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The Use of an Unfolding Case Study to Enhance Self-Efficacy in Nursing Students

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by

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Abstract

Nurse educators are challenged with preparing new nurse graduates that can function in the current healthcare practice environment of high patient acuity, morbidities, and information technology while maintaining patient safety and quality care management (Cronenwett et al., 2007). Therefore, nurse educators are amenable to exploring alternative teaching pedagogies that provide students with engaging learning opportunities that simulate real-life clinical scenarios they may encounter in professional nursing practice. This study explored the use of an unfolding case study as an innovative teaching strategy to enhance the perception of student self-efficacy. A one-group pretest-posttest descriptive design with a convenience sample of 17 second year associate degree nursing students enrolled in a complex health concepts course was utilized. The General Self-Efficacy Scale was used to measure perceived self-efficacy pre- and post-participation in an unfolding case study. The pretest mean was 3.20 (sd = 0.356) and the posttest mean was 3.38 (sd =0.396). The paired t-test result was 0.182 (sd = 0.300) with a statistical significance of 0.024.The results of this study supported the use of an unfolding case study as a teaching pedagogy to enhance nursing students' self-efficacy as they transition to enter professional nursing. Bandura's theory of self-efficacy (Bandura, 1977, 1986) and situation learning theory (Lave & Wenger, 1991) guided the conceptual framework of this study.

Keywords: unfolding case studies, self-efficacy, nursing education, teaching strategies, innovative teaching strategies, perceived self-efficacy, student learning, student-centered learning

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CHAPTER I

Introduction

The Carnegie Foundation for the Advancement of Teaching conducted a national study about the current status of nursing education (Day, 2011). One of the major recommendations of this study indicated the need for nursing education to "include more integration of classroom and clinical learning, and more teaching with a sense of salience, clinical imagination, and professional formation" (Day, 2011, p. 447). Stanley and Dougherty (2010) argued that nursing programs and nurse educators should re-consider the "teacher-centered curricular designs" and implement evidence-based teaching pedagogies that engage students in active learning (p. 378).

The complexity of our current healthcare system is being influenced by the increasing complexities of patient acuity and co-morbidities, technological and scientific advancements, demographic changes, and the financing of healthcare (Warner & Misener, 2009). Therefore, nurse educators should explore and consider innovative teaching strategies that will engage students in active learning "processes" that will facilitate critical thinking (Popil, 2011, p. 204).

Currently, one of the most difficult challenges for nurse educators is to identify creative and innovative teaching and learning methodologies that can be integrated into nursing curriculums that reflect the ongoing scientific and technological advancements that students need in preparation for entry into professional nursing practice. According to Ironside (2001, p. 441) the "reliance on conventional pedagogies has produced additive curriculum in which content is persistently added, while little is taken out." Delphier (2006) contends that additives curriculum may result in a constant tension for nurse

educators in identifying specific course content that needs to be revised or removed from content that should be integrated into curriculum. Likewise, students are inundated with massive amounts of content that may impede their academic performance. This may result in students experiencing low self-efficacy.

Self-efficacy is the primary construct of Bandura's Social Cognitive Theory (SCT). Bandura (1977) defined self-efficacy as the belief in one's ability to be successful in situation-specific tasks based on previous experiences. Being able to be successful in navigating the adversities of life provides the foundation for being confident when confronted with future obstacles. Self-efficacy is developed and influenced by four sources of information (Bandura, 1977):

- Personal performance accomplishments or mastery are based on successful learning outcomes from past learning experiences and opportunities. Success can enhance self-efficacy or failure can lower self-efficacy.

- Vicarious experiences are based on observing other individuals that model and demonstrate successful learning opportunities and experiences.

- Verbal persuasion occurs when an individual believes that they can be successful in performing a task-specific behavior based on the support and encouragement of other individuals that demonstrate success in their endeavors.

- Physiological and emotional states are based on individual sensitivity that may occur during completing a performance such as anxiety, increased heart rate, or nervousness. Such responses may impede individual performance and contribute to a low perception of self-efficacy in achieving a task-specific behavior for the learner.

SCT posits that individual behavior is related to the continuous interaction between personal, behavioral, and environmental factors and the continuous interaction among these factors is known as reciprocal determinism (Bandura, 1986). Crothers, Hughes, and Morine (2008) argue that these three dynamic factors can influence individual motivation to learn. According to Bandura (1986) personal factors are in the form of cognition, beliefs, attitudes, self-efficacy, and the motivation of the individual. The environment is comprised of the physical surroundings such as the classroom, and the social environment can be comprised of friends, family, faculty and students. Learning takes place in a social context by observing others (Bandura, 1986). Behavior is based on the performance of the individual. These three factors are interdependent in their reciprocal relationship for learning. Individuals "function as contributors to their own motivation, behavior, and development within a network of reciprocally interacting influences" (Bandura, 1999, p. 169).

The literature is robust with the use of case studies as a teaching strategy that can facilitate and foster critical thinking and engage students as active participatory learners. However, there is a distinct difference between case studies and unfolding case studies. Case studies are based on problem-based learning, and students must be self-motivated to explore and understand the outcomes to the case (Day, 2011). According to Azzarello and Wood (2006), situation-based case studies provide students with all of the information that is salient to the case. Hence, students may not be challenged to critically reflect and critically identify several solutions to the case study.

Reese (2011) stated that unfolding case studies "evolve over time in a manner that is unpredictable to the learner" (p. 344). Also, unfolding case studies engage students

with situation-based scenarios that can challenge students to critically analyze and evaluate patient outcomes before they are provided additional information related to the situation-based scenario (West, Usher, & Delaney, 2012). In professional nursing practice, the delivery of patient care is initiated before all of the patient data is available.

The utilization of unfolding case studies as an innovative teaching strategy is recommended in the *Essentials of Baccalaureate Education for Professional Nursing Practice* ("Faculty Toolkit," 2009). In fact, the use of an unfolding case study is an exemplar for *Essential IX* ("Faculty Toolkit," 2009). *Essentials I-VIII* defined the expected learning outcomes for graduates of baccalaureate nursing programs and *Essential IX* described the practice role of baccalaureate graduates as nurse generalists. However, the nursing literature was very limited on investigating the perception of student self-efficacy when unfolding case studies are utilized as a teaching pedagogy.

This capstone project evaluated if the use of an unfolding case study would result in an increase in self-efficacy and therefore greater academic performance and the ability to integrate essential knowledge domains for second year associate degree nursing students.

Problem Statement

The use of case studies in the evaluation of self-efficacy has been investigated in nursing literature. However, there is a dearth in the nursing literature about the use of unfolding case studies as an innovative teaching strategy to enhance the perception of student self-efficacy in academic performance which can result in the ability to integrate essential nursing knowledge domains.

Justification of Project

Our healthcare system is driven by information technology and outcomes-based clinical practice (Stanley & Dougherty, 2010). Therefore, it is imperative for nurse educators to implement teaching pedagogies and innovative teaching practices that reflect the cognitive and clinical practice demands in the classroom. Ironside (2001, p. 74) argued the "use of alternative pedagogies begins by challenging the self-evident assumptions of conventional approaches to nursing education." Moreover, Azzarello and Wood (2006, p. 11) argued that unfolding case studies "more accurately reflect actual situations in nursing practice where much of the problem data are not immediately available."

Unfolding case studies engage students to actively participate the learning process. The traditional lecture format is teacher-centered (Stanley & Dougherty, 2010). Moreover, students may learn teacher-centered knowledge through "memorization, repetition, and recitation of information" (Candela, Dalley, & Benzel-Lindley, 2006, p. 11). Hence, it is important for nurse educators to be "agents of change," to "bridge the chasm between academic preparation and nursing practice" (Stanley & Dougherty, 2010, p. 379). Unfolding case studies can serve to create cognitive-salience between classroom content and clinical practice for nursing students. Unfolding case studies can be utilized as situation-based learning activities for students to collaborate as a community of practice with the nurse educator as a facilitator of teaching-learning process.

Statement of Purpose

The purpose of this project was to determine if the use of unfolding case study will have a measureable impact on the perception of self-efficacy in second-year nursing students.

Project Question

The purpose of this project was to answer the question:

Is there a significant impact on nursing students' perception of self-efficacy when exposed to an unfolding case study while enrolled in a complex health concepts course? The research question was investigated with a one-group pretest-posttest descriptive design. The General Self-Efficacy (GSE) scale was used to measure the perception of self-efficacy of second-year associate degree nursing students that were exposed to an unfolding case study using a student-centered teaching strategy. The population, intervention, comparison, and outcome (PICO) format were used to investigate the study (Figure 1).

- Population (P): Second-year associate degree nursing students in a complex health concepts course.

- Intervention (I): Implementation of an unfolding case study as a teaching strategy to evaluate the perception of self-efficacy.

- Comparison (C): Compare student's perceived level of self-efficacy before and after exposure to an unfolding case study.

- Observation (O): Students will have an increased level of perceived self-efficacy with an unfolding case study that is a situation-based with student-centered learning activities.
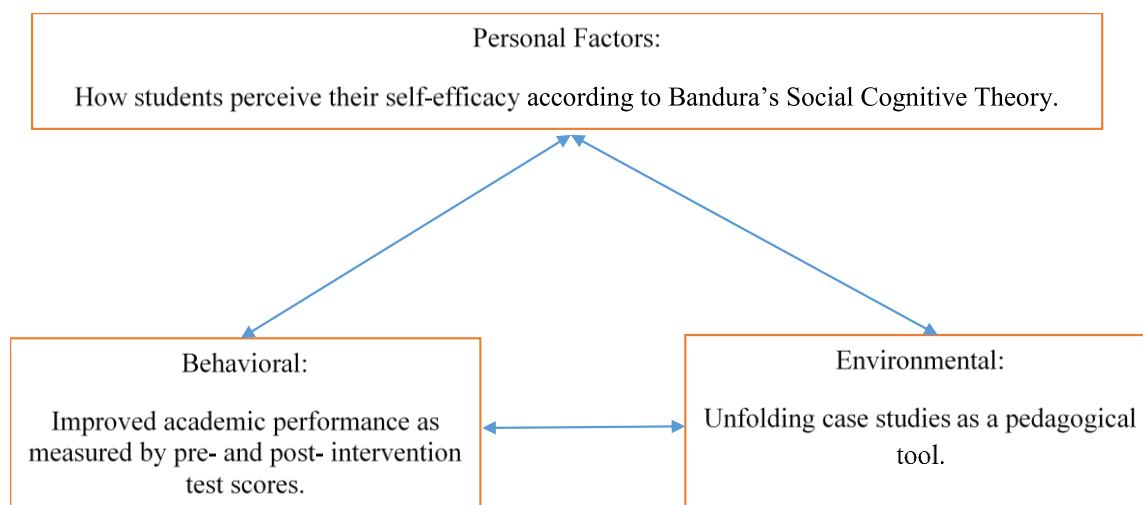
Figure 1. CTE Diagram relating to Bandura's SCT to Capstone Project

Definition of Terms

For the purposes of this capstone, the following terms will be used in this study.

- Self-efficacy: The "perception of one's capability to mobilize the motivation, cognitive resources, and courses of action required to meet given situational demands." (Glanz, Burke, & Rimer, 2011, p. 258).

- Perceived self-efficacy: Is defined as "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances." (Bandura, 1986, p. 391).

- Traditional lecture: Teacher presentation of course content to students (Rowles, 2012).

- Situated Learning Theory: Active learning activities are contextualized to reflect the real-life ambiguities and complexities of instructional content (Lave, & Wenger, 1991).

- Social Cognitive Learning Theory: Learning is acquired by an interrelationship between the learner's personal characteristics such as cognition and previous constructs of reality, behavior, and environmental influences (Bandura, 1977).

- Unfolding case studies: "An adaption of a traditional case study that goes a step further to allow the application of the knowledge, skills, and attitudes required in a clinical setting that simulates real-word events." (Reese, 2011, p. 344).

- General Self-Efficacy Scale: Used to assess an individual's general sense of perceived self-efficacy with the goal to predict one's ability to cope with the daily hassles of life as well as the ability to adapt after experiencing all types of stressful life events (Schwarzer & Jerusalem, 1995).

- Reciprocal Determinism: The interdependent relationship between personal factors, environmental factors, and behavior in the performance of learning outcomes (Bandura, 1986).

Summary

It is important for nurse educators to consider alternative teaching pedagogies that are student-centered in order to engage students in active learning activities that foster and facilitate critical thinking skills and clinical decision-making. The literature supports the use of unfolding case studies as a student-centered teaching strategy (Day, 2011). Unfolding case studies provide students with a situated-based scenario that

evolves over time. The instructor is the facilitator during this learning process as students offer solutions as the unfolding case study evolves and unfolds.

Unfolding case studies are low-fidelity simulations that can create an authentic learning experience for students by providing situation-based scenarios they may experience as they transition from new nurse graduates into professional nursing practice (Candela, 2012). According to Durham and Sherwood (2008, p. 436) "contemporary learners want interactive teaching that engages knowledge and skills with real world examples so they can develop clinical reasoning and judgement to apply later in practice.

CHAPTER II

Review of Literature

Based on research by the Carnegie Foundation for the Advancement of Teaching, there is a need for a "radical transformation in how we teach the practice" (as cited in Day, 2011, p. 447). *The Essentials of Baccalaureate Education for Professional Nursing Practice* ("Faculty Toolkit, 2009) document includes integrative learning strategies will enhance student achievement and outcomes. Therefore, it is imperative for nurse educators to utilize evidence-based teaching strategies that are student-centered, that are designed to involve students in active learning experiences, which can provide "hands-on" cognitive experience in the classroom (Popil, 2011, p. 205). The use of unfolding case studies in the classroom will enable students to experience a "sense of salience" in the learning process from the classroom to clinical practicums as nursing students (Day, 2011, p. 447). Moreover, unfolding case studies can provide students with learning experiences to develop "habits of thought" by contextualizing real-world situations that students may encounter in the workplace environment as they transition into professional nursing practice (Tanner, 2009. p 300).

The purpose of this study was to investigate the use of an unfolding case study to enhance self-efficacy in second-year associate degree nursing students. Consistent with the aim of this study, the review of the literature was as follows: (a) literature that describes the use of unfolding case studies in nursing education and (b) literature that describes the use of unfolding case studies and self-efficacy in nursing education.

A search of nursing literature published between 2004 and 2014 on teaching strategies in undergraduate nursing education was conducted from a variety of databases

and search engines such as the Cumulative Index to Nursing and Allied Health Literature (CINAHL), ProQuest, Elton B. Stephens Company (EBSCOhost), Area Health Education Center (AHEC) digital library, Medline, and the search engine Google Scholar. The key terms for the search were nursing education, teaching strategies, innovative teaching strategies, student-centered learning, unfolding case studies, self-efficacy, perceived self-efficacy, and student learning.

Unfolding Case Study and Clinical Skill Development

Mills et al. (2014) evaluated first-year undergraduate nursing students' (n=95) satisfaction with the use of unfolding case studies in a high-fidelity clinical environment with standardized patients for clinical skill development. In fact, the study was developed based on course feedback that specifically identified an increased need for experiential learning experiences in clinical skill development. To increase the realism of the situated learning experience in a real-world hospital clinical unit with standardized patients role-playing the unfolding case study, each session was videotaped and each student group was debriefed with feedback from video playback and from the instructor. Two unfolding case studies were designed and the first unfolding case study consisted of four situation-based clinical scenarios that were based on one patient's experience. The second unfolding case study consisted of two scaffolded clinical scenarios. Students usually worked in pairs, but some groups consisted of three students. Five minutes before entering the high-fidelity simulated clinical unit and meeting a standardized patient, each group received one of the six situation-based clinical scenarios that included the clinical skills that were expected to be demonstrated within 15 minutes. The clinical skills that had previously been taught to all first-year undergraduate students included a general

neurological assessment, taking and assessing vital signs, performing activities of daily living, basic care and comfort, medication administration, and wound assessment.

An instructor in the role of a registered nurse was available to provide support and guidance if the student group requested assistance during the unfolding clinical scenario. When the 15 minutes were over, each student group was debriefed, and each student was asked to share how they felt during the unfolding case study scenario and after the unfolding case study had concluded. In addition, the instructor provided immediate feedback based on playback from the video including learning opportunities to connect theory to practice from the video and student responses. Feedback from all of the student groups served as a catalyst for instructors to generate discussion questions for students to critically reflect about alternative nursing interventions related to each unfolding case study scenario and for students to reflect upon the interconnectedness in the application of classroom theory and clinical practicums.

One of the most salient elements of the study was the use of standardized patients that were utilized as the conduit to unfold the case study. The standardized patients received a copy of the situation-based clinical scenario that included statements and cues for the students as the cased unfolded one week prior to the simulation. This provided sufficient time for the standardized patient to prepare and reflect upon how they would role-play the scenario. In addition, the instructors and standardized patients would meet and collaborate about the unfolding case scenario two-to-three days before the simulation session, and a final briefing between the instructors and standardized patients occurred on the day of the actual simulation with the students.

The researchers used three evidence-based assessment instruments from the National League for Nursing (NLN) that were based on simulation studies by Jeffries and Rizzolo (2006) and other research studies that investigated nursing students and simulation. The three NLN instruments for the study were Student Satisfaction and Self-confidence in Learning, Education Practices Questionnaire, and Simulation Design Form. Individual student satisfaction scores ranged from 3 (undecided) to 5 (strongly agree) on a 5-item scale. The average student satisfaction score was between 4.0-5.0 and the overall mean score was 4.6 with a standard deviation of 0.4. The results indicated the students were very satisfied with the unfolding case study simulation experience. The individual scores about the student's self-confidence with learning in a simulation environment ranged from 1 (strongly disagree) to 5 (strongly agree) with an individual mean ranging from 3.6 to 5.0 and the overall mean for self-confidence was 4.3. The standard deviation was 0.7. These results indicated that students were self-confident about learning in a simulated environment. The Education Practices Questionnaire had four educational practice scales about active learning, collaboration, diverse ways of learning, and high expectations. Scores ranged from 2 (somewhat important) to 5 (very important) for active learning and collaboration. The scores ranged from 3 (neutral) to 5 (very important) in diverse ways of learning and high expectations. Also, 95% of student responses in each of the practice areas were a score of 4 (important or 31%) or 5 (very important or 64%). These results indicated that students felt diverse educational practices were important in learning acquisition and attainment. The simulation design included course objectives, student support, problem-solving, video feedback, guided reflection, standardized patients, and high-fidelity realism. Generally, the results indicated that students agreed

that the simulation design was an important aspect of experiential learning. In the areas of active learning, collaboration, diverse ways of learning, and high expectations, 96% of all responses in these subsections scored either a 4 (important or 21%) or 5 (very important or 75%).

The major strength of the study was the use of standardized patients in situation-based clinical scenarios that unfolded and evolved as the nursing students were engaged in providing patient care. Also, students were able to identify areas that provided opportunities to learn and understand areas in which they perceived the lack of self-confidence after the scenario concluded. The students were very positive about the use of working with standardized patients that enhanced their learning acquisition and learning outcomes. One major weakness of the study was the inability to compare and measure learning outcomes from students that participated in the study with students that were enrolled in the same course the previous year without high-fidelity simulation.

Unfolding Case Study and Clinical Problem Solving

McCormick, de Slavy, and Fuller (2013) developed a comparative-quantitative research study using an experimental design to assess and evaluate the use of technology in undergraduate nursing education. Specifically, the authors compared two teaching strategies; a digital media classroom (DMC) lecture and YouTube video clips and an unfolding case study scenario using simulation to teach and assess student assessment skills with patients with diagnosed with Parkinson's disease in a nursing skills clinical laboratory. Eighty-four undergraduate nursing students participated in this study.

In order to measure changes in the cognitive domain of knowledge, a pretest and posttest of 10 questions were administered to the control and experimental groups. These

questions were written based on Bloom's taxonomy on the analysis, synthesis, and evaluation levels and the questions consisted of alternative questions such as multiple-choice, matching, true/false, and click and point. In addition, a note-taking guide was developed for students to have information about the structure and function of the nervous system, terms and definitions related to Parkinson's disease, how to conduct a neurological assessment for Parkinson's disease, and an electronic form was developed for documenting nursing notes for students in the clinical laboratory.

The control group and experimental group had to complete pre-simulation activities and exercises such as reading E-articles about Parkinson's disease and becoming familiar with the two most commonly used Parkinson's disease rating scales (Hoehn and Yahr and the United Parkinson's Disease Rating Scale). These learning activities were posted online one week before the class. The control group had to take the 10-item pretest before lecture and afterwards they received a videotaped PowerPoint lecture about how to assess and perform a neurological assessment with video clips from YouTube. Students could use their note-taking guide to write down how to complete a neurological examination. The DMC lecture was one hour and 15 minutes, and a 10-item posttest with alternative questions was administered after the DMC lecture was completed.

Students in the experimental group were assigned to the clinical skills laboratory, and they were divided into three groups with one nursing instructor that would be the facilitator of the group. Each group was assigned to a patient with signs and symptoms of early, middle, or late stage of Parkinson's disease. The unfolding case study simulation was set up in the clinical skills laboratory. Moreover, students had access to all of the

equipment they would need to perform a neurological examination. Furthermore, students were given a blank neurological form to complete during the assessment with patient information with the patient's chief medical complaint, medical orders, and sample dialogue about the patient's family members. Specific information included in the unfolding case study scenario included patient biographical information, laboratory values, patient medications, and an RN-to-RN shift report.

Each student group had to perform a neurological assessment that was based on either the early, middle, or late stage of Parkinson's disease. The role of the instructor was to facilitate and not interfere with any decisions of the group in performing the neurological assessment. Each student had an assigned role in their group in unfolding case study scenario that included completing the assessment form. The individual roles included a primary nurse, student nurse, wife, son, two observers, and an individual that was assigned to be the voice of the patient communicated through a microphone. After each group completed their time-sequenced scenario, each group was assigned to develop and write an electronic nurses note about their patient. Then, each group met collectively to present their patient's case and to reflect about the learning experience, including writing nursing diagnoses.

Data results from a within-group and between-group data analysis were used to compare and measure the teaching strategies for using DMC lectures and a low-fidelity unfolding case study learning experience in a clinical skills laboratory. The results of a paired-sample pretest and posttest indicated that there was a significant difference in the teaching strategy using a DMC lecture with video clips and the low-fidelity unfolding case study. The results of within-group analysis indicated that the control group and

experimental group had significant increases in their posttest scores (p = .40). However, students in the low-fidelity unfolding case study (experimental group) had significantly higher posttest scores (p = .31) than students that received the DMC lecture (control group). The pretest and posttest scores for the control group were 4.37 and 4.93, respectively. The pretest and posttest scores for the experimental group were 4.69 and 6.22, respectively. The results of this study suggested that the low-fidelity unfolding case study was more effective as a teaching strategy than a videotaped lecture.

The major strength of this study was the use of an unfolding case study to teach how to assess and perform a neurological assessment and engage in decision-making in the delivery of patient care in a safe and non-threatening environment. An additional strength of the study was the integration of technology into nursing curricula. Nursing students of today are very adept in using technology in their personal lives; therefore, it would be a seamless transition for them to learn academic content presented in technological delivery platforms. The study did not indicate any challenges or difficulties that future researchers should be cognizant of for replication of the study.

Unfolding Case Study and a Subject-Centered Classroom

The Carnegie Foundation for the Advancement of Teaching is a national study about nursing education and the study posits the importance for nursing educators to develop and implement innovative teaching pedagogies that will transform nursing practice (Benner, Sutphen, Leonard, & Day, 2010). Day (2011) supports the work of David Palmer, a renowned master educator, as a teaching strategy to create the salience between classroom and clinical learning.

According to Palmer (1998, p. 119), the subject-centered classroom is a "classroom in which the best features of teacher-and-student education are merged and transcended by putting not teacher, nor student, but the subject at the center of our attention." In education, the subject at the center of teaching and learning in the classroom is "knowledge, practice, and purpose" and in nursing education, the relationship between the "patient, client, family, and community" is the subject of nursing practice (Day, 2011, p. 448- 449). Therefore, the instructor and students can collaborate as a community of learners about issues and concerns that are salient to the patient/client/family/community relationships, and this process becomes the center of the discussion in the classroom for teaching and learning in nursing education.

Day (2011) believed that nurse educators can create a subject-centered classroom by making the subject (patient, client, family or community) central in an unfolding case study. This can be accomplished by transforming lecture content into a "narrative that will serve as the center of active classroom discussion" (Day, 2011, p. 449). This will enable the nurse educator to create an unfolding narrative about the patient, client, family, or community for class discussion while teaching the major principles, theories, and concepts that students are expected to learn based on the learning objectives of the curricula. Day (2011) described a systematic process in which "class can be transitioned to interactive discussion where, ultimately, class time will be structured around a case study as it unfolds and lecture will have a small, or even non-existent role" (p. 44).

The first step in transforming lecture slides to an unfolding case scenario is to identify the goal of the class and the learners. It is imperative to identify the goals of the class and where the class content is placed in the overall curriculum. Secondly, identify

the content that will be discussed during class. When developing an unfolding case study

that will be subject-centered, there will not be a lot of slides that are content-rich.

However, the majority of the content can be covered during classroom discussion in the

delivery of patient care and this can include the primary concepts, principles, and facts

you want the students to learn and discuss. This will provide the framework in which to

develop the unfolding case narrative and the possible directions that narrative can take as

the case unfolds. The third step in the development of an unfolding case narrative is to

identify what you want the case to do; this will enable the nurse educator to determine

how the patient will be introduced to the students. According to Day (2011, p. 450), the

"introduction will determine the opening of the narrative that will foreshadow how the

case will unfold, and it should be based on the overall goals of the class." The

introduction can be based on the healthcare setting in which the patient is receiving care

in the narrative such as in a primary care setting, an acute care setting or an ambulatory

care setting. The fourth step is to identify who the patient will be and create a patient that

is salient to the content areas of your class objectives. Lastly, create the unfolding case

narrative based on the outline that was developed from previously used lecture notes or

from clinical experiences from professional nursing practice. Day (2011) described each

step of the process with an example about the care of a hospitalized patient with heart

failure.

Day (2011) provided nurse educators with a systematic process in which lecture

notes could be transformed into an unfolding case study. Therefore, nurse educators can

transition lecture notes from PowerPoint slides that are laden with facts to an unfolding

case study that "drives the concepts and content a nurse needs to provide the best care in

a particular situation; students learn in the classroom by using knowledge to plan care"
(Day, 2011, p. 451).

Unfolding Case Study and Critical Thinking Development

According to West, Holmes, Zidek, and Edwards (2013), nurse educators have
used simulation as a teaching strategy to improve critical thinking and clinical decision-
making. However, nurse educators may not be cognizant that critical thinking
development progresses through specific stages (West et al., 2013). Critical thinking
development is based on the research of Paul and Elder (2014) and includes six stages:

- Stage One: The Unreflective Thinker – The thinker is unaware there are problems
  with their thinking.

- Stage Two: The Challenged Thinker – The thinker has significant problems with
  their thinking.

- Stage Three: The Beginning Thinker – The thinker tries to improve their thinking,
  but without regular or consistent practice.

- Stage Four: The Practicing Thinker – The thinker practices on a regular basis and
  begins to improve in their thinking.

- Stage Five: The Advanced Thinker – The thinker has become committed to a
  lifelong practice of critical thinking.

- Stage Six: The Accomplished Thinker – The thinker has developed the ability to
  think critically as a way of life.

The purpose of the research study by West et al. (2013) was to enhance
undergraduate junior nursing students to progress from stage three (the beginning
thinker) to stage five (the advanced thinker), which is demonstrated on the senior level.

Stage three thinkers recognized that there were problems with their ability to think critically, and they were willing to commit to the process of improving their critical thinking skills. Stage five thinkers have developed the ability to think critically in dealing with complex situations, and reasonably come up with solutions to problems. West et al. (2013) modified and re-designed three of the National League for Nursing (NLN) unfolding simulated case studies for the research study. One of the case studies was modified to include advanced nurse practitioners in a simulated scenario to demonstrate the leadership roles of advanced nurse practitioners for intraprofessional collaboration.

The Just Culture Model was included in the study. The premise of this model was to provide a safe, non-judgmental, and non-punitive environment when the professional nurse makes a mistake, such as a medication error. The basic principle of Just Culture is to "move away from punitive models of error reporting, and advocates that individual practitioners should not be held accountable for system failings over which they have no control" (American Nurses Association, 2010, para. 5). The Just Culture concept was used for the debriefing process after each unfolding case simulation scenario. Hence, the study included the stage theory to improve critical thinking, the Just Culture model for simulation debriefing, and three unfolding simulation case studies from the NLN that were modified for the purposes of the study. The Simulation Information Management System (SIMS) Evaluation Questionnaire was used to evaluate student satisfaction with the unfolding simulation exercises. Twenty-six undergraduate nursing students, specifically juniors and seniors, participated in the study.

Eighty-five percent of the students agreed that the unfolding case studies were appropriate learning activities, including the Just Culture debriefing model and

intraprofessional collaboration activities. Also, 84% of the students indicated satisfaction with the unfolding simulation case studies. Results of the study indicated that senior-level nursing students (the advanced thinker) demonstrated leadership skills by mentoring and nurturing junior-level nursing students (the beginning thinker) during the unfolding simulation learning activities. The junior-level nursing students were able to recognize problems with their thought processes during unfolding simulations as well, particularly during debriefing exercises. According to the authors, the modified simulations were "robust, meaningful experiences for students that provided a simulated experience of continuity of care and helped students to integrate safety concepts and essential nursing actions into their practice" (West et al., 2013, p. 474).

One of the major strengths of the study was the application of the stage theory to promote and enhance critical thinking development in junior and senior-level nursing students by modifying three NLN unfolding simulation case studies to teach the curriculum. Another major strength of the study was the use of the Just Culture model after each simulation debriefing session to teach students as they prepare for professional nursing practice. This approach helped students to understand the importance of taking personal and professional responsibility in improving organizational and system issues in the delivery of safe patient care, and to recognize the importance of creating a supportive workplace environment that promotes a culture for patient safety, quality patient care, and positive patient outcomes. The exhaustive amount of time that was required to modify the NLN unfolding case studies to meet the learning needs of the students and the inability for each student group to observe the simulation exercises at the patient's bedside were listed as limitations of the study.

Unfolding Case Study and Situated Peer Coaching

Himes and Ravert (2012) investigated the use of unfolding case studies and situated learning theory in an undergraduate fundamentals skills laboratory nursing program. In the design of the study, the authors included unfolding case studies with clinical scenarios that would provide students with learning opportunities that would "move from task-based proficiencies to higher-level competencies that provide a foundation for care management knowledge and decision-making skills under a variety of clinical situations and care setting" as described in the report issued by the Institute of Medicine (IOM), *The Future of Nursing: Focus on Education,* 2010 (para. 9). The IOM report recommended the use of innovative learning models in nursing education that will transform the current teaching strategies utilized by nurse educators to models of learning that will engage students to be actively engaged in the learning process in the application and comprehension of the content as opposed to rote-memorization.

The design of the study by Himes and Ravert (2012) was influenced by the principles of situated cognition and situated coaching by Benner et al. (2010). According to the situated cognition principle, the nurse educator provides a learning environment in which the student is able to think through and process "clinical situations" (Benner et al., 2010, p. 30). In situated coaching, the nurse educator coaches the student in the classroom and clinical setting, and provides feedback as the student learns how to critically develop the ability to utilize nursing knowledge, clinical decision-making skills, and clinical judgement in providing patient safety and quality patient care (Benner et al.,

2010). Himes and Ravert (2012, para. 2) modified the principle of situated coaching for the study and used the phrase "situated coaching" to describe the use of situated peer coaching in the fundamentals skills laboratory. Specifically, instead of using an instructor as the coach in the unfolding case study, same-level peers coached each other in the fundamentals skills laboratory. Peer coaching described "same-level students or practitioners assisting one another" in meeting learning objectives (Himes & Ravert, 2012, para. 8) and according to Ladyshewsky (2010), peer coaching provided students with formative feedback that is not associated with a grade. In order to provide context for the scripted unfolding case studies, Paige and Daley (2009) recommended writing the script based on the people, ingredients, and activities. A systematic process in developing a scripted unfolding case study should include: (1) identifying the case topic and review the literature, (2) developing the learning objectives, (3) outlining how the case will progress and unfold, (4) creating a narrative about the patient that includes the learning objectives, (5) writing the unfolding case study, (6) developing and writing guidelines for the facilitator, and (7) reviewing the unfolding case study prior to implementation in the classroom (Page, Kowlowitz, & Alden, 2010).

The study sample size was 104 students. The objectives of the study were to measure the effectiveness of situated peer coaching of unfolding case studies on student satisfaction, student perceptions of learning, and student self-evaluations after implementing situated peer coaching with scripted unfolding case studies in the Fundamentals Skills Laboratory.

The study used a mixed methods research design. The first research question utilized a quasi-experimental design with no control group for both the pretest and

posttest. The second research question utilized quasi-experimental repeated measures quantitative research design without a control group and the third research question used a qualitative approach to evaluate student comments after each fundamentals skills laboratory.

The instrument for the study was The University Student Ratings tool, an instrument that was developed by the instructional design team that based the tool on best practice and learning in education. This assessment tool is administered anonymously over the internet, and students are asked to rate their individual courses and the course instructor. The five measures on the instrument that were in alignment with the study objectives were the overall course, amount learned, effectiveness of materials and activities, active student involvement, and effectiveness of concept questions. The Simulation Evaluation tool developed by T.F. Cicero and A.W. Mikasa was used to evaluate student performance in the areas of (1) assessment, intervention, evaluation, (2) critical thinking, clinical decision-making, (3) direct patient care, (4) communication, collaboration, and (5) professional behaviors. Students were able to evaluate themselves on a 6-point Likert scale ranging from a score of $0 - 5$. A score of "0" represents" below expectations" and a score of "5" represents "exceeds expectations." Blank space was provided on the instrument for students to write comments and provide feedback, and to share their experiences about the fundamentals skills laboratory. Thematic analysis was used to analyze the comments students wrote on the Simulation Evaluation tool. In order to review and evaluate the data, codes, and themes, the primary investigator and research assistants met on a weekly basis. The authors used in vivo coding and open coding to identify remarkable themes and experiences of the students.

The scripted unfolding case study unfolded each week for the 14-week semester in 15-45 minute simulated clinical scenarios. The authors developed unfolding scripted case studies for four imaginary patients. Each of the four patients had a chart that included information such as history and physical, progress notes, nursing notes, and laboratory values. The skill-set students were expected to demonstrate for the fundamentals skills lab was embedded in the unfolding case study. Prior to the implementation of the unfolding case study, the clinical laboratory instructor demonstrated the new skills that were embedded in the case study, and students were expected to demonstrate previously learned skills. Then students were placed in pairs with one student acting as the coach and the other student was the nurse for each scenario. The peer coach followed a detailed script to facilitate the unfolding of the case study through role-play. The peer coach provided realistic feedback to their student partner. The unfolding script has specific questions for the coach to ask their partner as the case study advances. The student nurse is able to practice and demonstrate psychomotor skills, problem-solve, and demonstrate communicate skills as the case unfolds. Furthermore, students are expected to ensure patient safety and demonstrate infection control in the delivery of patient care during each unfolding case study. The peer coach and student nurse participate in a debriefing at the end of each scenario. The clinical instructor monitors the coach and student nurse as the case unfolds and provides feedback during the debriefing. The students switch roles at the end of each scenario and a new scripted case study unfolds.

The findings for research question one indicated that there was not a statistically significant difference ($p > .05$) in the student ratings of the course for pretest and posttest

when implementing scripted unfolding case studies in a fundamentals skills laboratory. The evaluation instrument rated student comments on an 8-point scale from 1= very strongly disagree, to 8 = very strongly agree, or from 1 = exceptionally poor, to 8 = exceptionally good. Students rated the course above average, a "7" on both the pretest and posttest after implementing situated peer coaching with scripted unfolding case studies.

The findings for research question two, self-evaluation of student perceptions of learning when implementing scripted unfolding case studies in a fundamentals skills laboratory indicated students' self-assessments of performance were high (p < .000) and gradually increased over the course of the 14 weeks. Results from The Simulation Evaluation tool indicated that student self-assessment significantly increased as the course progressed in the fundamentals skills laboratories for hygiene, mobility, oxygenation, medication laboratory one, medication laboratory two, medication laboratory three, wound care, urinary and bowel care. The fourth and fifth fundamentals skills scenarios were not situated peer coaching with unfolding case studies. These laboratories were preparatory fundamental clinical scenarios for the sixth clinical scenario, medication administration.

A qualitative analysis of student comments on The Student Evaluation Tool identified major themes such as student preparation, communication with the patient, working with simulated peer coaching, critical thinking, and learning through scenarios. An analysis of student comments indicated their commitment in preparing for the fundamentals skills laboratory. Students shared positive comments about their learning

experiences with a situated peer coach and being able to give and receive formative feedback from their peer coach.

This is the first innovative research study to report on same-level situated peer coaching by using scripted unfolding case studies in a fundamentals skills laboratory (Himes & Ravert, 2012). A major strength of the study was student preparation. Students were provided instructions on coaching at the beginning of the semester and they were instructed on how to provide adequate time for the student nurse to answer questions as the scripted case study unfolded. In addition, prior to each fundamentals skills laboratory, students were asked to prepare by completing pre-laboratory reading assignments, viewing skills videos, attending lecture, and completing open-book group quizzes. A limitation of the study described in the study was the lack of a control group and the inability to determine if situated peer coaching with a scripted unfolding case study would impact student performance in the clinical practicums.

Unfolding Case Study and Simulation in a Pre-registration Course

West et al. (2012) developed and implemented an unfolding case study with a sample size of 226 nursing students enrolled in a 10-week first-year Australian regional pre-registration course. The case study was purposely developed to provide students with clinical scenarios based on real-world experiences and clinical situations they could actually encounter in their clinical practicums. Furthermore, the authors used a developmental approach suggested by DeSanto-Madeya (2007) for writing case studies, specifically from simplex-to-complex in order to enhance student ability to grasp and understand the case as it unfolds. Prior to the implementation of the unfolding case study, all faculty and staff that were participating in the course were briefed about the purpose

and aim of the unfolding case study to provide students with situated learning experiences in the clinical skills laboratory that could enhance their clinical performance during the first three weeks of clinical practicums. During this briefing process, faculty and staff were able to discuss, critique, and provide feedback about this teaching strategy. Tutors were provided a folder that contained an outline of the case study as it weekly unfolded over the course of the semester, course lectures with the teaching plans for the lectures, tutorials, and laboratory sessions.

Students were encouraged to prepare for the unfolding case study over the course of the semester by attending weekly lectures, tutorials, and clinical laboratory sessions; participating in online weekly discussion forums about the unfolding simulated case study; and participating in learning activities that promoted communication, collaboration, and clinical-decision-making skills. Students were provided incremental information for nursing care management such as specific documents that would be required in the care of the patient, progress notes, laboratory values and medications. Students had to utilize and demonstrate previously learned patient information and skill-set along with newly acquired information about the patient and skill-sets during weekly patient care management. The weekly unfolding simulated case study included lecture, a clinical skills laboratory session, a tutorial session, and specific patient information to facilitate experiential learning experiences that included principles about safety and quality patient care.

This study contributed to the body of nursing literature by providing significant information about the strengths and limitations about implementing an unfolding case study. Students shared positive comments about implementing a simulated unfolding case

study in the course. Generally, student grades in the course improved from the previous year without an unfolding case study. Furthermore, feedback from students indicated enhanced clinical performance and two clinical agencies shared with the authors an enhanced perception of critical thinking skills by the students during clinical practicums. West et al. (2013) described the lessons they learned about designing and implementing future unfolding case studies for the course based on feedback from students, tutors, faculty, and lab assistants after the unfolding case study was completed. First, it is important to recognize that implementing a new learning strategy that students have not participated in before can be quite daunting and overwhelming for students. West el al. (2013) recognized some students may not have experienced positive learning outcomes due to poor time management and not completing their assigned weekly learning activities on a weekly basis. Feedback from tutors and students suggested the case study did not unfold from simple-to-complex. The authors recognized the case study was not developed from simple-to-complex and this could have contributed to poor learning outcomes. Students experienced positive learning outcomes in demonstrating clinical laboratory skills, but students did not experience positive learning outcomes in documenting patient care and demonstrating critical thinking as the case unfolded due to the complexity of the case scenario. Therefore, case studies in the future for the course will not be an acute care patient with complex nursing management issues. Students will be able to provide patient care to a patient that is experiencing overall good health. Hence, students will be able to learn how to assess and learn how to provide patient care based on concepts and principles that will enable them to provide basic care and comfort as compared to the acute care patient in the unfolding case study. West et al. (2013)

described the importance for students to receive immediate and continuous feedback to facilitate student learning from simple-to-complex, unfold patient information during the case that is salient in patient care, and the facilitator must collaborate and guide the students during the course of the unfolding case study to assist students in applying critical thinking skills during the situated learning process.

Self-Efficacy and Perceived Self Confidence in Health Teaching

Goldenberg, Andrusyszyn, and Iwasiw (2005) used Bandura's Theory of Self-Efficacy as the conceptual framework for the study to investigate the effects of classroom simulation on third-year baccalaureate nursing students' self-efficacy in health teaching. Bandura's Self-Efficacy Model postulates that one's perception of self-efficacy can influence their ability to perform a task successfully (Bandura, 1977, 1986). According to Bandura's Theory of Self-Efficacy, individuals will participate in activities or tasks in which they perceive they will be successful and avoid participating in experiences that are perceived to exceed their ability to perform or complete successfully (Bandura, 1977, 1986).

Goldenberg et al. (2005) conducted an exploratory, descriptive research study with a convenience sample of 66 third-year baccalaureate nursing students. However, only 22 students completed the self-efficacy questionnaire that was administered before and after two half-day workshops on simulation for first-semester students enrolled in a 13-week course. The aim of the study was to provide students with learning opportunities based on a case study and simulation activities that would enhance student self-confidence and self-efficacy related to the phases of health teaching; specifically, assessment, planning, implementation, and evaluation.

Research question one investigated for any differences in the self-efficacy mean scores before and after participating in simulated health teaching through case study and role play. Research question two investigated any relationships between self-efficacy scores and demographic variables such as age, gender, grade point average, nursing experiences, post-secondary education, and clinical hours in health teaching. Research question three explored student feedback on the effectiveness of utilizing a case study and role-play simulation as teaching strategies.

The study utilized a two-part, 63-item Baccalaureate Nursing Student Teaching-Learning Self-Efficacy Questionnaire. One of the authors of the study participated in the development of the questionnaire. Three experts in nursing education established content validity and face validity was established through a pilot study of seven fourth-year nursing students that had completed the course the previous year. Cronbach's alpha reliability coefficient was .97. Part I of the self-efficacy questionnaire was to determine student perception of self-efficacy related to health teaching before and after the simulation workshop. Students were asked to respond to the phases of health teaching (assessment, planning, implementation, and evaluation) by using a 4-point scale that ranged from "completely lacking in confidence" to "very confident". Students were able to provide comments about simulation as a teaching strategy by answering open-ended questions. Part II of the questionnaire consisted of assessing participant demographic information.

The results for research questionnaire one for determining the differences in the mean self-efficacy scores before and after the simulation experience indicated students' self-efficacy scores were significantly higher ($p = 0.001$). Before the simulation

workshop, the mean = 2.96, and after the simulation workshop, the mean = 3.55, thereby indicating an increase in student self-confidence in their ability to demonstrate health teaching. Significant differences were identified (p = 0.001) between pretest and posttest scores for the phases of health teaching. The self-efficacy scores were higher for assessment, implementation, and evaluation. However, self-efficacy scores for planning remained unchanged. This was attributable to insufficient time to implement a teaching plan.

Results of research question two indicated no significant relationships in regards to students' self-efficacy scores in health teaching and demographic information variables as determined by Pearson's correlations (r), despite slight variations in sample such as age, gender, and employment status as students, experience in healthcare and their previous experience in health teaching as nursing students. The authors concluded the sample size could possibly account for the lack of correlation. Descriptive statistics were used to rate the effectiveness of simulation as a teaching strategy for the workshops. Simulation was rated as an effective teaching strategy by over half of the students that participated in the workshops.

The results of the study by Goldenberg et al. (2005) indicated students experienced a significant increase in their perception of self-efficacy in regards to their performance in health teaching. The case study and simulation role-play by the participants in the study indicated learning opportunities that provide situated learning experiences may enhance student performance in clinical practicums and in a successful transition in professional nursing practice. Limitations of the study were a small sample size and a two-week delay in students being able to evaluate the course. Of the 66 nursing

students enrolled in the course, only 22 students evaluated the questionnaire to determine self-efficacy for the simulation workshop. Participation in the simulation workshop was voluntary and the return rate was 33%. The questionnaire was administered two weeks after the completion of the course due to a delay in ethics approval and students had started their winter break for the semester as well. The authors stated the small sample size was not controlled for bias and prohibited any interpretation of possible correlations with limited generalizations of results from the study.

Self-Efficacy and Clinical Simulation

Spike and O'Donnell (2010) conducted a qualitative study from a sample size of nine nursing students that participated in a preliminary study by Pike (2008) about self-efficacy beliefs and clinical simulation in nursing education. In 2008, Pike conducted a preliminary study with a quantitative research design that utilized a pretest and posttest to measure student self-efficacy after participation in simulation learning activities and 22 nursing students participated in the study.

The aim of the study by Pike and O'Donnell (2010) was to explore the qualitative responses of students that emerged from questions on the posttest questionnaire by Pike (2008). The study by the authors explored perceived self-efficacy beliefs from the perspective of lived experiences of students that participated in the preliminary study by Pike (2008).

Bandura's Theory on Self-Efficacy was the conceptual framework for the study by Pike and O'Donnell (2010). According to Bandura (1997), there are four sources of information the learner can cognitively process that may possibly influence enhanced self-efficacy. These are (1) enactive mastery (previous experience with a task will

enhance the learner success in performing the same or similar task or behavior), (2)

vicarious experiences (learning occurs by observing others perform a task or behavior),

(3) verbal persuasion (the learner is influenced by individuals that communicate the

learner can be successful in performing a task or behavior), and (4) physiological and

physical arousal such as increased or decreased states of anxiety can determine one's

self-efficacy in performing a task or behavior. The themes that emerged from the

preliminary study by Pike (2008) that influenced self-efficacy beliefs were enactive

mastery necessary of self-efficacy beliefs, vicarious experiences by observing the nurse

educator, and simulation as a teaching and learning strategy on student self-efficacy

beliefs.

The perception of self-efficacy in regards to communication skills in clinical

situations and the authenticity of clinical simulations were the two principal themes that

emerged from the data analysis of the posttest questionnaire on student self-efficacy

beliefs in the study by Pike and O'Donnell (2010). The inability to communicate

effectively in clinical emerged as the principal theme in the study. Specifically, data

analysis indicated low self-efficacy in demonstrating basic communication skills during

clinical practicums. Based on the feedback from the students, the authors concluded that

a focus on communication skills should be incorporated within simulation sessions to

provide students with situated learning activities and learning opportunities to practice

basic communication skills in nursing care management.

The need for simulation authenticity was the second theme that the authors

identified from data analysis. Student comments suggested that simulation needs to be

perceived as authentic or realistic by the learner. From the student perspective, simulation

experiences that are not perceived as realistic by the leaner may impede student learning. According to Jeffries and Rizzolo (2006), it is important for students to perceive clinical simulations as authentic experiential learning opportunities to enhance the cognitive process of student learning.

The strength of the study was the exploration of student self-efficacy beliefs in simulation. It is important for nurse educators to consider student perspectives of teaching-learning strategies, especially in simulation. Student feedback can be invaluable for the nurse educator in developing or re-designing teaching strategies that will enhance student learning and active participation in the learning process. The study supports Bandura's posit that enactive mastery can influence learner self-efficacy beliefs in task performance. Limitations of the study as described by the authors are a small sample size, and the study cannot be generalized to nursing education based on one study alone.

Self-Efficacy and Genitourinary Teaching Associates

Jenkins, Shaivone, Budd, Waltz, and Griffith (2006) implemented a pretest-posttest design to evaluate the responses of 107 beginning nurse practitioner students' perceptions of self-efficacy with an educational learning activity, Genitourinary Teaching Associates (GUTAs). The researchers measured the student's confidence and comfort with performing genitourinary examinations on females and males before and immediately after participating in GUTAs learning activities. The author hypothesized that students would report a statistically significant increase in their confidence level to perform a genitourinary examination and this would increase their comfort level with performing female breast and pelvic examinations, and male genital and digital-rectal

prostate examinations. The use of GUTAs had not been used in undergraduate or graduate education prior to the publication of the study.

Bandura's Theory of Self-Efficacy was the conceptual framework for the study. Bandura's Theory of Self-Efficacy posits that the four constructs or information sources that influence the learner's ability to enhance self-efficacy are enactive mastery experiences (engaging in successful performance behaviors), vicarious experiences (observing performance accomplishments of others, such as one's mentor), verbal persuasions (engaging in positive communications in which the learner is informed they will be successful in performance accomplishments, and arousal (the learner has physiological and emotional experiences that can influence behavior performance). The GUTAs learning and performance examinations provided learning activities for enactive mastery in a safe, supportive and controlled learning environment in which the students received immediate feedback. Other learning activities provided opportunities for students to practice communication skills, interpersonal skills, and demonstrate patient education.

Confidence about the learner's ability to perform female breast and pelvic examination, and male genital and digital-rectal prostate examinations was measured immediately before and after performing GUTAs learning activities. The researchers used an 11-point confidence scale, with 0 = not at all confident to 10 = very confident, for each examination. Learner comfort in learning to perform each examination was rated by the students immediately before and after each learning activity. The learner indicated if they strongly agreed, agreed, disagreed, or strong disagreed to the following statements (1) I feel comfortable learning to perform a female breast examination, (2) I feel

comfortable learning to perform a female pelvic examination, and (3) I feel comfortable learning to perform a male genital and digital-rectal examination. The same 11-point confidence scale and the three questions relating to comfort level in performing each learning activity were evaluated. The self-efficacy constructs of vicarious living and verbal persuasions were not measured.

Paired t-tests were utilized to compare pretest and posttest results. The confidence levels increased significantly ($p < 0.001$) following each GUTA learning activity. Pretest confidence in performing examination was higher for female breast examinations (mean = 7.19, SD = 2.01), followed by the female pelvic examination (mean = 4.81, SD – 2.36), and the male genital, digital-rectal prostate examinations (mean = 4.45, SD = 2.30). Posttest confidence increased significantly for each examination: female breast examination (mean = 8.8, SD = 1.10), female pelvic examination (7.87, SD = 1.42), and the male and genital, digital-rectal prostate examination (mean = 8.12, SD = 1.40). After completing the GUTA learning activities, most of the participants responded that they either strongly agreed or agreed that they felt comfortable in performing female breast examinations (100%), female pelvic examinations (100%), and male genital and digital-rectal prostate examination (99%).

The strength of the study was that student confidence and comfort level in performing genitourinary examinations significantly increased by using GUTAs learning activities. The findings of the study were consistent with the self-efficacy theory in which student self-efficacy beliefs are influenced by performance accomplishments. Educational learning opportunities in a safe, practice environment that provided immediate feedback may have contributed to student self-efficacy through vicarious

experiences (observing and participating with students and faculty) and through verbal persuasions (positive feedback from students and faculty). One limitation of the study was insufficient information that described the confidence instrument used in the study.

Self-Efficacy and Online Video Clips

McConville and Lane (2006) investigated the use of technology supported learning in nursing education by providing examples in video clips that contextualized situations that students could experience in professional nursing practice, and the study evaluated the use of video clips to enhance student self-efficacy to communicate effectively with patients they would encounter in professional nursing practice. Forty-five nursing students participated in the study. Bandura's Theory of Self-Efficacy provided the conceptual framework for the study.

Self-efficacy is the confidence level an individual has in their ability to perform a behavior successfully (Bandura, 1977, 1986). There are four sources of information that can enhance learner self-efficacy. Enactive mastery is the first source of information that can enhance self-efficacy. The learner will expect to be successful in behavior performance due to previous experience with the same task or behavior. Vicarious experiences are the second source of information for self-efficacy. Learner self-efficacy can be enhanced by observing successful performance accomplishments of other individuals. Verbal persuasion is the third source of information that can enhance self-efficacy. Individuals in the learner's community of supporters that provide positive feedback and words of encouragement can enhance self-efficacy. Arousal is the fourth source of information for enhanced self-efficacy. The learner's ability to positively control their physiological and emotional response during the performance of a behavior

can positively enhance self-efficacy. McConville and Lane (2006) asserted that the viewing of video clips by nursing students would provide vicarious experiences they could observe and learn how to successfully interact with difficult patients as they transition into professional nursing practice. The video clips provided examples of both successful and unsuccessful behaviors for students to observe and learn in nurse-patient interactions.

The aim of the study was to implement a teaching-learning strategy for a learning module in a 15-weeek course in which the majority of the course content was delivered in a traditional lecture format. The title of the learning module was "Communication and Customer Care," and video clips were developed to accompany the lecture material. Eighteen high quality video-clips were written and produced by members of the community and the university such as colleagues from the School of Allied Health, staff from a local hospice organization, and members of a Learning Disability Group. There was a production team that included a video producer, editor, freelance sound engineer, two professional make-up artists, and six students from the Media Department at the University. The video clips were transferred to the university on-line learning platform by members of the university information technology department so students could access the video clips at their convenience. The students received a workbook about the video clips that explained how to login to access video clips. Students were able to revisit the video clips to further their understanding about how to cope in challenging situations with difficult patients. The information from the learning module and video clips about how to handle difficult patients would be salient during their clinical practicums and in professional nursing practice.

The researchers developed a six-item self-efficacy scale to measure student perception in handling difficult situations or circumstances they could encounter in the clinical area. The self-efficacy scale was related to the course content and video clips. The six-item self-efficacy scale was used to assess self-efficacy by asking the participants questions about confidence in successfully dealing with breaking bad news to relatives, a patient that asks if he is going to die, an aggressive patient, communication with a person with a learning disability and communication with a child. Participants were able to rate their self-efficacy on a 5-point scale, where 1 = not at all confident to 5 = very confident.

A post-module self-efficacy assessment was measured by using the same six-item self-efficacy scale that was used to assess pre-module self-efficacy. A 12-item questionnaire was developed for participants to rate the extent to which they felt traditional lecture and watching video clips contributed to enhanced self-efficacy in handling the same six situations on a 5-point scale. The students could rate any increase in self-efficacy from 1 = not all to 5 = very effective.

Multivariate analysis of variance (MANOVA) was to assess changes in self-efficacy over time (pretest and posttest learning modules) and to compare whether video clips enhanced self-efficacy as compared to attending lectures. Research findings indicated student self-efficacy increased over the course of the module ($p < 0.05$). Univariate results indicated that self-efficacy significantly increased ($p < 0.05$) toward having to break bad news to a relative of an unexpected death and self-efficacy toward having to break bade news to a relative of an expected death over time. Research findings indicated there was no significant difference on enhanced self-efficacy with traditional lecture in the delivery of class content or with student access to watch online video clips.

The researchers concluded that the theoretical content discussed in lecture and watching videos about patient care management skills provided students with a better understanding about the complex situations they could encounter in professional nursing practice than through traditional lecture format, alone.

The use of online video clips to compliment lecture content with technology supported learning was a major strength of the study. The video clips augmented lecture content and significantly increased student self-efficacy in handling complex nurse-patient situations students could encounter in a clinical practicum and as professional nurses. Students were able to access and observe repeatedly online video clips about real-life scenarios that provided students with information on how to enhance their effectiveness to handle situations in administering patient care. The lack of a control group and the inability to validate the reliability of the self-efficacy scales developed by the authors were limitations of the study.

Self-Efficacy and Continued Education in Neuroscience Nursing Skills

Dilorio and Price (2001) described the design and implementation of the Neuroscience Nursing Self-Efficacy Scale (NNSES) that was used to assess the perceived level of confidence in new nurse graduates or registered nurses with clinical experience that were interested in pursuing a nursing career in the Neuroscience Nurse Internship Program (NNIP) from 1988 to 1998. In 1988, the NNIP was initiated within the Clinical Center for Nursing Department of the National Institute of Health (NIH) in Bethesda, Maryland. Three to six nurses were admitted as nurse-interns to NNIP. When the study was initiated in 1988, the authors used an instrument developed by Roberta S.

Abruzzese, the (RSA) Model of Evaluation to measure perceived proficiency in nursing skills in continuing nursing education programs.

The NNIP is a six month program comprised of course content and clinical instruction in the care of patients with nervous system disorders. The classroom portion of the program consisted of lectures on specific nervous system disorders, neuroanatomy, and neurophysiology. The clinical component of the program allowed the nurse-interns to provide direct patient care under the supervision of a nurse preceptor. In addition, the nurse-interns attended neurological and neurosurgical rounds, conferences, and clinical seminars. The two primary goals of NNIP were that the nurse-interns would learn the knowledge and skills that were required to provide competent nursing care for patients with nervous system disorders and they would be able to function as members of the biomedical research team at the NIH Clinical Center.

In designing the NNSES, the authors identified nursing diagnoses as the framework for the instrument. Items on the instrument were developed through an exhaustive review of nursing literature on patients that had nervous system disorders. In addition, the authors included their experiences as neuroscience nurses, the experiences of other neuroscience nurses, and the teaching-learning objectives of the NNIP to design NNSES instrument. This resulted in the NNSES instrument having a total of 54 nursing skills that were further divided into 10 categories. Nine categories were named based on nursing diagnoses that included alterations in consciousness, mentation, communication, protective mechanisms, mobility, elimination, nutrition, sensation (including pain), and psychological function. The tenth category could not be classified into one of the nine categories and was called general neuroscience nursing skills.

In the first version of the 54-item instrument, participants could rate their perceived degree of proficiency for each nursing skill on a 5-point scale from 1 = beginning to 5 = proficient. However, after using that format of the instrument for three classes of nurse interns (three years), the program developers broadened the range of responses on the rating scale to an 11-point scale to increase the variability of participant responses and the scale was changed to measure the perceived level of participant self-efficacy or confidence in performing nursing skills. For classes four – ten, each item on the scale was measured from 0 = cannot do at all to 10 = sure I can do. Thus, this change decreased the errors of measurement related to different interpretations of the terms from beginning and proficient. Also, six additional items were added to the scale, resulting in a total of 60-item nursing skills.

The change in the terms on the scale to perceived level of confidence is based on Bandura's Theory of Self-Efficacy. Participant self-efficacy was assessed at three specific times during the course of the program. The first time participants completed the NNSES instrument was shortly after their initial orientation to the Clinical Center nursing department. The second time participants assessed their level of confidence or self-efficacy in performing nursing skills was one month after their day of employment at the Clinical Center. The third time participants in the program completed the instrument was at the conclusion of the program, six months later. The information yielded from these three rating sessions was used to determine the degree of change in the nurse-interns confidence or perceived self-efficacy in their ability to perform nursing skills in the program.

The NNSES enabled Dilorio and Price (2001) to examine changes of self-efficacy in three ways. First, the researchers examined the overall changes in the nurse-interns' perceived level of confidence in performing clinical nursing skills and the assessment of their ability to perform a clinical assessment. The participants were provided a safe and supportive learning environment in which they were able to enhance their nursing skills. They were provided opportunities to learn about nervous system disorders that were augmented with learning about medical-surgical nursing procedures, and to practice neuroscience nursing procedures under the direct supervision of a preceptor. An analysis of the data indicated participants that completed the program felt more confident in proving nursing care for patients with complex needs.

Second, Dilorio and Price (2001) were able to examine the perceived level of confidence of the participants within each of the nine categories of neuroscience nursing. In several of the classes over the years, the nurse-interns indicated self-confidence in managing patient care in the areas of nutrition and elimination. The researchers indicated this could be attributed to the subject content being discussed and covered as students in their nursing education programs. On the other hand, in several classes over the years, the nurse-interns indicated their lack of confidence in the areas of communication and consciousness. The researchers attributed these results to a lack of in-depth coverage on this subject content during the course of their nursing education. However, the authors used information on the NNSES instrument for every nurse-intern, from each class over the course of the 10-year program, to provide learning opportunities for participants to improve their skills in the areas in which they perceived a lack of confidence. Data

analysis from the NNSES instrument indicated that at the completion of the program, nurse-interns' level of confidence increased in all of 10 major categories.

Third, DiIorio and Price (2001) were able to examine the level of perceived confidence in each of the individual items on the 60-item NNSES instrument and order-rank each of the items on the 60-item scale from most confident to least confident for the nurse-interns. The information was collected at three points in time to create a set of results that demonstrated the rank order of each item during orientation to the program at the Clinical Center, at the beginning of NNIP, and at the completion of the program. The results of this format indicated that participants felt the most confident in providing basic nursing care in general nursing skills such as skin care, the use of restraints, and transfer techniques. However, at the completion of the program, the nurse-interns perceived their level of confidence increased in their ability to perform neuroscience nursing skills. Data analysis indicated nurse-interns were more likely to rate their ability to perform neuroscience nursing skills successfully.

A major strength of the study was the NNSES provided the nurse-interns with the opportunity to assess their perceptions about their nursing skills and to compare their perceived confidence in demonstrating each skill. Nurses would be able to assess their strengths and most challenging areas in providing nursing care that needs improvement. Another major strength of the study that is salient for staff development in healthcare organizations was that the NNSES instrument could be utilized in determining the training needs for continuing education. For instance, nurse managers could use the information on the NNSES instrument for professional staff development that could enhance the educational needs of their unit. Limitations of the study as described by the

researchers included the inability to determine whether the changes in participant levels of self-efficacy were statistically significant because they did not utilize statistical tests in the study, and the authors were unable to determine the reliability and validity in assessing the NNSES instrument.

Self-Efficacy and Interactive Multimedia Learning

Maag (2004) implemented an experimental multifactorial design to investigate the use of a one-hour interactive multimedia online learning tool as an effective learning method when compared to three other learning methods to teach medical dosage calculations to 94 undergraduate nursing students. The aim of the study was to investigate if there would be a statistically significant increase in math scores, math self-efficacy, and student satisfaction with an interactive multimedia learning method. The conceptual framework of the study was based on Paivio's dual coding theory, Mayer's cognitive theory of multimedia learning, Sweller's cognitive load theory, and Bandura's theory of self-efficacy.

Paivio asserted that there are both verbal and non-verbal subsystems that are structurally and functionally distinct at the cognitive level. Therefore, the use of pictures and words could enhance cognitive coding by providing a framework for the construction of multimedia-based construction that is delivered through computerized technology. Mayer broadened Paivio's use of pictures and suggested the use of animation and text with narration in the use of computer-based multimedia presentations. Sweller argued that certain teaching methods could impede a learner's ability to process difficult learning materials. Based on Sweller's cognitive load theory, learners have the innate ability to use their mental processes of learning to problem-solve difficult concepts and principles.

Bandura's self-efficacy theory posits that learner belief systems about their self-efficacy will influence their ability to be successful in performing a specific task or behavior.

Maag (2004) developed three criterion-based math tests that included basic math problems and medical dosage calculations to determine participant mathematical abilities. The researcher developed three mathematical tests from a medical dosage calculation book that consisted of 25 multiple-choice questions. Participants had to solve 11 math problems that included decimals, fractions, division, multiplication, metric and apothecary. The remaining were medical dosage and intravenous calculations. Content validity of the three tests was determined by three nurse educators from the two universities in which the participants were voluntarily recruited and a math expert from one of the universities. Participants were recruited from a private university (n = 50) and a public university (n = 46).

The Mathematics Self-Efficacy Scale (MES), which is based on Bandura's Theory of Self-Efficacy, was utilized to determine whether the teaching methods in the study would have an effect on student mathematical self-efficacy. The scale consisted of 34 items, and participants were asked to rate their level of confidence on a 10-point scale ranging from" no confidence at all" to "complete confidence". The first subscale (SE1) on the MES instrument consisted of 18 mathematical problems (mathematical comprehension, computational ability, and application of mathematical principles and concepts). The second subscale (SE2) consisted of 16 items and participants were able to report on the MES instrument their anticipated grade in a mathematical college course based on a letter grade of A or B. Maag (2004) used SE1 scale for data analysis.

Maag (2004) developed the Student Satisfaction Survey to assess participant satisfaction with the instructional methods of the study. Participants were asked to rate the learning modules in the study on a scale of 1 to 5 (1 indicating strongly disagree and 5 indicating strongly agree). The Coefficient alpha was 0.95 for the 93 participants that completed the survey. The survey was reviewed for content validity and it was determined to be valid based on the content subject matter by a professor at the School of Education.

Mathematical achievement scores and math self-efficacy were measured one week prior to participating in one of the four treatment groups and this information was used as covariate data. Mathematical achievement and self-efficacy scores were determined post-treatment and at a two-week follow-up. Student satisfaction scores about the treatment methods were analyzed by using a one-way analysis of variance (ANOVA).

Participants were randomly assigned to one of four treatment groups in the study: text only, text and image, multimedia, and interactive media. Each of the treatment groups received the same learning material and each treatment session lasted for one hour. The first treatment group (T) consisted of participants independently reading and learning from the three text-based mathematical modules. Each module contained a review of basic mathematical concepts, metric and apothecary conversions and medical dosage calculation instructions.

Participants in the second treatment group (T1) independently read the same modules as the participants in group one. However, these modules were enhanced with images. The third treatment group (T1A) consisted of participants who reviewed the same modules as T and T1; however, the participants watched the three multimedia

modules on a computer screen. These three multimedia modules were displayed on a single Web page, and the participants were able to scroll down the computer screen as they reviewed the information on the computer screen. The participants in group four (T1A1) viewed the three multimedia modules that were divided on interlinked Web pages with modules consisting of text, image, animation, and interactive learning.

Participants were provided with learning objectives at the beginning of each module. Each interactive learning module was designed to build upon previous learning material. Also, each module contained interactive review questions following the introduction of each mathematical or medical dosage calculation concept. Participants had to answer each review question before advancing to the next page of the learning module.

In the first phase of data collection, participants were administered the MES instrument, followed by a 25-item pretreatment math test. Although participants were allocated 40 minutes to complete the MES, on average students completed the pretreatment math tests in five minutes. The second phase of data collection occurred exactly one week later; the participants were randomly assigned to one of four treatment groups. Each group was allocated one hour to complete the instructional treatment method (text only, text and image, multimedia, and interactive media). Exactly one week later, students were randomly assigned to one of four treatment groups and participants in each group were allocated one hour to complete the instructional treatment method. Directly after each treatment method, participants were administered the MES and within two or three minutes, a post-treatment test was administered to each student. The third phase of the data collection process occurred exactly two weeks following the treatment

phase at each university, (n = 50 at the private university and n = 46 at the public university).

Results indicated there was not a statistically significant increase in the mean math-test scores for posttreatment and the two-week follow-up treatment period. The researcher had anticipated that there would be an increase in cognitive outcomes following a short interactive multimedia presentation of remedial math concepts and medication dosage calculation instruction. The researcher concluded that a one-hour intervention was not sufficient enough to make a significant difference in the participants' ability to enhance their mathematical skills. Results of the study indicated there was not a statistically significant increase concerning the interactive effect of the learning method on students' math self-efficacy mean scores over the course of the study. However, the results of the study indicated students demonstrated a "moderate amount" of self-efficacy at the beginning and at the completion of the study. Data analysis indicated group four reported the highest satisfaction score with the multimedia intervention. However, these results were not statistically different from those of the other groups.

Although there was not a statistically significant increase for math scores and math self-efficacy, results for student satisfaction with interactive multimedia interactive learning intervention suggested this learning method may have contributed to student motivation to review math concepts that were essential in solving mathematical problems and calculating medical dosage calculations. Maag (2004) described study limitations as a small convenience sample, short treatment time (one-hour intervention) and a lack of

student motivation in utilizing the pretreatment intervention method to enhance their ability to be successfully increase their math scores during the course of the study.

Gaps in the Literature

An exhaustive review of the present literature has elucidated the current state of knowledge about use of unfolding case studies and the use of Bandura's Social Cognitive Theory (SCT) as the conceptual framework to measure the perceived self-efficacy of nursing students, the major construct of SCT in undergraduate nursing education. The most significant gaps in the literature was the use of situated learning to provide an authentic context for situation-based clinical scenarios based on clinical practice they may experience in professional nursing practice and the limited use of debriefing after the implementation of an unfolding case study in undergraduate nursing education.

Lave and Wenger (1991) assert that learning occurs within a social and cultural context in which knowledge can be developed and enhanced within a community of learners that provides salient educational opportunities for student-educator dialogue, observation, and reflection about the subject content. Eick, Ware, and Williams (2003) used situated learning in their study to design and implement a co-teaching learning model between faculty and student-teachers in an undergraduate science course.

An unfolding case study is an example of low-fidelity simulation (Glendon & Ulrich, 1997) that has been utilized in the literature to measure the perceived self-efficacy of nursing students in undergraduate nursing education. McLaughlin, Moutray, and Muldoon (2007) conducted a three-year longitudinal study, from 1999 to 2002, that examined the role of personality and self-efficacy as a predictor of academic performance and attrition in an undergraduate nursing program. Results of the study indicated students

with a perception of positive self-efficacy would be more likely to progress though the nursing program successfully.

Strengths and Limitations of the Literature

A review of the literature supported the use of unfolding case studies and Bandura's use of self-efficacy in undergraduate nursing education. Student reports indicated perceived self-efficacy can be influential in determining performance accomplishments. Additional strengths about the use of unfolding case studies and unfolding case studies with self-efficacy included, but were not limited to:

- Expanded opportunities to participate in high-fidelity and low-fidelity simulation (McCormick et al., 2013; Mills et al., 2014; Pike & O'Donnell, 2010; West et al., 2012).

- Expanded opportunities to practice critical thinking and clinical decision-making in a safe learning environment (Dilorio & Price, 2001; Jenkins et al., 2006).

- Expanded opportunities to practice intraprofessional and professional collaboration in a safe learning environment (Goldenberg et al., 2005; Himes & Ravert, 2012; West et al., 2013).

- Enhanced self-efficacy with multimedia learning (McConville & Lane, 2006; Yousey, 2013).

Day (2011) and Reese (2011) provided suggestions for developing unfolding case studies.

A significant limitation in the literature was the lack of generalizability to other degree programs, such as associate degree or diploma programs. Other limitations included, but not limited to:

- Small convenience sample size affecting generalizability of findings (Pike & O'Donnell, 2010).

- Lack of a control group (Goldenberg et al., 2005; Himes & Ravert, 2012).

- Inadequate technologies to support multimedia learning (Maag, 2004; McConville & Lane, 2006).

- Complexity of unfolding case study impeded acquisition of knowledge and clinical skills practice (West et al., 2012).

- Inadequate time and space for each student to participate in simulation learning experiences (West et al., 2013).

Conceptual Framework

Albert Bandura's Social Cognitive Theory (SCT) was the conceptual framework for this capstone project. Bandura argued that human behavior, and thus, human actions, are influenced by the three-way interaction between personal factors, behavioral factors, and environmental influences (Glanz et al., 2011). These three factors create a triadic reciprocal causation model in which individual characteristics, behavior, and environment are continuously interacting (van der Bilj & Shortridge-Baggett, 2001). One of the basic tenets of SCT is that learning occurs through observing the actions of other individuals, and learning through their personal experiences. This is applicable to learning process because learners are able to construct the acquisition of learning by practicing and observing situation-specific skill-sets that can enhance the perception of self-efficacy for performance accomplishments.

SCT is salient to learners in nursing education because of the process of learning, specifically the acquisition of knowledge and skills, should not be viewed as the total

responsibility of the instructor, but the learner can be an active participant in the mastery of processing and learning curricular content. Self-efficacy or self-confidence is an important construct of SCT. Self-efficacy is the belief that an individual has the ability to achieve their goals successfully regardless of life events or challenges. Perceived self-efficacy has been defined as "people's judgments of their capabilities to organize and execute courses of actions required to attain designated types of performances" (Bandura, 1986, p. 91).

The perception of self-efficacy is salient to the learning process because students that believe they will be successful in their academic studies are more likely to experience positive learning outcomes (Bandura, 1977). Self-efficacy is the "belief about one's ability to engage in particular activities based on the likelihood of success" (Sinclair, & Ferguson, 2009). Nurse educators can utilize unfolding case studies as an innovative teaching strategy to enhance self-efficacy for student learners in a welcoming and supportive learning environment for a community of learners.

Situation Learning Theory (SLT) provides an authentic context for teaching the content for an unfolding case study. SLT is based on the learning process that occurs when learners become immersed in learning activities that simulate real-world experiences in the classroom (Lave & Wenger, 1991). This theory emphasizes student learning occurs through social interaction and authentic learning activities within a community of practice of student learners in the classroom (Sadler, 2009; Stein, Isaacs, & Andrews, 2004; Zheng, 2010). Knowledge acquisition is acquired by students as they actively engage in learning experiences situated in the unfolding case study that simulated experiences that could occur in professional practice. According to Chen, Yi,

and Wang (2012), learning will occur when students participate in experiential learning experiences as a community of practice as opposed to individual learning activities.

As students collaborate and participate in a community of practice with a situated unfolding case study, the nurse educator can serve as a coach and role model to the students (Edmonds-Cady & Sosuiski, 2012; Himes & Ravert, 2012). As the case study unfolds, students are not directly provided solutions from their inquiry; however, the nurse educator provides the "scaffolding for learning and guides students to a place of understanding and competence" (Bell, Maeng, & Binns, 2013, p. 351). Situation learning strategies that have been be used in unfolding case studies by nurse educators include storytelling, reflection, collaboration, coaching, cognitive apprenticeship, and technology (Gieselman, Starks, & Farruggia, 2000).

Summary

The literature supported the use of innovative teaching pedagogies that will enhance student learning that will prepare new graduates to transition into professional nursing practice. The literature was robust with the use of unfolding case studies augmented with Bandura's Theory of Self-Efficacy to determine nursing students' perceptions about their ability to demonstrate nursing care management in the classroom and clinical practicums. Situation-based learning activities can serve to enhance student perception of self-efficacy with real-world, situation-based clinical scenarios that may facilitate active learning in the cognitive-knowledge domains with an integration of theoretical and clinical application in the classroom. Unfolding case studies can engage students with situation-based scenarios that enable students to learn in a safe and

welcoming learning environment, and this learning process can facilitate positive learning outcomes for learners (Woolf & Quinn, 2009).

The aim of this doctoral capstone was to investigate the use of an unfolding case study to enhance self-efficacy augmented with situation learning theory in an associate degree nursing program. This project sought to address the gaps, weaknesses, and limitations found in the current literature. This doctoral project did not replicate a reviewed study, but took into consideration limitations and gaps noted in the literature. The review of the literature supported the need to investigate the use of an unfolding case study to enhance self-efficacy augmented with situation learning that can provide real-world clinical experiences that can serve as an innovative teaching strategy to assist nursing students in their professional transformation into professional nursing practice. According to Wenger (1998, p.215*), learning that takes place in a community of learners, such as in the classroom with the instructor as the guide and facilitator of discussion, creates a positive learning atmosphere in which "learning and identity in practice" can be contextualized from the subject content in an unfolding case study.

CHAPTER III

Methodology

Nurse educators are faced with the challenge of utilizing effective teaching

strategies that will prepare nursing graduates to transition into professional nursing

practice. It is imperative for nursing programs to implement interactive teaching

pedagogies that mirror the complexities of healthcare environments.

Traditional didactic teaching methods such as lectures do not provide students

with learning opportunities that simulate the realities of healthcare environments such as

high patient acuity, advanced technologies, workplace staffing, and financial restraints

(West et al., 2012). Unfolding case studies can reflect actual practice situations where

much of the data is not immediately available (Azzarello & Wood, 2006).

The purpose of this project was to determine if a student's level of perceived self-

efficacy would increase with the implementation of an unfolding case study as a

pedagogical tool. The following chapter presents the design, setting, sample, methods,

ethical considerations to protect human subjects, instruments, data collection procedures,

and data analysis procedures used in this capstone project.

Project Implementation

Seventeen second-degree nursing students in an Associate Degree Nursing (ADN)

program participated in this research study. Participants were informed that their

participation in the capstone project was voluntary and they were informed they had the

right not to participate in the study. Also, they were informed they had the option to

answer or not answer any questions on the project instrument forms. Participants were

informed on the consent form that their participation was voluntary and they were under

no obligation to complete the demographic data form, the General Self-Efficacy (GSE) scale pre-test and post-test, or the post-survey implementation form. The participant consent form provided information about the purpose of the study, subjects' rights for participating in the research study, potential risks and benefits, and contact information for the researchers and the University's Intuitional Review Board. There were no incentives for participation.

Completion of the participant consent form, demographic data form, and GSE pre-test were completed in approximately 10 minutes. Completion of the GSE post-test and post-survey implementation forms were completed in approximately 10 minutes. The debriefing process was completed approximately 30 minutes after the unfolding case study was completed.

Each student was provided a participant consent form with the option to voluntarily participate. If a student declined to participate, the student was still administered the same instrument as those students that decided to participate. Therefore, the student would not be identified or singled-out for not participating in the study. The demographic data form and the GSE scale pre-test were distributed, respectively, to each nursing student before the unfolding case study was presented to the class. The demographic data form and GSE scale pre-test were collected. Then, the unfolding case study was presented to the students.

Individual packets contained one participant consent form, one demographic data form, one GSE scale pre-test, one GSE post-test, and one post implementation survey form. Prior to the administration of the participant consent form, each student was asked to retrieve a number written on a one inch by one inch unlined index card. There were

total of 17 unlined index cards in an envelope. Each student was assigned the specific

number that was individually retrieved by each student from the envelope. The individual

number that was retrieved from the envelope by each participant was used as the non-

identifier on the participant consent form, demographic form, GSE scale pre-test and

post-test. The same non-identifying number was used for the post- implementation survey

form. The post-survey implementation form was administered directly after the GSE

post-test was collected.

The community college system has a concept-based curriculum. Each concept in

the curriculum is defined with specific exemplars. The prescribed course concept for the

class was Quality Improvement (QI). The prescribed exemplar for the QI concept was

breach of care and root cause analysis. The exemplar selected by the project administrator

was breach of care. Students were assigned prescribed reading assignments about QI;

however, students were not informed the unfolding case study would be about the

concept exemplar, breach of care. Students were asked to prepare for each lecture with

prescribed learning outcomes, concept exemplars, and learning resources for their reading

assignments. Course concepts with content exemplars were administered at the beginning

of the spring 2015 semester by the nursing faculty that teach second-year nursing

students.

Students are required to complete a pre-quiz prior to each lecture that is related to

concept that will be discussed by their instructors. The pre-quiz is developed and

administered by the nursing faculty prior to each lecture. It is mandatory for students to

complete the pre-quiz before every lecture. The project administrator was not involved in

the development or administration of the pre-quiz for QI prior to the presentation of the

unfolding case study. The pre-class quiz for the unfolding case study was collected by nursing faculty before the unfolding case study was presented.

The convenience sample consisted of 17 nursing students. Students were divided into collaborative groups by counting off one, two, three, four, or five. The project administrator designated specific areas in the classroom for each group to collaborate as a community of practice, and to discuss the situation-based exemplar on breach of care as it unfolded. The unfolding case study was entitled, "Nurses and Social Media: Don't Create a Breach in Care," and the unfolding case was presented on PowerPoint. Students received class objectives for the unfolding case study. There were specific questions on the PowerPoint for students to collaborate and reflect on the case unfolded.

 Each collaborative group worked as a team for approximately 20 minutes to identify potential solutions to each question posed by the project administrator as the case unfolded. Students used their electronic devices such as ipads or laptops to research and identify professional journals and professional websites with evidence-based standards of practice, guidelines, and protocols related to professional nursing practice to identify nursing interventions. The project administrator was the facilitator and coach to each collaborative group as the case unfolded.

The unfolding case study on breach of care unfolded over approximately one hour and 40 minutes. As the case unfolded, each group collaborated; each group was allocated between 10-15 minutes to share with the entire class their evidence-based solutions to each question. The project administrator provided feedback to each group in order to assess and evaluate student learning and understanding.

After the unfolding case study about the QI concept, breach of care as the concept exemplar was completed; the GSE scale post-test was administered and collected. Approximately 30 minutes was allocated for a general debriefing.

According to Fanning and Gaba (2007), it is imperative for the facilitator to create a learning atmosphere in which learners feel comfortable to participate in the debriefing process without facilitator bias or judgment. Lederman (1992) provided seven structural components for a successful debriefing process. These included the facilitator, participants, the learning experience and the impact of the learning experience for the participants, reflection about the learning experience, the report or sharing of the experience among participants, and providing adequate time for the debriefing process (Lederman, 1992). The debriefing process for the unfolding case study for this research study was based on the debriefing model by Overstreet (2010) in Figure 2.

Debriefing Components	**Component Description**
E - Emotion	How did that experience feel to you?
E - Experience Counts	Have you experienced something similar to this before? I would like to share a similar patient/family experience.
C - Comunication	Take a few moments to think about what was important to you during this experience. Then, I like to hear your thoughts.
H - Higher order thinking	The main objective today was to learn about (*insert objective*). With that in mind, can you identify aspects of your nursing care you would change if you performed care for this patient again?
A - Accentuate the positive	I saw excellent nursing care when you (*describe the behavior*). I think you are beginning to integrate the concept of (*name of concept*) into your nursing practice. I also saw some areas that need strengthening (*describe the behavior or concept*).
T - Time	We will have approximately (*insert number)* minutes to debrief. First, I would like to hear about any emotion you experienced. Then, we will discuss (*insert your objective*).
S - Structure	Have you (*the educator*) allowed a list of questions or objectives to obstruct the flow of conversation or detract from learners comments? Explore learners' thoughts and feelings and what was important to them.

Figure 2. Educators' Questions for Novice Nurses Cued By Ee-Chats

Data for this study was collected and stored in the project administrator's home office with the collected data locked in a secured file cabinet. Only the project administrator had access to the file cabinet.

Setting

This study was conducted at a community college nursing program in southeastern United States. Within the college, the School of Nursing offers a program of study that leads to an associate degree in nursing and a diploma for licensed practical nursing.

Sample

A convenience sample of 17 second-year associate degree nursing students participated in this study. There were no inclusion criteria for participation in this study. A power analysis was not done due to the small sample size. Nieswiadomy (2012) asserts a power analysis should be done to determine the minimum sample size for a research study; however, a power analysis was not necessary due to the availability of a convenience sample in the class.

Project Design

The design for this project was a one-group pretest-posttest descriptive design.

Protection of Human Rights

Permission to conduct the project was obtained from the University's Institutional Review Board. Permission to conduct research was also received from the community college. Each student completed a consent form prior to participating in the study. Each student was given an additional copy of the consent form for his or her personal records. Participation was voluntary and confidentiality was protected by the project administrator

by use of a participant selected number on all data forms. Results were analyzed based on the findings among the group with no individual results reported. There were no risks of harm or injury associated with this study, and there were no penalties associated with refusing to participate or incentives associated with research participation. Any questions by the students were addressed by the project administrator.

Instruments

The General Self-Efficacy (GSE) scale was used to measure perceived self-efficacy of second-year ADN students participating in an unfolding case study on Quality Improvement. The GSE scale is a 10-item psychometric scale developed in Germany by Schwarzer and Jerusalem (1995), and the operative construct of the scale was perceived self-efficacy. The GSE scale has been used to assess perceived self-efficacy in various disciplines in the literature such as education, mathematics, science, social work, communication, psychology, and healthcare.

The GSE scale is based on a 4-point Likert scale with responses ranging from "not at all true to exactly true". The scale is scored by measuring how students rate themselves on each question, and the higher the score, the higher the level of perceived self - efficacy. The GSE scale is designed to be altered by principal investigators in order to conduct research (Schwarzer & Jerusalem, 1995). The GSE scale was not altered by the project administrator; however, an additional paragraph was written by the project administrator to accompany the original directions to the GSE scale on the GSE pre-test and GSE post-test.

The GSE scale is available in 31 languages and from samples from 23 countries. From these samples, the Cronbach's alphas have ranged from .76 to .90 (Schwarzer & Jerusalem, 1995).

Another component of data collection was a demographic data form. This form was utilized to assess participant characteristics such as age, gender, educational background, and ethnicity. A post-survey implementation form with four questions with a 5-point Likert scale with responses ranging from "strongly disagree to strongly agree" was administered after the unfolding case study debriefing.

Data Collection

Participants were provided an explanation about the purpose of the capstone project before distributing project instruments. Participants were informed that their participation would be voluntary and anonymous. In addition, participants were informed they could decline to continue in the study at any point in time as the capstone project progressed. If a student declined, the student was still administered the same instruments as those students that agreed to participate. Therefore, students would not be identified or singled-out for not participating in the capstone project. Moreover, participants were informed that agreeing to participate or declining to participate would not affect their course grade.

Each student retrieved one non-identifying number from an envelope. There were 17 individual numbers in the envelope. The number retrieved by a student was a non-identifying number that the student recorded on each project instrument, including those that chose to decline to participate. There were 17 individual envelopes that contained one participant consent form, one demographic form, one GSE scale pre-test and post-test

form, and post-implementation form. The participant consent form, demographic form, and GSE scale pre-test form were collected prior to the unfolding case study and they were placed in individual envelopes labeled 1 through 17.

The unfolding case study was presented and upon its completion, the GSE scale post-test was distributed and collected. Then, students participated in the unfolding case debriefing. Immediately after the debriefing, participants completed a post-survey implementation survey. The purpose of the post-implementation survey was to capture their perception of an unfolding case study versus a traditional lecture as an innovative teaching pedagogy.

Data Analysis

Data was entered into the computer of the project statistician by importing the data from an Excel file containing the raw data. The Statistical Package for the Social Sciences (SPSS, version 22.0) was used for data analysis. The paired *t*-test was used for data analysis. The paired *t*-test was used to compare the pre and post self-efficacy scores. Statistical significance was evaluated for a p-value < .05.

Timeline

The timeline for development and completion of this capstone project was approximately six months.

Budget

The cost of this capstone project was approximately $600.00 and the project administrator fully funded the project. Project expenses included travel expenses, printing project instruments, office supplies including envelopes, printing paper, pens, ink cartridges, pencils, printing of the final manuscript, and the manuscript editor.

Limitations

The limitations of this study were a small, non-randomized convenience sample size, setting, time constraints, and the lack of a control group.

Summary

This capstone project used a one-group pretest-posttest descriptive design to determine if the use of an unfolding case study would enhance self-efficacy in ADN participants. The lack of literature regarding the use of situation learning theory with the use of unfolding case studies to measure self-efficacy prompted this study. The sample was a convenience sample of 17 second-semester ADN students from a community college. A synopsis of the study design, instrumentation, and ethical considerations was presented in this chapter.

CHAPTER IV

Results

The purpose of this project was to determine if the use of an unfolding case study to enhance self-efficacy augmented with situation learning theory in an associate degree nursing program. The unfolding case study was entitled, "Nurses and Social Media – Don't Create a Breach in Care." The following chapter presented the results of statistical findings for this research question.

Sample Characteristics

The population for this capstone project was second-year nursing students enrolled in the course, Nursing 213 – Complex Health Concepts. The sample size was ADN students in a community college in Southeastern United States.

Of the 17 students present for implementation of the capstone project, 17 students (100%) participated in the project. Students' ages from 21 to 43 with a mean of 27.4 (sd = 6.4). Of the 17 students, 12 (70.6%) were Caucasian; three were African-American (17.6%), one Asian (5.9%) and one Hispanic (5.9). Of the 17 students, 14 (82.4%) graduating with an ADN would be their first degree and three students (17.6%) have a degree in another discipline. Of the 17 students, four (23.4%) will be the first to graduate with a degree in their immediate family (parents or siblings) and 13 students (76.5%) immediate family have degrees. The frequency distributions of demographic variables of students are presented in Table 1.

Table 1

Frequency Distribution of Demographic Variables of All Students (n = 17)

Demographic Variables			
	Range	M	SD
Age	21-43	27.4	6.47
		n	%
Ethnicity			
Caucasian		12	70.6
African American		3	17.6
Asian		1	5.9
Hispanic		1	5.9
First Degree from a College or University			
Yes		14	82.4
No		3	17.6
First Degree from a College or University in Your Immediate Family (Parents/Siblings)			
Yes		4	23.5
No		13	76.5

Major Findings

Descriptive statistics were used to determine the mean scores for each individual question and the overall mean score for responses to the General Self-Efficacy (GSE) Scale Pretest. The GSE Pretest was administered before the unfolding case study was presented. For the 17 students, the overall mean Pretest score was 3.20 (sd = .356). The means and standard deviations for each of the 10 items on the GSE Pretest are presented in Table 2.

Table 2

Means and Standard Deviations of the GSE Pretest Questions (n = 17)

Question	M	SD
Question 1	3.24	.437
Question 2	2.59	.507
Question 3	3.59	.507
Question 4	3.12	.600
Question 5	3.00	.612
Question 6	3.35	.493
Question 7	3.29	.470
Question 8	3.24	.664
Question 9	3.24	.664
Question 10	3.41	.507

Note: Pretest Means = 3.206 (sd = .356)

Descriptive statistics were used to determine the mean scores for each individual question and the overall mean score for responses to the General Self-Efficacy (GSE) Scale Posttest. The GSE Posttest was administered immediately after the unfolding case study was presented. For the 17 students, the overall mean Posttest score 3.38 (sd = .396). The means and standard deviations for each of the 10 items on the GSE Posttest are presented in Table 3.

Table 3

Means and Standard Deviations of the GSE Posttest Questions (n = 17)

Question	M	SD
Question 1	3.35	.493
Question 2	2.76	.664
Question 3	3.65	.493
Question 4	3.41	.507
Question 5	3.35	.493
Question 6	3.59	.507
Question 7	3.47	.514
Question 8	3.53	.514
Question 9	3.41	.507
Question 10	3.35	.493

Note. Posttest Means = 3.38 (sd = .396)

A Paired t-test was conducted on GSE pretest and posttest scores to determine if use of an unfolding case study augmented with Situation Learning Theory would enhance self-efficacy in an associate degree nursing students. The GSE pretest mean was 3.20 (sd = .356) and the GSE posttest mean was 3.38 (sd = .396). The mean difference between the GSE pretest and posttest was .182 (sd = .3005). There was statistically significant difference between the GSE pretest and posttest scores ($p < 0.05$). The p value for the GSE pretest and posttest scores was $p = 0.024$. Table 4 shows the results of the paired sample t-test GSE pretest and posttest scores.

Table 4

Paired Samples t-test Results of the GSE Pretest –Posttest Scores

Paired Differences			
Mean	Std. Deviation	t	Sig. (2-tailed)
.182	.300	2.50	.024

95% Confidence internal of Differences	
Lower	Upper
.0729	.336

Chronbach's Alpha for the GSE Pretest was .844 (sd = .842) and Chronbach's

Alpha of the GSE Posttest was .920 (.922). Table 5 shows the results of Cronbach's

Alpha Reliability for the GSE Pretest and GSE Posttest.

Table 5

Chronbach's Alpha Reliability for GSE Pretest and Posttest.

Chronbach's Alpha - Pretest	Standardized Items	No. of Items	Chronbach's Alpha - Posttest	Standardized Items	No. of Items
.844	.842	10	.920	.922	10

Descriptive statistics were used to determine the frequency of all student

responses to each question on the Post Implementation Survey Form. Results are shown

in Table 6. Of 17 students, only 15 responded to Question 4. Students were given the

option to provide comments and feedback on Post-Implementation Survey Form but none

were provided.

Table 6

Frequency Results of Post-Implementation Survey

_____

Question	SA	A	U	D	SD
1. Lecture is important to me in understanding course content.	6(35.5%)	11(64.7)			
2. Pre-class quizzes are important in preparing me for the course content.		3(17.6%)	6(35.3%)	8(47.1%)	
3. In-class collaboration with my classmates helps me to understand the course content better than when I work independently on an in-class learning activity.	2(11.8%)	5(29.4%)	8(47.1%)	1(5.9%)	1(5.9)
4. Would you prefer an unfolding case study as opposed to a traditional lecture to learn the course content?		Yes 6(35.3%)		No 9(52.9)	

_____

Summary

This project evaluated the use of an unfolding case study to enhance the perception of self-efficacy of students in an Associate Degree Nursing program. The project design for this study was a one-group pretest-posttest descriptive design. A lack of literature regarding the use of Situation Learning Theory, unfolding case study debriefing and measurement of perceived student self-efficacy prompted the conduction of this project. The sample consisted of 17 second-year ADN students in the last semester of their nursing program.

Information in Table 1 describes sample characteristics. Information presented in Tables 2 and 3 describes the mean and standard deviation for the GSE scale pretest and posttest, respectively. Information presented in Table 4 reveals s statistically significant difference in perceived self-efficacy between the GSE scale pretest and posttest scores ($p = .024$) of an unfolding case study based on the course concept for the class, Quality Improvement, and the class exemplar, breach in patient care. Statistical significance was evaluated for a p-value $< .05$.

CHAPTER V

Discussion

This study investigated if the use of an unfolding case study enhanced self-efficacy in an ADN complex health concepts course. Bandura's social cognitive theory (1977, 1986) and situation learning theory (Lave & Wenger, 1991) were used to guide this doctoral project. The General Self-Efficacy (GSE) Scale (Schwarzer & Jerusalem, 1995) was the instrument utilized to measure self-efficacy. A paired-samples t-test was utilized to determine if statistical significance existed for the mean difference between the GSE pretest and posttest after the implementation of an unfolding case study. Data results were reported in Chapter IV.

Implication of Findings

The results of this study suggested that self-efficacy may be increased following the use of an unfolding case study as a pedagogical strategy to teach content to nursing students. As the case study unfolded, student self-efficacy was enhanced. According to Bandura's social cognitive theory, the construct of self-efficacy posits that an individual's belief in their ability to be successful in any given task or behavior may directly influence his/her performance outcomes (Bandura, 1977, 1986). Overall, this project concluded that students participating in the unfolding case study as a teaching pedagogy experienced a measured increase in self-efficacy. Unfolding case studies may serve as an additional strategy to enhance the transition from nursing student to professional practice. However, the current project should be replicated to evaluate whether or not the findings are replicable in other settings.

Application to Theoretical/Conceptual Framework

Bandura's social cognitive theory on self-efficacy (1977, 1986) and Lave and Wenger's (1991) Situation Learning Theory formed the theoretical framework for this project. The General Self-Efficacy (GSE) Scale was the instrument utilized by this project to assess perceived self-efficacy. Self-efficacy is based on an individual's belief about their ability to perform a specific task, and the self-efficacy expectation is an integral part of the theory. Self-efficacy focuses on the individual's level of perceived confidence and ability to perform a behavior. Student self-efficacy was enhanced as the case unfolded. Situation Learning Theory (SLT) provided an authentic context for teaching the content for the project unfolding case study. SLT is based on the learning process that occurs when learners become immersed in learning activities that simulate real-world experiences in the classroom (Lave & Wenger, 1991). According to Yousey (2013), unfolding case studies should be relevant (appropriate for student learning), realistic (engages students with an authentic learning experience), engaging (facilitates active learning), and the instruction is challenging for the student (unfolds from simple-to-complex and is level-appropriate for the learner). The unfolding case study for the project attempted to adhere to the attributes of an unfolding case study as advocated by Yousey (2013).

Bandura's Social Cognitive Theory (1977, 1986) and Lave and Wenger's (1991) Situation Learning Theory were congruent with the capstone project. Both theories were utilized to develop and design the project unfolding case study, "Nurses and Social Media – Don't Create a Breach in Care."

The Post Implementation Survey form was developed by the project administrator to capture student perception of the teaching-learning pedagogy, an unfolding case study based on the class concept, Quality Improvement, and class exemplar, breach of care. The survey was a 5-point Likert scale that ranged from "strongly disagree" (1) to "strongly agree" (5). Students were provided an option on the form to share comments and feedback about their learning experience with the project. An interesting result was in regards to the question, "Pre-class quizzes are important in preparing me for the course content." Responses from ranged from "disagree" (8 students, 47.1%), to "undecided" (6 students, 35.3%) to "agree" (4 students, 17.6%). The assumption by the project administrator was preparation for class may contribute to self-efficacy through class participation.

Another interesting finding was in regards to the question, "In-class collaboration with my classmates helps me to understand the course content better than when I work independently." Responses ranged from "strongly disagree" (1) to "strongly agree" (5). Eight students (47.1%) were undecided about the benefits of in-class collaboration. One of the basic tenants of Situation Learning Theory is collaborative learning in a community of practice as the subject content is discussed with the instructor as facilitator and coach of the teaching-learning process. The most significant finding was to the question, "Would you prefer an unfolding case study as opposed to a traditional lecture to learn the course content?" Of the 15 students that responded to the question, nine students (88.2%) responded "no" and six students (35.3%) responded "yes." Two students did not respond to this specific question on the survey. This may be due to the fact that this strategy was unfamiliar to the students.

Limitations

Limitations of this project included a small sample size, use of one academic setting, time constraints, and lack of a control group. Students were also exposed to only one unfolding case study.

The small sample size was a limitation of the project. The sample size consisted of 17 students, and it is difficult to generalize project findings to similar nurse-student populations. However, the project may be an important consideration for those seeking information about utilizing an unfolding case study based on the conceptual framework of the study in a similar population.

A limited academic setting was a limitation of the project. The project was restricted to one academic setting, and time restrictions prevented the project administrator from seeking multiple settings.

Time constraints were a limitation of the study. Students had to attend a mandatory event for graduating seniors. The event was scheduled during the timeframe of the unfolding case study. However, this was not on the academic calendar when the presentation date for the case study was finalized.

The lack of a control group was an additional limitation of the study.

Implications for Nursing

In 2003, the Institute of Medicine (IOM) issued a report entitled, *"Health Professions Education: A Bridge to Quality*." The IOM report asserts the need for health education improvement in educating health professionals, including nursing education. Graduates of professional health education programs should: be proficient in five core competencies in the areas of patient-centered care, participate as a member of

multidisciplinary teams, implement evidence-based practice, utilize quality improvement strategies, and use information technology. Accrediting and regulatory agencies such as the American Association of Colleges of Nursing (AACN), the Commission on Collegiate Nursing Education (CCNE), and the Commission for Nursing Education Accreditation (CNEA), The Joint Commission (TJC), the National Council of State Boards of Nursing (NCBON), and the North Carolina Board of Nursing (NCBON) are committed to ensuring patient safety and quality care; the recommendations by the IOM are salient to educating and training future nurse-generalists.

Nurse educators are challenged with preparing new nurse graduates that can function in the current healthcare practice environment of high patient acuity, morbidities, and information technology while maintaining patient safety and quality care management (Cronenwett et al., 2007). Therefore, nurse educators are amenable to exploring alternative teaching pedagogies that provide students with engaging learning opportunities that simulate real-life clinical scenarios they may encounter in professional nursing practice. The results of this study support the use of an unfolding case study as a teaching pedagogy to enhance nursing students' self-efficacy as they transition to enter professional nursing. The dichotomy between didactic and clinical learning can be integrated with unfolding case studies to provide students with authentic learning opportunities in the classroom that can enhance self-efficacy by teaching situational awareness (Cohen, 2013); that is, the ability to anticipate, evaluate, and respond to subtle changes in a patient's condition before it deteriorates. Also, students can engage in self-reflection about their responses to situation-based clinical scenarios as the case unfolds.

Recommendations

Based on the limitations of the study, future projects should utilize larger sample sizes among varying levels of degrees in nursing education and implement future projects at multiple sources rather than only one program. These recommendations may increase generalizability. Future projects utilizing an unfolding case study to enhance student self-efficacy should consider implementing the project at multiple intervals throughout the semester with an experimental and control group. Implementing the project at multiple intervals based on an experimental design may be more useful in determining if the educational intervention (unfolding case study) enhanced student self-efficacy.

An additional recommendation would be to debrief students after the unfolding case study is completed. Few studies utilized a systematic debriefing process after the unfolding case study was complete. Debriefing affords students the opportunity to engage in guided reflection and to discuss alternatives in formulating nursing care management interventions (Decker, 2007). A final recommendation is to integrate Quality and Safety Education for Nurses (QSEN) six core competencies (patient-centered care, teamwork and collaboration, evidence-based practice (EBP), quality improvement (QI), and informatics in pre-licensure nursing education programs. These competencies will prepare future nurses with the knowledge, skills, and attitudes (KSAs) to continuously improve the quality and safety of the healthcare system in which they practice.

Conclusion

The results of this study indicated the use of an unfolding case study enhanced second-year associate degree nursing students' self-efficacy in a community college in the southeastern United States. Nurse educators should consider utilizing unfolding case

studies as a teaching pedagogy to enhance nursing students' perceived self-efficacy in classroom and clinical learning experiences.

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