Almost Never
2 = Rarely
3 = Seldom
4 = Once in a While
5 = Occasionally
6 = Sometimes
7 = Fairly Often
8 = Usually
9 = Very Frequently
10 = Almost Always

Code:_____

To what extent do you typically engage in the following behaviors? Choose the response number that best applies to each statement and record it in the box to the right of that statement.

| | | |
|---|---|---|
| 1. | I set a personal example of what I expect of others. | |
| 2. | I talk about future trends that will influence how our work gets done. | |
| 3. | I seek out challenging opportunities that test my own skills and abilities. | |
| 4. | I develop cooperative relationships among the people I work with. | |
| 5. | I praise people for a job well done. | |
| 6. | I spend time and energy making certain that the people I work with adhere to the principles and standards we have agreed on. | |
| 7. | I describe a compelling image of what our future could be like. | |
| 8. | I challenge people to try out new and innovative ways to do their work. | |
| 9. | I actively listen to diverse points of view. | |
| 10. | I make it a point to let people know about my confidence in their abilities. | |
| 11. | I follow through on the promises and commitments that I make. | |
| 12. | I appeal to others to share an exciting dream of the future. | |
| 13. | I search outside the formal boundaries of my organization for innovative ways to improve what we do. | |
| 14. | I treat others with dignity and respect. | |
| 15. | I make sure that people are creatively rewarded for their contributions to the success of our projects. | |
| 16. | I ask for feedback on how my actions affect other people's performance. | |
| 17. | I show others how their long-term interests can be realized by enlisting in a common vision. | |
| 18. | I ask "What can we learn?" when things don't go as expected. | |
| 19. | I support the decisions that people make on their own. | |
| 20. | I publicly recognize people who exemplify commitment to shared values. | |
| 21. | I build consensus around a common set of values for running our organization. | |
| 22. | I paint the "big picture" of what we aspire to accomplish. | |
| 23. | I make certain that we set achievable goals, make concrete plans, and establish measureable milestones for the projects and programs that we work on. | |
| 24. | I give people a great deal of freedom and choice in deciding how to do their work. | |
| 25. | I find ways to celebrate accomplishments. | |
| 26. | I am clear about my philosophy of leadership. | |
| 27. | I speak with genuine conviction about the higher meaning and purpose of our work. | |
| 28. | I experiment and take risks, even when there is a chance of failure. | |
| 29. | I ensure that people grow in their jobs by learning new skills and developing themselves. | |
| 30. | I give the members of the team lots of appreciation and support for their contributions. | |

# Appendix K

## Permission to Use the Leadership Practices Inventory

**KOUZES POSNER INTERNATIONAL**
15419 Banyan Lane
Monte Sereno, California 95030 USA
FAX: (408) 354-9170

September 3, 2008

Ms. Brenda Stutsky
111 Stevens Avenue West
Lockport, Manitoba R1A 2S4 CANADA

Dear Brenda:

Thank you for your request to use the Leadership Practices Inventory (LPI) in your dissertation. We are willing to allow you to *reproduce* the instrument in written form as outlined in your request, at no charge, with the following understandings:

(1) That the LPI is used only for research purposes and is not sold or used in conjunction with any compensated management development activities;
(2) That copyright of the LPI, or any derivation of the instrument, is retained by the authors, and that the following copyright statement is included on all copies of the instrument: "Copyright © 2003 James M. Kouzes and Barry Z. Posner. All rights reserved. Used with permission.";
(3) That one (1) **electronic** copy of your dissertation and one (1) copy of **all** papers, reports, articles, and the like which make use of the LPI data be sent **promptly** to our attention; and,
(4) That you agree to allow us to include an abstract of your study and any other published papers utilizing the LPI on our various websites.

If the terms outlined above are acceptable, would you indicate so by signing one (1) copy of this letter and returning it to us. Best wishes for every success with your research project.

Cordially,

Barry Z. Posner, Ph.D.
Managing Partner

I understand and agree to abide by these conditions:

(Signed) _____ Date: September 24/08

# Appendix L

## Community of Inquiry Instrument

5 Point Likert-Type Scale
1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

Choose the response number that best applies to each statement and record it on the line to the left of that statement.

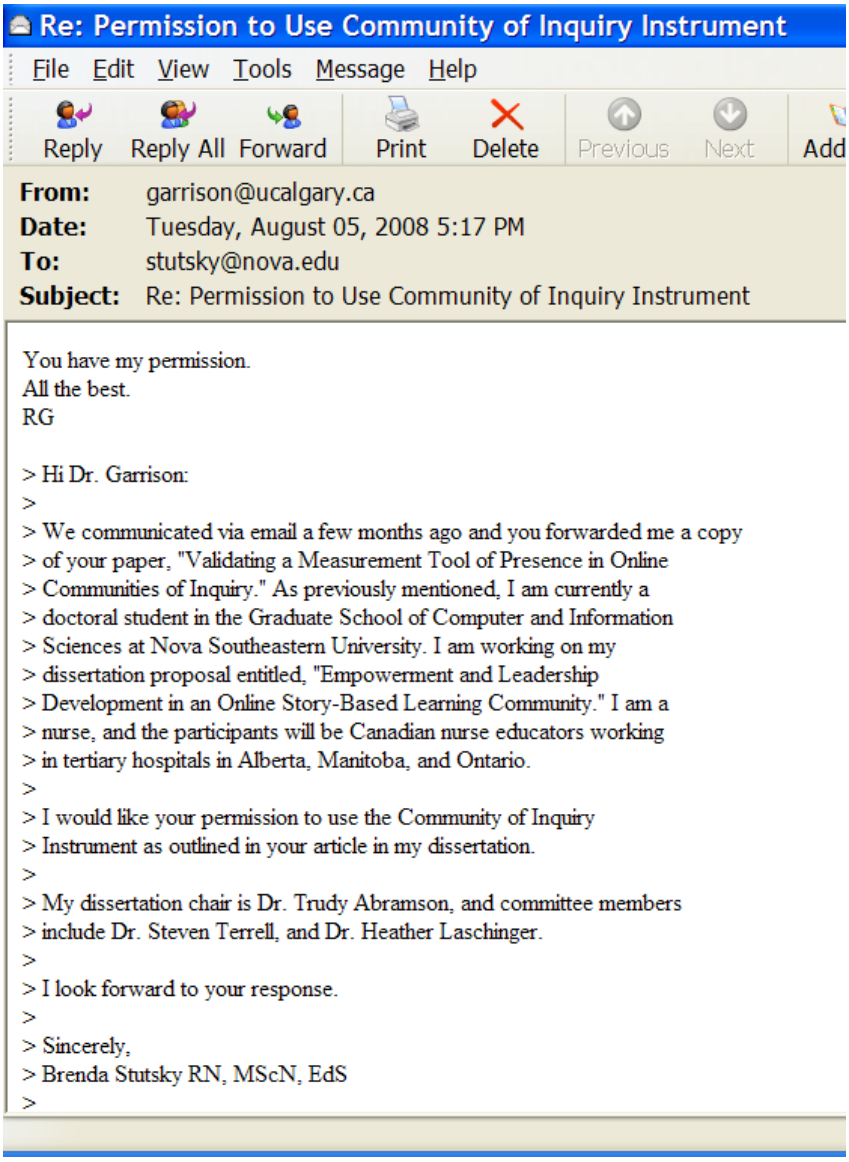
| | | |
|---|---|---|
| | | **Teaching Presence**<br>*Design & Organization* |
| | 1. | The instructor clearly communicated important course topics. |
| | 2. | The instructor clearly communicated important course goals. |
| | 3. | The instructor provided clear instructions on how to participate in course learning activities. |
| | 4. | The instructor clearly communicated important due dates/time frames for learning activities. |
| | | *Facilitation* |
| | 5. | The instructor was helpful in identifying areas of agreement and disagreement on course topics that helped me to learn. |
| | 6. | The instructor was helpful in guiding the class towards understanding course topics in a way that helped me clarify my thinking. |
| | 7. | The instructor helped to keep course participants engaged and participating in productive dialogue. |
| | 8. | The instructor helped keep the course participants on task in a way that helped me to learn. |
| | 9. | The instructor encouraged course participants to explore new concepts in this course. |
| | 10. | Instructor actions reinforced the development of a sense of community among course participants. |
| | | *Direct Instruction* |
| | 11. | The instructor helped to focus discussion on relevant issues in a way that helped me to learn. |
| | 12. | The instructor provided feedback that helped me understand my strengths and weaknesses. |
| | 13. | The instructor provided feedback in a timely fashion. |
| | | **Social Presence**<br>*Affective expression* |
| | 14. | Getting to know other course participants gave me a sense of belonging in the course. |

| | | |
|---|---|---|
| | 15. | I was able to form distinct impressions of some course participants. |
| | 16. | Online or web-based communication is an excellent medium for social interaction. |
| | | *Open communication* |
| | 17. | I felt comfortable conversing through the online medium. |
| | 18. | I felt comfortable participating in the course discussions. |
| | 19. | I felt comfortable interacting with other course participants. |
| | | *Group cohesion* |
| | 20. | I felt comfortable disagreeing with other course participants while still maintaining a sense of trust. |
| | 21. | I felt that my point of view was acknowledged by other course participants. |
| | 22. | Online discussions help me to develop a sense of collaboration. |
| | | **Cognitive Presence**<br>*Triggering event* |
| | 23. | Problems posed increased my interest in course issues. |
| | 24. | Course activities piqued my curiosity. |
| | 25. | I felt motivated to explore content related questions. |
| | | *Exploration* |
| | 26. | I utilized a variety of information sources to explore problems posed in this course. |
| | 27. | Brainstorming and finding relevant information helped me resolve content related questions. |
| | 28. | Online discussions were valuable in helping me appreciate different perspectives. |
| | | *Integration* |
| | 29. | Combining new information helped me answer questions raised in course activities. |
| | 30. | Learning activities helped me construct explanations/solutions. |
| | 31. | Reflection on course content and discussions helped me understand fundamental concepts in this class. |
| | | *Resolution* |
| | 32. | I can describe ways to test and apply the knowledge created in this course. |
| | 33. | I have developed solutions to course problems that can be applied in practice. |
| | 34. | I can apply the knowledge created in this course to my work or other non-class related activities. |

Code Number: _____

# Appendix M

## Permission to Use the Community of Inquiry Instrument



Re: Permission to Use Community of Inquiry Instrument

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**From:** garrison@ucalgary.ca
**Date:** Tuesday, August 05, 2008 5:17 PM
**To:** stutsky@nova.edu
**Subject:** Re: Permission to Use Community of Inquiry Instrument

You have my permission.
All the best.
RG

> Hi Dr. Garrison:
>
> We communicated via email a few months ago and you forwarded me a copy
> of your paper, "Validating a Measurement Tool of Presence in Online
> Communities of Inquiry." As previously mentioned, I am currently a
> doctoral student in the Graduate School of Computer and Information
> Sciences at Nova Southeastern University. I am working on my
> dissertation proposal entitled, "Empowerment and Leadership
> Development in an Online Story-Based Learning Community." I am a
> nurse, and the participants will be Canadian nurse educators working
> in tertiary hospitals in Alberta, Manitoba, and Ontario.
>
> I would like your permission to use the Community of Inquiry
> Instrument as outlined in your article in my dissertation.
>
> My dissertation chair is Dr. Trudy Abramson, and committee members
> include Dr. Steven Terrell, and Dr. Heather Laschinger.
>
> I look forward to your response.
>
> Sincerely,
> Brenda Stutsky RN, MScN, EdS
>

# Appendix N

## Demographic Questionnaire

## Empowerment and Leadership Development in an Online Story-Based Learning Community

**Directions**

Please complete this questionnaire by placing an "x" inside the box that corresponds to your answer. There are eight questions in total.

**Questions**

a. What is your gender?

1. Female ☐
2. Male ☐

b. What is your current age?

1. Less than 25 years ☐
2. 25 – 29 years ☐
3. 30 – 34 years ☐
4. 35 – 39 years ☐
5. 40 – 44 years ☐
6. 45 – 49 years ☐
7. 50 – 54 years ☐
8. 55 – 59 years ☐
9. 60 – 64 years ☐
10. 65 – 69 years ☐
11. 70 years or greater ☐

c. What is your highest level of education?

1. Diploma ☐
2. Bachelor's Degree ☐
3. Master's Degree ☐
4. Doctoral Degree ☐

d. What is your current employment status?

1. Full-time ☐
2. Part-time ☐
3. Casual ☐

e. Which one of the following describes your place of employment as a nurse educator?

1. Urban tertiary hospital ☐
2. Urban community hospital ☐
3. Rural hospital ☐

f. How long have you been in your nurse educator position?

1. Less than 1 year ☐
2. Between 1 – 5 years ☐
3. Between 5 – 10 years ☐
4. Between 10 – 15 years ☐
5. Between 15 – 20 years ☐
6. Between 20 – 25 years ☐
7. Between 25 – 30 years ☐
8. Between 30 – 35 years ☐
9. Between 35 - 40 years ☐
10. Over 40 years ☐

g. What is your total number of years of experience in nursing?

1. Less than 1 year ☐
2. Between 1 – 5 years ☐
3. Between 5 – 10 years ☐
4. Between 10 – 15 years ☐
5. Between 15 – 20 years ☐
6. Between 20 – 25 years ☐
7. Between 25 – 30 years ☐
8. Between 30 – 35 years ☐
9. Between 35 - 40 years ☐
10. Over 40 years ☐

h. How would you rate your general computer abilities compared to other nurses?

1. Below Average ☐
2. Average ☐
3. Above Average ☐
4. Expert ☐

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