


2018

# Critical Thinking and Clinical Judgment in Novice Registered Nurses

Sheila Tyne  
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# Walden University

College of Education

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Sheila Tyne

has been found to be complete and satisfactory in all respects,  
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2017

Abstract

Critical Thinking and Clinical Judgment in Novice Registered Nurses

by

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MSN, Walden University, 2008

BSN, Holy Names University, 2003

Doctoral Study Submitted in Partial Fulfilment

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December, 2017

## Abstract

The health care field has become increasingly more complex, requiring new nurses to be prepared upon graduation to respond to a variety of complex situations. Unfortunately, many graduates from associate degree nursing (ADN) programs are not able to think critically upon entering the work force. This presents a major problem for the nurse and for the employer. The purpose of the study, therefore, was to gain a deeper understanding of the graduates' perceptions of their ability to critically think during their first year of clinical practice, and if they believed their program prepared them to be critical thinkers. The key research questions focused on how the novice nurses reconciled their performance on a critical thinking, online assessment, the Health Sciences Reasoning Test (HSRT), with their perception of their critical thinking skills, and if they felt prepared, during their first year of clinical practice, to critically think. The conceptual framework applied was Bloom's Taxonomy and Tanner's clinical judgment model. A purposeful sampling of 7 novice nurses from 3 ADN programs was chosen. After completing the HSRT, audio-taped phone interviews were conducted. The data indicated that the participants felt unprepared to respond to emergent patient situations, thus undermining their self-worth and clinical competency. The participants agreed there was a need for a critical thinking course in ADN curriculum. A project was created for a 9-week critical thinking course, incorporating theory, clinical practice, and simulation exercises. Social change is expected to occur when student nurses are able to critically think upon graduation, resulting in positive patient outcomes, both of which will benefit patients, their families, and their communities.

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## Dedication

I dedicate this dissertation to my mother, Iris M. Tyne, RN, and my father William V. Tyne. I lost both of them during my doctoral program. My mom was my inspiration for becoming a nurse. She believed I could accomplish anything I set my mind to, even when I doubted myself. My dad gave me my strong work ethic, a sense of humor, and was my biggest cheerleader! I miss them both every day, but I know they are cheering me on from heaven. It has been a long journey mom and dad, but I did it! Thanks for all of your unconditional love and support.

## Acknowledgements

First and foremost, I must acknowledge and thank my partner in life, my loving husband, James W. Cantrell. Without you honey, I never would have made it this far. You have supported me, wiped away my tears, and celebrated my triumphs. I promise I am really done now! I also want to thank each of my nursing instructors who were tough, but fair. They helped me to get to this point in my career. Each of you pushed me, challenged me, and supported me when I needed it most. I must also thank my family and friends, who have been on this long journey with me. Lastly, a big thank you to Dr. Mary Ramirez, my doctoral committee chairperson, who showered me with patience, guidance, and laughter.

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## Section 1: The Problem

Critical thinking skills are paramount to delivering safe and competent patient care. Rubenfield (2000) wrote that the “habits of the mind of critical thinking in nursing include confidence, contextual perspective, creativity, flexibility, inquisitiveness, intellectual integrity, intuition, open-mindedness, perseverance, and reflection” (as cited in Kaddoura, 2013, p. 4). Some newly graduate registered nurses (RNs), as well as associate degree in nursing (ADN) students, struggle to implement critical thinking skills in their clinical practices.

At a local ADN community college, the curriculum includes a foundation for the students to practice safely and master basic, technical, hands-on skills (Foronda & Belknap, 2012). Because it is considered a technical program, ADN students do not receive the in-depth theoretical foundation that their bachelor’s and master’s prepared counterparts do, which assists the nurse in building critical thinking skills. Cork (2014) suggested that the novice nurse’s lack of clinical practice experience contributes to her/his relying on rules and regulations, or a step-by step, linear process, as learned in the ADN program. This approach involves minimal critical thinking, or use of intuition, in patient care decision making, and may lead to new nurses focusing on only one problem, preventing them from seeing the “big” picture. Price (2015) reported that ADN students and new graduates struggle with connecting a disease process with the patient’s signs and symptoms, missing how one leads to the other.

The Accreditation Commission for Education in Nursing (ACEN, 2013) directs schools of nursing to define critical thinking; to conduct ongoing, systematic evaluation of all program components, including critical thinking; and to use the findings for

curriculum development, maintenance, and revision. The ACEN (2013) recognized that there is a need to provide improved curriculum development that encourages critical thinking, which may improve novice nurses' clinical decision making. A qualitative case study approach was used to investigate the critical thinking acumen of novice nurses within their first year of professional practice.

Additional factors contributing to the novice nurse's difficult transition from student to practitioner are the stressors he/she faces in the clinical setting. These stressors include the lack of nurses, work challenges, and increased patient acuity (Naholi, Nosek, & Somayaji, 2015). Although the novice nurse attempts to manage these stressors, he/she is unable to develop the required critical thinking skills needed to deliver safe and competent care. The navigation of these stressors often leads to new nurses leaving their profession, causing patient care to suffer and negative outcomes to occur. Dundas (2015) reported that it is common for novice nurses to feel unprepared and frightened when faced with the smallest patient emergency.

The quest to define, teach, and master critical thinking traverses all disciplines and occupations throughout the world. Over 5 centuries ago, Bacon (1605) defined critical thinking as a desire to seek, patience to doubt, fondness to meditate, slowness to assert, readiness to consider, carefulness to dispose and set in order, and hatred for every kind of imposture (as cited in "A Brief History", 2013). Bacon's insightfulness can be translated into building student nurses' critical thinking skills.

### **The Local Problem**

At the local study sites, many novice nurses' lack critical thinking skills. Clinical and college educators, practicing nurses with more than one year of clinical practice, and

I report the poor critical thinking skills of new nurses. Odland, Sneltvedt, and Venke (2014) reported that employers of newly graduated RNs felt that they were inadequately prepared for clinical practice. One of the educators shared that “it is frightening trying to figure out where to begin the new grad’s orientation program. These new nurses seem completely unaware of the relationship between patient care and the nursing process” (RL, personal communication, April 25, 2015).

Nursing students and novice nurses continue to approach a patient assessment in a step-by-step process. Students perform an incomplete assessment due to their disregard for the influence and importance of diagnostic data that can assist them with fully assessing the patient. This approach may cause the nurse to miss information that may be vital to their patient’s outcomes. Lasater, Nielsen, Stock, and Ostrogorsky (2015) reported that novice nurses struggle with applying their limited critical thinking skills in the workplace. An interconnecting approach to a patient issue is lacking, and it is necessary for the new nurse to connect the pieces of a patient’s clinical puzzle.

In the rationale section that follows, I discuss local educators who have noted this lack of interconnectedness in nursing students and novice nurses. Gorton and Hayes (2014) echoed the importance of marrying the nursing process and critical thinking to enhance critical thinking skills. The authors posited that critical thinking applied to the nursing process allows nurses to address the diverse and convoluted requirements of current nursing practice.

Cazzell and Anderson (2016) concluded that nursing participants lacked interconnectedness in their patient assessments and treatments. Cazzell and Anderson stated that this could prove deadly in emergency situations where anticipatory decision

making and the ability to prioritize are essential to safe patient care. Benner's theory of novice to expert states that the novice nurse has not mastered the critical thinking skills necessary to anticipate patient emergencies and respond competently (as cited in Gallegos & Sortedahl, 2015). The skill of combining diagnostic data, signs and symptoms, and patient responses, and determining what is working and what is not, is lacking in novice nurses. Seibel (2014) stated that many novice nurses feel bullied, disrespected, and abandoned in the workplace. This can lead to an increase in new nurses leaving the profession.

Because the healthcare field has become one of increasingly more complex and higher acuity care, new nurses must be prepared upon graduation to think critically in all patient situations. Potgieter (2012) reported that nursing is an advancing profession, which demands higher-level cognitive skills, such as critical, creative, and reflective thinking; problem solving; and decision making. Due to the increase in complexity caused by an increase in patient acuity with comorbidities, clinical thinking becomes increasingly more important (Cazzell & Anderson, 2016).

### **Rationale**

The study focus of novice nurses' lack of critical thinking education was initially mentioned by a director of education in a Texas hospital when I was an ADN educator there. She expressed that she felt educators and employers were failing to assist novice nurses in developing critical thinking skills, and that these skills need to be taught early on in the classroom. "It is obvious to me that nursing education in local ADN programs is not addressing critical thinking, which is vital in helping a new nurse develop and apply clinical reasoning" (KC, personal communication, January 7, 2014)

I have had concerns about ADN critical thinking education since I became a nurse educator in 2009. I decided to make my doctoral research study about the critical thinking acumen of novice nurses, and if they felt their ADN education prepared them to critically think. In 2009, I began researching how widespread my topic was. I moved back to California in 2013, where I continued to investigate whether the problem was occurring there as I had found in Texas. In California, I found that it was indeed a local problem, as evidenced by the novice nurses' poor clinical performance I assessed as a clinical educator, then as I noted in my nursing students at our local ADN community college program. This led to my study participant recruitment, data collection, and data analysis with California nurses only. The International Review Board (IRB) application approval was based on my California research. My IRB study approval # is 08-07-15-0048630.

In nursing, patient safety is the first priority. Poor critical thinking skills increase the possibility of errors. Turkel, Marian, Marvelous, Morrison, and Singletary (2016) stated that patient safety is lacking when novice nurses possess underdeveloped critical thinking skills. Turkel et al (2016) suggested including critical thinking education in the classroom, but also felt it needed to be continued in the workplace.

A computer-based test, developed in California, is used to assess the critical thinking skills of newly hired RNs. This program, the Performance Based Development System (PBDS), is a competency assessment process used to evaluate nurses' ability to think critically and perform clinically (Performance Management Services [PMS] Inc., 2012). The PBDS assessment addresses four nursing specialty areas: medical/surgical, critical care, neonatal intensive care, and obstetrics. I was interested to see if California

hospitals were administering the PBDS assessment to their new hire RNs, as they were in Texas when I was teaching there.

The PBDS assessment creator posited that before a nurse can be a successful critical thinker, he/she must learn how to assess the patient. Assessment is the first step in the nursing process, and the building block for developing critical thinking skills. It is a fundamental skill required of all nurses in clinical practice. PBDS is meant to assist educators and employers in recognizing nurses' needs for further education in clinical practice. PMS, Inc. (2012) claimed that 65% of new graduate RNs are not able to deliver quality patient care.

The PBDS assessment consisted of patient case scenario videos that required the participant to list which steps he/she would take to treat the presented patient problem. The assessment took between 3 and 4 hours, and was administered online in a computer room at the hospital. The results were sent to “raters,” employees of PMS, who received a year-long training that prepared them to analyze and score the PBDS results.

There were five levels on the grading continuum, ranging from unsuccessful to successful. If the new hire was successful, he/she would report to his/her assigned unit. The preceptor responsible for the nurse's orientation to the unit received feedback about the nurse's performance on the PBDS assessment, and then tailored the orientation to focus on any areas in need of additional educational support. New nurses who were unsuccessful with PBDS were given one-on-one training with the educator. Their unit managers were made aware of the plan of action, and they were involved in counseling their nurses.

Professional nursing organizations and associations have recognized the poor



critical thinking performance of novice nurses and its impact on patient care. The National League for Nursing (NLN), the American Nurses Association (ANA), and the NCSBN give a voice to nurses, involving them in policy review and reform. They help the new nurse to make the connection between nursing education and clinical practice (“Every Nurse Should,” 2012). Associations help nurses build their knowledge base, advance their skills, share standards of practice, and remain connected and relevant (“The Whys and How,” 2017).

Additional benefits available to professional nursing organizations’ members include the availability of evidence-based professional articles to help the nurse stay current with changes in nursing. Career networking and personal and professional development, and a sense of belonging, are benefits also. Attending an organization’s seminars and conventions broadens the nurse’s local and world perspectives on nursing, teaching tolerance, and patience (“Whys and Benefits,” 2017). Lastly, nursing organizations are founded by and for nurses, which empowers nurses to get involved in improving their profession.

Several healthcare organizations have focused on improving novice nurses’ performances through critical thinking education. Some of these organizations include the Institute of Medicine (IOM), the Robert Wood Johnson Foundation (RWJF), and the Carnegie Foundation. These organizations support nursing in its commitment to improving patient care delivery, and they believe that educated nurses ensure patient safety.

In 2008, the IOM collaborated with the RWJF on a 2-year initiative aimed at addressing the need to evaluate and renovate the nursing profession” (“The Future of,”

2015). The report included two foci: a focus on education and a focus on scope of practice. The IOM (2010) suggested four key messages intended to improve and advance the nursing profession:

- Nurses should practice to the full extent of their education and training.
- Nurses should achieve higher levels of education and training through an improved education system that promotes seamless academic progression.
- Nurses should be full partners, with physicians and other health care professionals, in redesigning health care in the United States.
- Effective workforce planning and policy making require better data collection and information infrastructure (“The Future of,” 2015).

The Carnegie Foundation Study (2017) recommends that the entry-level degree for new nursing graduates be at the baccalaureate level, and that all RNs earn a master’s degree within 10 years of initial licensure. The Carnegie Foundation supported the need for higher education in nursing, with a focus on critical thinking. This aligns with the purpose of this research study: to determine the preparedness of ADN graduate nurses to critically think during their first year of clinical practice.

### **Definition of Terms**

The following defined terms were used throughout this study and are standard terms used in the nursing profession.

*Co-morbidities*: Two or more coexisting medical conditions or disease processes in addition to the primary diagnosis (Centers for Disease Control and Prevention [CDC], 2015).

*Concept-based learning (CBL):* CBL is a learning strategy that teaches nursing students key concepts that can be applied to clinical settings, thus encouraging an understanding of interrelated concepts and organization of information (Baldwin University, 2013).

*Critical thinking:* Critical thinking in nursing is the intellectual process of using conceptualization, application, analysis, and evaluation of patient information gathered through observation, experience, and reflection to guide the nurse's caregiving ("Defining Critical," 2015).

*Critical thinking skills:* Critical thinking skills in nursing include analysis, interpretation, judgement, problem solving, evaluation, and reasoning (Doyle, 2016).

*Emotional intelligence (EI):* EI is the ability to perceive, manage, and evaluate emotions in oneself, in others, and in groups (Clancy, 2014).

*Experiential learning (EL):* EL is a process through which students develop knowledge, skills, and values from direct experiences outside a traditional educational setting (University of Colorado, 2013).

*Geriatric:* Geriatric refers to a person 65-years of age or older (World Health Organization [WHO], 2014).

*Gestation:* Gestation is the period between conception and birth (Medline Plus, 2014).

*High-fidelity (HF):* HF is a technologically advanced computerized mannequin used in nursing simulation labs that are meant to replicate a live human (Lewis, Strachan, & Smith, 2012).

*Nursing process:* The nursing process is used by nurses to assess a patient's needs and create a plan of action to address those needs (Nursingprocess.org, 2013).

*Preexisting condition:* A pre-existing condition refers to a health problem that started before the date that new health coverage began (US Department of Health and Human Services, n.d.).

*Problem-based learning (PBL):* PBL is a teaching methodology that is student centered, serves as a guide in solving patient problems, and improves critical thinking skills (Featherstone & Hodge, 2015).

*Systems thinking:* Systems thinking is a method of critical thinking by which an individual analyzes the relationships between a system's parts in order to understand a situation for better decision making (Senge, 2016).

*Simulation:* Simulation is a learning tool used in nursing education to create an environment that promotes experiential learning (Norman, 2012), and allows the nursing student hands-on training that can be applied in a clinical setting.

### **Significance of the Study**

Novice nurses lack critical thinking skills and are ill prepared to care for the severely ill patients currently seen in hospitals, which can result in fatal patient outcomes. Cho et al. (2015) offered possible causes for poor patient outcomes: inadequate nurse patient staffing ratios, work environments lacking adequate resources, leadership and positive, supportive coworker relationships, and low percentages of highly educated nurses possessing a bachelor's in science in nursing degree or higher.

Rapid changes and specialization in today's hospitals call for highly skilled nurses (Price, 2015). Novice nurses enter the workforce and are expected to perform

competently. However, they have been educated in an academic system that continues to practice non-student-centered curriculum, and they learn in a step by step, linear fashion (Chan, 2013). This approach prevents the student from developing skills that assess all of the patient data, allowing for missed cues of impending problems, and seeing how the patient data portends a disease progressing in severity.

Critical thinking is not a single skill a nurse must master. It is composed of multiple components, including the nursing process, data analysis, research, education, theory, and diagnostics (Tajvidi, Ghiyasvan, & Salsali, 2014). The driving force behind this study was a desire to help novice nurses transition from the classroom to the bedside as competent, educated, and safe practitioners. To this end, a critical thinking education course will be added to the first semester curriculum of our local ADN program, to highlight and address any weaknesses in critical thinking education.

Once the course has been tracked over a 2-year cycle and proven successful, the data will be shared with stakeholders, which include local ADN programs and health care providers. If the data shows improvement in the graduates' critical thinking skills, the course will be presented to additional stakeholders, such as the California Organization of ADN programs, and the California Board of Registered Nursing, with the plan being to implement the course in all ADN programs statewide. Once data shows improved critical thinking skills in ADN novice nurses within their first year of practice locally, the course will be introduced to nurse educators nationwide, with the goal being to improve novice nurses' critical thinking skills, resulting in improved patient outcomes.

### **Research Questions**

The intent of this study was to assess the critical thinking skills of novice RNs in the first year of their clinical practice, to determine if they felt prepared by their nursing education to critically think, and to ascertain if they saw a need for a critical thinking course to be added to the first semester curriculum of ADN programs. There is a correlation between critical thinking skills and positive patient outcomes. Moorman, Hensel, Decker, and Busby (2017) noted this correlation, and suggested that there is a need for the development of intrapersonal, interpersonal, and cognitive skills education in nursing. These skills include “critical thinking, problem solving, ability to tolerate ambiguity, communication, collaboration, creativity, and information literacy” (Moorman et al., 2017, p.127).

The following research questions align with the purpose of this study, which was to determine the preparedness of ADN graduate nurses to critically think during their first year of clinical practice. Based on the collected and analyzed data from the study participants, I present a project outlining a critical thinking course for ADN first semester students. My research h questions were:

- 1) How did novice nurses reconcile their HSRT results with their perception of their critical thinking skills?
- 2) What evidence did the novice nurses present for whether, in their first year of practice, they felt prepared and confident in their ability to critically think and clinically reason?

## **Review of the Literature**

The literature search was done using several resources, such as the World Wide Web, Walden University Library, Google Scholar, professional nursing organizations, and libraries of several other institutions of higher learning. The databases used included ProQuest Health, Medline, Cinahl Plus, Google Scholar, and Eric. The Boolean search words used were *critical thinking in nursing, critical thinking skills, novice nurses, clinical reasoning, clinical practice of novice nurses, Christine Tanner, teaching critical thinking, new graduate RNs, nurse errors, nursing curriculum, critical thinking curriculum, aging population, Human Patient Simulator, high patient acuity, advanced healthcare technology and poor coordination of services*. The literature search revealed a connection between substandard patient outcomes and the poor clinical performance of novice nurses.

## **Theoretical Framework**

Nursing education is in need of improved critical thinking that prepares novice nurses for practice in a changing and challenging health care environment. The nursing process has been the gold standard for nursing education for decades (“The 5 Steps,” 2017). The nursing process reduces decision making to a linear, problem solving approach, disregarding new influences such as technological advancements, and the more complex patient scenarios seen in health care. As the new nurse gathers data from a variety of sources, he/she must recognize, apply, and use this material in order to provide safe patient care (McMahon, n.d.).

Tanner (2006, 2010) posited that the model of the nursing process has become ineffective in capturing the complex and challenging clinical decision making required of

nurses today. Tanner noted a need to combine the nursing process with a practice theory that gives the new nurse additional data to guide his/her clinical reasoning and decision making. Tanner developed the clinical judgment model (CMJ) theory.

Tanner's CJM, the chosen theoretical framework for this study, defines clinical judgment using four descriptions: noticing, interpreting, responding, and reflecting (Cazzell & Anderson, 2016). Noticing represents the student's acknowledgement that there is a change in a patient's condition. Interpretation is the student's ability to reason and recognize a variety of possible actions to be taken. Responding represents the course of action or actions, as well as the decision not to act. Reflection is the student reflecting on the course(s) taken, the intervention(s) implemented, and the final assessment of the outcomes from said interventions (Gonzol & Newby, 2013).

The CJM expanded on the nursing process, encouraging nursing education to focus beyond the linear practice of assessing a patient using an adragological approach. Tanner (2010) purported that different learning activities may be beneficial in nursing education. Examples of these activities are:

- Extending theoretical knowledge and learning how key concepts are applied to practice.
- Developing practical skills for basic nursing procedures.
- Developing clinical judgment, reflection on practice, and systems thinking.
- Clinical judgment rests on the development of experiential knowledge.
- Understanding the culture of health care and nursing, the effect it has on patient care and care team members, and how to function within this inter-professional team work model (Tanner, 2010).



The CJM lays the foundation for the interpretation of data collected, application of interventions to address the nursing problems identified, and evaluation of the process using student reflection. Tanner (2010) encouraged the nurse to draw conclusions about a patient's needs, whether or not to take action, to modify clinical practices, or develop new ones based on evaluation of the patient's response. According to the CJM, the nurse should understand not only the pathophysiology of a patient's clinical disease presentation, but how to use reflection to form an awareness of what the illness experience means for the patient and his/her family. The CMJ guides the novice nurse in systematically laying out a plan of care that addresses all aspects of the patient's care, while demanding that all healthcare delivery encompasses comprehensive information needed to make clinical decisions. The patient's community is included in this process as well, as it is affected by its member's participation and success.

The CJM fits well with this study. Novice nurses need to possess the ability to review all pertinent patient data: lab work, diagnostics, medications, signs and symptoms, and the psychosocial patient needs in order to deliver a plan of care that is safe, competent, and thorough. Student nurses are taught the nursing process in their first year of a nursing program. This is beneficial for the new student nurse when he/she has little patient exposure. However, the nursing process needs to be expanded as the student advances to the next level of his/her nursing education. Through this process, the student begins to build critical thinking skills

### **Review of the Broader Problem**

This study's focus was the poor critical thinking and clinical performance of newly graduated ADN nurses within the first year of their clinical practice. The purpose

of this study was to determine the preparedness of ADN graduate nurses to critically think during their first year of clinical practice. There are several contributing factors to the challenges facing the novice nurse, causing them to feel unprepared to enter the nursing workforce (McDermid, Peters, Daly, & Jackson, 2016).

Fitzpatrick and Gripshover (2016), stated that high patient acuity, an aging population, technological advancements, and poor coordination of services result in rising health care costs. These challenges could overwhelm the novice nurse, especially one with poor critical thinking and clinical judgment skills. By dissecting and addressing the aforementioned challenges, nurse educators would be better able to define and implement curriculum that strengthens students' abilities to critically think.

**An aging population.** An aging population, which the WHO (2014) defined as ages 60-65-years-old, with an increase in chronic illnesses, causes an increase in the cost of health care and drains resources. Chronic disease prevalence is contributing to health care costs and decreased quality of life in industrialized nations worldwide. Dieleman, Baral, and Birger (2016) stated, "US spending on personal healthcare and public health showed substantial increases from 1996 through 2013; with spending on diabetes, ischemic heart disease, and low back and neck pain accounting for the highest amounts of spending by disease category" (p. 2,627). Along with our current nursing shortage, the nursing profession is facing an increase in patient injuries, nurse errors, and nurses leaving the profession due to fear and frustration.

When faced with ill, multiply-diagnosed patients who require advanced critical thinking skills, novice nurses reported becoming fearful for their licenses and frustrated over their perceived lack of preparation (Giandinoto & Edward, 2014). These novice

nurses struggled with the application of critical thinking skills. Clinical development during their first year of practice is crucial to novice nurses retaining their skills and reiterating the importance of patient safety.

Examples of chronic illnesses and co-morbidities are diabetes, heart disease, chronic obstructive pulmonary disease, and cancer. Forty-five percent of U.S. adults have at least one illness, one in four have two or more, and over 50% of older adults in the U.S. have three or more co-morbidities (Tinker, 2015). Kotkin and Cox (2014) stated:

Since 2000, the senior population has increased 29% compared to overall population growth of 12%. The percentage of Americans in the senior set has risen from 12.4% to 14.1%, and their share of the population is projected to climb to 19.3% by 2030. With the baby boomer population in the U. S. rapidly approaching retirement age, our health care delivery system is going to be further challenged. There will be fewer qualified care givers available to address the soaring needs in our communities.

Senior citizens' ability to afford health care is impacted by the concern regarding the stability and future availability of Medicare. The Urban Institute (2013) reported that although Medicare covers most U. S. adults aged 65 and older, monthly premiums, copays, and a lack of benefit packages may not allow some elderly to afford health care. There are no controls on the amount of money providers can charge for those services not covered under Medicare. Older U. S. adults must purchase supplemental insurances in order to fill the gaps of Medicare's non-coverage. In 2006, the premiums for supplemental insurances accounted for 56% of seniors' out of pocket spending (Urban Institute, 2013).

**The high acuity of today's nursing profession.** Nurses today face high acuity challenges, affecting the struggle to deliver quality patient care. Patients are sicker with multiple complex needs. Resources for patient care, including proper staffing, are dwindling. A clear definition of acuity is needed in order to prepare nurses for the current health care environment.

Inadequate staffing and unrealistic workloads place an unnecessary burden on nursing staff, reduce the quality of care that nurses are able to provide, and lead to fatigue, unachievable expectations, and uncompleted tasks (Horton, 2014). With this definition of acuity comes the responsibility of nursing leaders to assure bedside RNs that competent and safe care can be delivered. Unfortunately, the needs of the severely ill patient do not always fit into defined time and care limits.

Novice nurses have worked hard in school to master the skills necessary to deliver safe care to patients. However, they have not been required to apply the skills to real life situations without the support of their educators. Dundas (2015) stated that although education and licensure allow the novice nurse to practice as an RN, he/she has not yet developed the critical thinking skills necessary to evaluate and treat complex situations in the clinical environment.

Kalb, O'Conner-Von, Brockway, Rierson, and Sendelbach (2015) reported that current nursing education falls short in preparing novice nurses to practice in the highly libelous health care environment. Kalb et al stated that Florence Nightingale's educational model involved matching nursing students with experienced nurses. This learning at the bedside model continued until after World War II, when it changed to college based programs, which combined didactic and clinical components. One clinical instructor was

responsible for up to 10 students. This change in nursing care delivery caused a breakdown in student nurse preparation and one on one learning opportunities. Kalb et al (2015) reported this resulted in a decrease in competently prepared, critically thinking novice nurses.

These changes in the nursing delivery system, combined with sicker patients with multiple co-morbidities, have overwhelmed novice nurses. The Carnegie Study (2016) summarized those forces in health care delivery today that increase the acuity of the nursing profession:

Nursing is facing overwhelming challenges: from a health care system in upheaval, an economic system in turmoil, technological advancements, and patients participating in their health care decisions. Combine these challenges with the current nursing shortage and changes in nursing practice, and the profession's ability to maintain its standards can be adversely affected ("Educating Nurses," 2016).

An aging population, which the WHO (2014) defined as ages 60-65-years old, with an increase in chronic illnesses, causes an increase in the cost of health care and drains resources. Chronic disease prevalence is contributing to health care costs and decreased quality of life in industrialized nations worldwide (McCaskill, Schwartz, Derouin, & Pegram, 2014). These challenges, combined with the current nursing shortage, result in the nursing profession facing an increase in patient injuries, nurse errors, and nurses leaving the profession.

Clinical development during the first year of practice is crucial to retaining new nurses, building upon their skill sets, and instilling patient safety values (Hickerson,

Taylor, & Terhaar, 2016). The baby boomer population in the U.S. is approaching retirement age, resulting in the health care delivery system being further challenged. There will be less qualified care givers available to address the soaring needs in communities.

**Technological advances in health care.** While advancements in technology have resulted in patients living longer, they have also caused health care costs to rise, decreasing Americans' access to services. Primary care related emergency department (PCR-ED) utilization, including conditions that are preventable or treatable with appropriate primary care, is associated with decreased efficiency of, and increased costs to, the health care system (Enard & Dent, 2013). Many PCR-ED users experience actual or perceived problems accessing appropriate, ongoing sources of medical care.

Patient navigation, an intervention used most often in the cancer care continuum, may help to address these barriers among medically underserved populations, such as those who are low income, uninsured, publicly insured, or recent U.S. immigrants. Enard and Dent (2013) noted that healthcare costs have risen dramatically over the last 15 years. This has many in American society concerned that healthcare is not being fairly distributed. Medical News Today (2017) agreed and reported that:

American respondents having difficulty paying their medical bills are more likely to do without medical care because of the cost, and cited that 42% of the survey participants had not seen a doctor, filled a prescription, or received recommended care. This percentage is much higher than in other nations, and over double in the United Kingdom, Canada, France, the Netherlands, Norway, Sweden and Switzerland. ("Sicker US adults," 2017).

For our elderly population, advanced technology costs prevent many from seeking care that may arrest an acute illness before it becomes chronic. As a result, they come to the hospital with multiple co-morbidities, requiring advanced care delivered by confident, prepared, and critically thinking nurses.

Wellness and preventative services are being touted as the answers to halting the rise of chronic illnesses among Americans and, subsequently lowering health care costs. Through wellness promotion, the rates of Type 2 diabetes, heart disease, kidney failure, and stroke can be greatly reduced (Giandinoto & Edward, 2014). However, the concern remains that even these preventative programs will be too costly, or underserved populations will have poor access to them. New RNs of the future will be required to be well versed in not only care at the bedside, but their critical thinking skills will be applied to proficiency in wellness education, disease prevention, and financial acumen.

**Poor coordination of services.** There is a need for improved coordination of patient care services. Nurses cannot provide thorough care if they are unable to coordinate the management of a patient's chronic illnesses. Jones et al (2015) reported that failure to coordinate care can lead to poor patient outcomes as the care fragments and the patient's status becomes critical. One cause for the poor coordination of benefits is the high co-pay costs required of many Americans who are on fixed incomes or are unemployed.

This lack of coordination wreaks havoc on patients' health, they become sicker, and their access to services fall short of preventing acute conditions becoming chronic. With poor coordination of care, patients entering the hospital are often critically ill, and the nursing care they require is demanding. When these ill patients finally seek care in an

Emergency Department (ED) or acute facility, their health care needs and resulting costs reach catastrophic levels. Weiss, Wier, Stocks, and Blanchard (2014) reported that in 2009 about half of all inpatient hospital admissions originated in the emergency department (ED).

The specialization of care providers is another reason for poor coordination of services leading to patients becoming sicker and their needs costlier. Upon discharge from the hospital, care and services are often divided among a plethora of providers. Ensuring coordination of services will fall to the new graduate, demanding that he/she be able to ensure complete and thorough care by coordinating their patients' services from hospital to home (Horton, 2014). Collaboration with other service providers requires strong critical thinking skills and the new RN's ability to fulfill the role of patient advocate.

**How nursing schools are preparing new graduates to think critically.** Nursing literature reports the need for evidence based practice (EBP) rooted in evidence based research. EBP is defined by White-Williams et al (2013) as the use of scientifically proven principles to provide safe and competent patient care. Critical thinking skills develop when nursing students are exposed to innovative, evidence based teaching methods, which assist them in improving their clinical practice and raising patient care standards to a higher level (Ellis, 2016).

Using EBP allows nursing students to apply their didactic learning experiences to their clinical ones, which builds critical thinking skills. Upon entering the nursing profession, EBP demands critically appraised and scientifically proven evidence, which is essential in delivering safe and competent healthcare (Kaper et al., 2015). Applying EBP



challenges requires the nurse educator to find an effective delivery method which assists students in building a foundation for safe, competent, and critically developed clinical practice.

Canada (2016) explained the relationship between critical thinking and EBP, and posited that this relationship requires several features of the critical thinking continuum. "...EBP promotes safe patient care, effective cost saving measures, and a better understanding of applied nursing care" (p. 162). The critical thinker first evaluates the patient's needs based on learned skills, and this process results in decisions that are applied to human change. This human change benefits not only the patient, but his/her community as well. Critical thinking requires evidence based research which supports practice, the willingness of the thinker to reassess personal attitudes and belief systems, and to accept change and differing opinions.

Critical thinking is emphasized by national and international nursing organizations, and is recognized as a tenet for basic nursing practice (Papathanasiou et al., 2014). Inadequate critical thinking skills in a novice nurse can have harsh outcomes for consumers of health care. Communities deserve adequate, safe, advanced nursing care delivered by compassionate, proficient and competent nurses. Kalb et al (2015) reports that there exists an urgent need for early critical thinking education in nursing schools

Caputi (2012) supported the need for improved critical thinking in nursing education, and cited the following deficiencies of novice nurses:

- Prioritization
- Anticipation of risk
- Delegation of tasks

- Interpretation of data
- Taking initiative
- Recognition of a change in patient status
- Conducting appropriate patient follow up
- Application of the nursing process
- Recognizing and reporting unsafe practices by self and others (“Transforming Clinical,” 2012).

### **Implications**

The implications for the project study, based on anticipated study findings, are twofold. Firstly, novice nurses develop a voice, encouraging them to speak up for themselves, and that there is a need for further support and direction after graduation, as suggested by Carnegie Mellon University (“Teaching Excellence,” 2014). Secondly, the introduction of a standalone critical thinking course, beginning day one of a nursing program, may improve the students' preparation for the transition from classroom to bedside.

Possible project study directions based on the study's data collection and analysis are the need for earlier critical thinking education in ADN nursing programs, and an increase in the use of the Human Patient Simulator (HPS) to simulate real life patient scenarios in lieu of clinical placements. Tentative directions for the project study deliverables may include the stand alone critical thinking course, applications for HPS scenarios to reinforce the critical thinking process in patient care, and the improved critical thinking skills of newly graduated ADN RNs, resulting in positive patient outcomes.

## Summary

Using critical thinking education, students evaluate the arguments of others, resolve conflicts, and figure out solutions to complex problems (Naber, Hall, & Schadler, 2014). Several teaching methodologies foster learner centered education. The decades old, content driven, and teacher focused modalities may not be effective in teaching nursing students to think critically think and clinically reason in today's challenging health care arena (Zarifsanaiey, Amini, & Saadat, 2016).

Study participants' recruitment, along with the data types used and analyzed, are discussed in Section 2. Also included are the research design, data collection, data analysis, and data results. Section 3 outlines the proposed project and includes the chosen genre, rationale, and review of the literature. This section also includes the project's description, evaluation plan, and implications. Section 4 contains the researcher's reflections on the project study experience, that address the project's strengths, limitations, and alternative approaches to the stated problem. Section 4 also includes the scholarship, project development, and leadership and change areas, outlining my learning and personal growth of self.

## Section 2: The Methodology

### **Qualitative Research Design and Approach**

The research methodology implemented was a qualitative design with a case study approach (Welford, Murphy, & Casey, 2012). This design was applied to further delve into novice nurses' perceptions of their critical thinking acumen during their first year of clinical practice, and if their nursing program education prepared them to critically think upon graduation. Prior to deciding to use the case study approach, I compared the four major designs most commonly used in qualitative research. The four designs are phenomenology, ethnography, grounded, and case study. The grounded theory is not applicable to my study because I have chosen a theory as part of the theoretical framework from which I am using as a lens to support my research.

In the phenomenology design, scholars focus on the lived experiences of the study participants ("The Purpose of," 2017). Although I am interested in each participant's lived experiences in relation to his/her critical thinking skills, I am more interested in the causes for his/her perceived lack of said skills. My intent was to focus on novice nurses as a subset of nurses with experiences specific to them, not on each individual, which is the definition of phenomenological research.

In an ethnographical design, the researcher studies individuals in a group, but the focus is on the culture these individuals associate with ("Journey to," 2017). My study participants possessed characteristics from a variety of cultures, religions, and races, all of which had no bearing on what I was seeking to understand. The only traits my participants had in common were that they graduated from an ADN program and had a year of clinical experience.

The grounded theory design was not applicable to my research goal, nor would it help to answer my research questions. Its purpose is to collect data that assist in the development of a theory. It uses the participants' narratives to develop theories that expand on psychosocial methods, and is applicable to a variety of health and social sciences, including nursing, social work, and education ("What is Grounded," 2017). I chose the case study design over the grounded theory design because I had an applicable theoretical framework for my study, and I wanted to focus on nursing only.

The case study design was selected to derive personal, reflective interpretation from newly graduated ADN RNs about their critical thinking skills during their first year of practice. This design allows the researcher and participants to explore and understand a situation, problem, phenomenon, service or program (Camarinha-Matos, 2012), allowing the study participants to address whether their nursing education prepared them to critically think upon entering the nursing profession.

### **Participants**

A convenience sampling was used because it can rely on data collection from the sample members who are conveniently available to join in the study ("Convenience Sampling," 2017). The participants were solicited through a mass e-mail that was sent to a large potential participant pool of over 300 novice nurses from three local ADN programs who graduated in 2012 or 2013. Participants self-selected from a large group, which was identified due to criteria that included the following: participants graduated from an ADN nursing program in 2012 or 2013, participants must have had 12 months or less of clinical experience, participants must have been agreeable to take the HSRT assessment online, and the participants must have participated in one on one phone

interviews. These novice nurses possessed the knowledge to speak about their nursing education experiences, and decide if they felt their education prepared them to critically think upon graduation.

The three directors sent out an introductory email (see Appendix B) to all 2012 and 2013 graduates of their programs, requesting them to contact me if they were interested in joining the study. The directors had no contact with the graduates after they sent the original email, and they were not aware of those who participated in the study, so coercion was not a factor. No one besides me had access to the study data or analysis, and this step helped ensure confidentiality.

To further ensure the ethical treatment of the participants, to maintain their privacy and confidentiality, and to supply protection from harm, several layers of protection were used in the study. All participants were 18 years of age or older. Their directors' introductory emails were sent via a secure network to their private email addresses. I received return e-mails from 10 persons voicing an interest in joining the study. Three of the respondents were from the first college, two from the second college, and two from the third college. Though I was aware of their gender, age, and marital status, I was unaware of their names, geographical locations, and other personal identifying information. I did have their personal email addresses.

I e-mailed the informational e-mail to the 10 interested participants, explaining the study and its goals. I attached a consent form for the participants to sign. I assured them that their participation would be kept in strictest confidence, as well as my collected data from the HSRT assessment and phone interviews. The participants were never at risk

for physical harm from the study, nor from emotional harm, as I treated them with the utmost respect, kindness, and appreciation.

Once the signed consents were returned, I e-mailed the HSRT on-line critical thinking assessment to the seven participant's personal email. They all responded that they understood they were to complete and forward the assessment to Insight Assessment (2016) for analysis. I never received responses to the e-mails and text messages I sent to the participants who did not complete the HSRT.

All seven participants graduated from ADN nursing programs at local colleges. Five of the participants were female, and two were male. The participants' ages ranged from 25-52-years old. Three females were married and had children. Two females were married with no children. The ethnic makeup of the participants was the following: one female Japanese national, two male and one female Mexican-Americans, and three female Caucasians. I recognized the diverse ethnic makeup of my participants could potentially prove to be a limitation of the study if their cultural beliefs influenced their participation in the HSRT assessment and phone interviews.

I communicated frequently through e-mails and phone calls with the seven participants, building rapport, trust, and a working relationship. I answered their questions related to the study. They stated understanding of the study, its purpose, HSRT assessment, phone interviews, and timeline.

### **Data Collection**

The two data collection instruments used for the study were the HSRT assessments and individual audio-taped, one on one phone interviews. The HSRT assessments provided a baseline critical thinking skills assessment, while the interviews

offered the participants' views of their critical thinking acumen, and whether their nursing programs prepared them to critically think. All participants completed both the HSRT assessment and phone interviews.

The HSRT assessments were sent to each participant. The HSRT is designed to assess nursing students' clinical reasoning and judgment skills, and their ability to anticipate and prioritize care (Insight Assessment, 2013). It is a multiple-choice test that is administered on-line, taking approximately 50 minutes to complete. The test questions range from simple to complex, and are presented in patient case scenario format. Although the HSRT results could be interpreted as quantitative data, I chose to use them as simple assessments of the participants' critical thinking skills. The HSRT data provided a baseline assessment. The assessment enabled me to explore possible project directions, with the goal being to improve the critical thinking skills of novice nurses, and preparing them for practice.

Upon completion of the HSRT assessments, the one on one interviews were scheduled. A signed consent giving permission to record was received before the interviews began. I audio-taped and transcribed the phone interviews. Each interview lasted approximately 30-45 minutes. I created the interview tool, which included six questions with subquestions (See Appendix D). After the interviews were completed, I transcribed them in text form per participant so I could easily note similar theme trends. I presented these trends under the data analysis section, which follows this section. Permission to record was received before the interviews began. The goals of the interviews were to illicit rich, in depth descriptions of the novice nurses' critical thinking



skills, and to determine if they felt their HSRT results were representative of their critical thinking skills.

Each interview lasted 30-45 minutes and was audio-recorded. Upon completion of the interviews, the data were analyzed and common themes were noted. Vaismoradi et al (2016) defined a theme as “the main product of data analysis that yields practical results in the field of study” (p. 101). All data collected were securely stored on a flash drive, in a locked cabinet, in my home.

My role as the researcher included interactions I had with two of the three directors of the ADN programs from which I chose my study participants. The director of the first college was my current supervisor. The graduates from this college, who participated in the study, were unknown to me as I had no contact with them in my current position as assistant director of the ADN program. We did not discuss the names of possible participants from the graduate groups, and she agreed to send out a mass e-mail to all of the 2012 and 2013 graduates. No personal or professional communication occurred before or after the e-mail was sent.

I met the nursing program director of the second college at a professional conference in 2013. The participants from this college were unknown to me. I had no previous contact with the director from the third college prior to beginning my study. As all participants were recruited from the graduating classes of 2012 and 2013, and I began employment at the first college in 2013, the risk for researcher bias was nonexistent.

The directors e-mailed an introductory letter. My first interaction with the participants came after I e-mailed the informational letter explaining the study in depth. Throughout the HSRT and interview processes, my interaction with the participants

consisted of e-mails and phone calls. First and last name initials were assigned to each participant, and I addressed them as such when speaking one on one with them. Of the seven participants, three resided out of state, so any future direct interaction with them would be nil. Of the remaining four, none worked in any hospitals or other health care settings that I would have occasion to visit in my present work capacity.

### **Data Analysis Results**

The participants took the HSRT assessments on-line in the privacy of their homes. Once the participants completed their critical thinking assessments, they forwarded them to Insight Assessment for interpretation, which were then forwarded to me. I used Insight Assessment's HSRT manual to understand the HSRT scale scores. I created an Excel spreadsheet to keep track of this data. After I understood Insight Assessment's interpretation of the participants' HSRT results, I arranged one-on-one phone interviews with each participant. The HSRT results were discussed with the participants during their interviews.

The first set of study data analyzed was the HSRT results. This tool was used to assess the critical thinking skills of seven novice ADN graduates, with 12 months or less of clinical practice, who participated in the study. The HSRT was developed by Insight Assessment (2013). Insight Assessment assigned six categories to interpret the HSRT results: Overall, Induction, Deduction, Analysis, Inference, and Evaluation. There is a seventh category, Percentile, which refers to the test takers' overall score (Insight Assessment, 2016). The percentile score compares the test taker's score with an external benchmark.

For this HSRT analysis, the benchmark was comparing the test taker's score with 100 other test takers' scores. The categories are listed below with a brief description of each. The HSRT assessment was chosen for this study because the results are directly relatable to the first research question: How did novice nurses reconcile their HSRT results with their perception of their critical thinking skills?

Insight Assessment (2013) defined the scoring categories as follows:

1. Overall describes strength in using reasoning to form reflective judgments.  
Reasoning is of utmost importance to a nurse's critical thinking ability.
2. Difficult or uncertain decision-making relies on inductive reasoning, which provides the critical thinker with firm beliefs in conclusions and reasonable actions.
3. Deductive reasoning skills enable the critical thinker to make decisions based on a core values system, which includes policies and procedures, principles, operating conditions, and terminology.
4. Analytical reasoning enables the critical thinker to recognize assumptions, reasons and claims, and to determine the role they play in forming opinions.
5. Inference skills enable the critical thinker to draw conclusions and make decisions based on evidence.
6. Evaluation skills enable the critical thinker to determine whether the sources of information used to develop a course of action are credible and reliable ("Performance ratings," 2015).

Insight Assessment's (2016) interpretation of the participants' scores used a 33 point version to assign the recommended performance assessments scoring ranges. The 33-point version offers 5 scale scores divided into three levels of recommended performance. These scores are used to identify areas of strength and weakness, with the ultimate goal being to provide educational opportunities for the participant to improve his/her assessment skills.

According to Insight Assessment's HSRT User Manual (2016), performance Assessments are analyzed using assessment descriptors. These descriptors are:

- Superior: This result indicates critical thinking skill that is superior to the vast Majority of test takers.
- Strong: This result is consistent with the potential for academic success and career development.
- Moderate: This result indicates the potential for skills-related challenges when engaged in reflective problem solving and decision-making.
- Weak: This result is predictive of difficulties with educational and employment related demands for reflective problem solving and decision making.
- Not Manifested: This result is consistent with possible insufficient test taker effort, cognitive fatigue, or reading or language comprehension issues.

My synopsis of Insight Assessment's (2013) interpretations of each participant's HSRT results follows. Of the seven participants who took the assessment, three scored 72 or greater as an overall percentile ranking among nationwide assessment takers, one scored 45, one 28, one 22, and the last scored one on the percentile score due to his failure to complete all of the assessment questions. The HSRT assessment allotted 50

minutes for the participant to complete it. Using Insight Assessment's (2016) HSRT User Manual, I analyzed each participant's individual scores, which included the six categories, the percentage of questions answered, and the time spent on taking the assessment. My analyses results were:

**Participant #1 AW:** AW's overall, induction, and evaluation scores reflected a successful critical thinker, with strong reasoning and decision-making skills. AW scored *moderately strong* in the analysis and inference categories, and *not manifested* in the deduction category. AW scored *moderate to strong* in the other categories, therefore her deduction score could be reflective of test taking error or test taker fatigue. AW completed 100% of the questions in 39 minutes.

**Participant #2 SW:** SW's overall deduction scores were *moderate*, while her induction, analysis, and evaluation scores were strong. SW's inference score was *not manifested*, which could be attributed to test taker fatigue, error, or an inability to draw conclusions from the evidence presented. SW completed 97% of the questions in 50 minutes.

**Participant #3 KB:** KB's overall, induction, analysis, and inference scores were all *moderate*, while her evaluation score was strong. KB scored *not manifested* in the deduction category. This may be due to test taker fatigue; however, KB attributes this score to some difficulty with portions of the test because of a language barrier. KB completed 100% of the questions in 48 minutes.

**Participant #4 JA:** JA scored *not manifested* in each category. JA reports being a "horrible test taker," and felt the HSRT assessment was not an accurate reflection of his critical thinking skills. JA asked if he could study for the assessment and retake it. I told

him I understood, but that the assessment was not the only assessment of his critical thinking skills; that the interview delved deeply into his self-assessment of his critical thinking skills. JA completed 70% of the questions in 50 minutes.

**Participant #5 SA:** SA scored *strong* in the overall, induction, analysis, and evaluation categories, and *moderate* in the deduction and inference categories. SA reported strong critical thinking and test taking skills. SA completed 100% of the questions in 30 minutes.

**Participant #6 JV:** JV scored *strong* in every category, and reported strong critical thinking skills learned both in his ADN program and work experience. JV completed 100% of the questions in 43 minutes.

**Participant #7 SO:** SO scored *strong* in the overall, induction, deduction, analysis, and evaluation categories, and *moderate* in the inference category. SP completed 100% of the questions in 50 minutes.

Insight Assessment's (2013) original analysis of the study group's strengths and areas for improvement per category tested are as follows: participant JA's scores were not factored in as every category showed *not manifested*. Insight Assessment's minimum requirement is to complete 60% of the questions, which all participants met. The group's mean scores per category were: the overall, induction analysis, and evaluation scores were *strong*, while the deduction and inference scores were *moderately strong*. These HSRT assessment scores were shared with the participants in their one on one interviews. Each interview question related back to one or both of my researcher questions.

To ensure credibility and accuracy of the data collection and analysis, peer debriefing and triangulation were used. I applied peer debriefing by enlisting the help of a

Master's prepared RN to review my study. She offered interview tips to improve the flow of the interviews in search of more in-depth, rich descriptions of the participant's critical thinking experiences. Her professional experience was as a bedside nurse for five years, and a nurse educator for 15 years. We communicated via e-mail, text, and phone over a 6 month period. She provided suggestions and insights into areas in need of some clarification. I supplied the clarification and she signed off on my study.

I utilized triangulation by collecting more than one form of data on my research topic (Creswell, 2014); the HSRT assessments and the phone interviews. These two forms of data offered a variety of opinions on the same topic, and assisted in answering my research question. Case study research emphasizes the importance of utilizing multiple sources of evidence (Lalor et al., 2013). There are four forms of triangulation:

Data triangulation involves retrieving data from a variety of sources to form one body of data; investigator triangulation utilizes multiple observers instead of a single observer in gathering and interpreting data; theoretical triangulation draws upon more than just theoretical positions when interpreting data; and methodological triangulation employs more than one research method or data collection technique (Denzin, 1989).

I used data triangulation for my study. I collected data from the participants' HSRT assessments and phone interviews. By using two forms of data, my goal was to avoid any bias on my part, which can occur in "single method, single observer, single theory studies" (Yeasmin & Rahman, 2013, p. 157).

Prior to the start of the interviews, the participants were encouraged to ask any questions about the process, and to verbalize any concerns they may have before giving

consent to be interviewed. A voice activated recorder was used to record the interviews, and the recordings were then transcribed over the next 24-48 hours. Once the recordings were reviewed several times, transcripts were prepared in Word documents. I placed the documents in a binder, with sections consisting of each participant's first and last initials only. The binder and recorder were locked in a cabinet in my home, and only I have access to the key and cabinet.

Thematic analysis was used with the phone interview data. In this form of analysis, the collected data were reviewed to note themes, and/or patterns, in the participants' reactions and responses to the interview questions (Fletcher, 2014). The interviews were manually coded. A code is "a word or phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data" (Saldana, 2013, p. 3). After coding was completed, I reviewed the data again, looking for common themes and/or patterns, which follow in the next section.

Interview questions one and two were demographically based and were not coded or themed. The participants' responses to interview questions three, four, five, and six are listed in Table 1 which follows below. I included all responses from all participants. I analyzed, or coded (Stuckey, 2014), all interview responses and noted the following themes: *Anticipating change; application to practice; transitioning to knowing; and need more critical thinking education*. The participant responses and the correlating themes are in Table 1. The themes closely mirrored the steps of the nursing process, which lays the foundation for the development of critical thinking as noted in Tanner's CJM.



**Interview Questions 3:** Please define critical thinking in your nursing practice.

This question relates to the first research question: how did novice nurses reconcile their HSRT results with their perception of their critical thinking skills? It refers to the need for the nurse to possess critical thinking skills in order to anticipate the needs of his/her patient and to tailor his/her care accordingly. Each participant's HSRT results were given to him/her at the start of the interview. After answering the question, the participant's HSRT scores were discussed. The main theme common among each participant's answer was that anticipating change in your patient's condition requires strong critical thinking skills. The participants were surprised as a whole that their HSRT scores were as high as they were, except for participant JA. As mentioned previously, JA scored *not manifested*, which he attributed to being "a horrible test taker."

**Interview Question 4:** Do you understand the concept of combining what you know with how to implement it in practice; in other words, are you a critical thinker?

This question relates to the first research question: how did novice nurses reconcile their HSRT results with their perception of their critical thinking skills? After reviewing the participants' HSRT results, I wanted to determine how they assessed their current critical thinking skills, and if they felt their HSRT results were reflective of their skills. An important component of critical thinking is knowing how and when to apply didactic knowledge to a patient situation. All participants answered in the affirmative to this question, with clarification that applying critical thinking to practice is an ongoing learning process.

**Interview Question 5:** If you answered yes to the previous question, when did you experience the transition from knowing to applying in your clinical practice?

I intended this question to further explore whether the novice nurses felt that critical thinking education would have accelerated the process of developing critically thinking skills, thus preparing them to enter the workforce ready to immediately apply their skills to clinical practice. The participants had varying educational experiences, but all felt their ADN programs could have offered more in-depth, critical thinking education. The participants also agreed that their on the job clinical work experience supported the application of their prior education, but more importantly, it honed and sharpened their critical thinking skills. The responses to question 5 validated my belief that critical thinking can be taught in a classroom, but it requires application in the clinical setting to assist novice nurses in seeing the “big picture” of patient care.

**Interview Question 5 subquestion:** If you answered yes to the previous question, when did you experience the transition from knowing to applying in your clinical practice?

The purpose of this question was to determine the influence clinical practice has on the novice nurse’s critical thinking and clinical reasoning development. It related to the second research question: what evidence did the novice nurses present for whether, in their first year of practice, they felt prepared and confident in their ability to critically think and clinically reason? I created this question to address one of the main foci of this study: did the participants’ nursing programs prepare them to apply their critical thinking skills in clinical practice immediately upon graduation? I posed the hypothesis that the less time the participants reported it took them to make the transition from knowing to applying their knowledge in clinical practice, the better the critical thinking education they received in their ADN programs.

**Interview Question 6:** Do you feel your nursing education prepared you to become a critical thinker?

This question addressed the second research question: what evidence did the novice nurses present for whether, in their first year of practice, they felt prepared and confident in their ability to critically think and clinically reason? Question 6 speaks to the proposed outcome of the study: will incorporating a critical thinking course into the first semester of an ADN program assist nursing students to build their critical thinking skills early so they are best prepared and competent to deliver safe patient care? The resulting data from the interviews supported the need for such a course.

**Interview Question 6 subquestion:** If yes, how? If not, why not?

This subquestion allowed the participants to further expound on their answers to the first part of the question. The participants' suggestions for improving critical thinking education in ADN programs included more clinical time, more case scenarios and simulation, and less focus on content. Although all of the participants answered in the negative to whether they felt their nursing programs prepared them adequately to critically think and clinically reason upon graduation, 100% of them felt their programs "tried their best with what they had to work with." All participants had a variety of suggestions for improving critical thinking education in ADN programs as reflected in their answers to the subquestion included in Table 1 below. I have included both responses to question 6 and its subquestion under one unifying theme.

Table 1

*Participant Responses per Theme*

| Theme                                | Responses  |
|--------------------------------------|--|
| Anticipating change                  | <p>It's vital to save your patient's life.<br/>           What's the whole patient picture?<br/>           Know patient's medical history.<br/>           Includes labs, diagnostics, and meds.<br/>           Have to apply every day.<br/>           Assess situation, decide patient needs.<br/>           Beyond what you see or read.</p>   |
| Application to practice              | <p>Yes, I am a critical thinker. But I'm just learning how to apply it.<br/>           Yes, I can critically think, but I am still learning how to apply it.<br/>           Yes, I am a critical thinker, and learn new skills every day.<br/>           Yes, I feel I am becoming a skilled critical thinker.<br/>           Yes, I am becoming a critical thinker but the trick is knowing how to apply it.<br/>           Yes, I feel I am a critical thinker, but I'm still learning how to apply it to every patient.<br/>           Yes, I am developing into a critical thinker, but I have a lot to learn!</p>   |
| Transitioning from knowing           | <p>I felt comfortable after my 1<sup>st</sup> year.<br/>           I felt ready to handle any situation at work after 6 months<br/>           I knew I was ready after about 6 months.<br/>           I was ready at 8 months of clinical experience.<br/>           It took me a while to feel ok.<br/>           After my 1<sup>st</sup> full year, I felt I was a competent critical thinker.</p>   |
| Need for critical thinking education | <p>No; too much content, not enough clinical time. More case scenarios and simulation are needed.<br/>           No; need more clinical time, simulation, too much content. I felt so overwhelmed and incompetent for the first year of my practice.<br/>           No; some instructors incorporate critical thinking, while others focus on content. We need more case scenarios and clinical time.<br/>           No; good hands-on skill practice, but need more clinical time and simulation. Need to apply to a real patient.<br/>           No; do not have full responsibility for the patient so it's hard to understand what it's really like in the hospital setting. Less content, more simulation and scenarios.<br/>           No; need more case scenarios, simulation, clinical time. Instructors focused on the content, which was too much to learn in 2 years!<br/>           No; need more time at the bedside. We are given the impression that our clinical rotations mirror reality, which they do not. Case scenarios and simulation really helped, but need more of them.</p> |

A qualitative, case study design was chosen to explore the critical thinking acumen of novice nurses with up to one year of clinical practice experience. This methodological approach allowed in-depth, multifaceted explorations of a specific group with complex issues within real-life settings (Creswell, 2014). Its key features of scientific credentials and evidence-based applications were relatable to the participants chosen, and documented the effectiveness of critical thinking performance as related by them.

The purpose of the study was to determine the preparedness of ADN graduate nurses to critically think during their first year of clinical practice. Further review of the literature revealed that research into critical thinking in nursing education has increased by approximately 25% since 2009 (Robert & Petersen, 2013). Novice nurses continue to struggle with bullying, a lack of help with a variety of patient care challenges, and egregious errors that could have been avoided if novice nurses were better prepared to critically think (Ellis, 2016).

Some alternative teaching strategies suggested in current nursing literature to assist novice nurses to build their critical thinking skills included the following: “flipped classrooms,” patient case scenarios, and student reflective journals (Robert & Petersen, 2013). . The “flipped classrooms” encourage group work which leads to student interactions, and allows them to see other students’ assessments of the scenarios. It gives the students some control over their learning. Realistic patient case scenarios teach the student to look at the whole patient picture; diagnostics, psychosocial issues, interventions, and medications. Students are encouraged to create new ways of treating

patients, and to understand the importance of including ancillary services in their plan of care so that the patient has access to every available resource.

The study of the critical thinking skills of novice nurses is currently appropriate as the nursing profession is experiencing a severe nurse shortage. According to the American Association of Colleges of Nursing (AACN), there are several causative factors contributing to the current nursing shortage, which statistics warn will only worsen over the next decade. Some of these factors include: “baby boomer” nurses are nearing retirement, nursing schools are struggling to increase recruitment of students as the demand for healthcare rises due to healthcare reform, and there is a severe faculty shortage, coupled with insufficient clinical sites, classroom space, and clinical preceptors (“Nursing shortage,” 2017).

In order to recruit and retain new nurses who will maintain long and successful careers in nursing, nursing education must foster the nurses’ success, and offer the support needed in developing critical thinking skills. Tutticci, Lewis, and Coyer (2016) explained that the nursing student requires constant reflection on his/her practice in order to understand who, what, where, and why of their actions. Reflection will help the student understand what was effective, and what is needed to further ensure patient safety.

In addition to the nursing shortage, our healthcare system is treating patients that are sicker, requiring advanced practice nurses that are capable of thinking quickly and acting even quicker. Theisen and Sandau (2013) noted that many healthcare organizations have had to reevaluate their orientation and training programs to ensure the novice nurse is competent to handle the increased patient acuity safely. Medication, procedural, and

documentation errors are on the rise, and the burnout rate for new nurses is as quick as a year at the bedside.

Along with student reflection, simulation based learning has proven to be successful in fostering critical thinking in nursing students. The influx of nursing students into hospitals, the demand for more nursing programs to address the nursing shortage, and the lack of clinical placements, have encouraged nurse educators to invest in and implement the use of the HPS. Theisen and Sandau (2013) suggested simulation learning, which allows new nurses to experience complex situations in a safe environment. Simulation is incorporated into the project deliverable as a result of the noted need for additional clinical experiences, which build the nursing student's critical thinking skills.

During the phone interviews, several participants mentioned they wished they had more experience with the HPS. They felt their clinical placements were often boring and without much patient contact. Felton et al (2013) explained that simulation entails assessing a patient problem using an activity, experience, or event that is presented as realistically as possible. Felton et al (2013) reported that many students preferred this form of learning because they were not in the stressful clinical setting and could focus.

Another theme that emerged during the phone interviews was the participants felt they were building their critical thinking, but felt their critical thinking skills would improve as their clinical practice experience grew. The participants agreed that clinical experience offered them the tools needed to build their critical thinking skills. Maguire (2013) concurred, and suggested that hospital rotations in acute facilities are essential to the development of critical thinking skills.

Section 3 outlines the project developed to address the study data, which supported a lack of critical thinking education in ADN nursing programs. This lack of critical thinking education may lead to poor critical thinking skills in graduate ADN/RNs with less than one year of clinical practice, resulting in an increase in errors and adverse patient outcomes. The project is a 9-week critical thinking course offered during the first semester of an ADN program. The course includes small group work, simulation exercises, patient case scenarios, problem-focused scenarios, role play, class presentations, and introduction to evidence-based research.



### Section 3: The Project

#### **Introduction**

Based on the results of the research study, the project will be a curriculum plan for a stand-alone critical thinking course required in the first semester of an ADN nursing program. There is a plethora of critical thinking definitions from all genres, including nursing education. Dwyer (2016) defined critical thinking as the process by which people develop and support their beliefs about a given situation, then evaluate the strength of arguments made by others in the same situation.

In Bloom's taxonomy from the 1950s, Bloom identified a hierarchy of cognitive skills (Reddington, 2012) vital to the adult learner's quest to build critical thinking skills. The cognitive skills identified were knowledge, comprehensions, application, analysis, synthesis, and evaluation ("Bloom's Taxonomy," 2017). These skills resemble the steps of the nursing process, and are applicable to nursing education. Bloom also suggested that these skills can be tools for faculty to encourage higher order thinking in their students (as cited in Ross, 2017). Bloom's taxonomy will be discussed in greater detail in the following literature review, under conceptual framework.

The curriculum plan genre was chosen to address the participants' reported lack of critical thinking education received in their ADN programs, which they verbalized during their interviews. The participants felt that in-depth critical thinking education would better prepare nursing students to practice safely and competently at the bedside, especially if it was introduced in the first semester of an ADN program. I chose Bloom's taxonomy for my project because of its focus on refining curriculum design and

developing learning outcomes that incorporate cognitive skills (Ugur, Constantinescu, & Stevens, 2015). Nursing has become more complex and demanding of higher order thinking nurses who can identify a patient problem quickly and respond safely and competently. My project for a critical thinking course added to ADN curriculum would address the changing and challenging nursing arena of the 21<sup>st</sup> century.

The course will be 9 weeks in length and carry a three-unit credit. The targeted learning group will be registered nursing students attending a 2-year ADN program at a community college in Southern California. The purpose of the course is to teach nursing students to think critically from the beginning of their nursing education, with the end goal being their ability to assess all of the “puzzle pieces” that comprise a patient’s clinical picture, beginning Day 1 of their program. Li et al (2015) stated that learning styles are important in the class room because they allow students to learn at their own pace, and to draw conclusions while acquiring knowledge. Therefore, learner-centered teaching should address every learning style.

Global Digital Citizen Foundation (2016) offered several critical thinking activities to engage students in building their critical thinking skills. They include: attribute linking—building community by taking perspectives; barometer—taking a stand on controversial issues; big paper—building a silent conversation; body sculpting—using theatre to explore important ideas; and café conversations—small group discussions about real life situations. These activities help the students to complete required nursing competencies (Shin et al, 2015). By improving the critical thinking skills of novice nurses upon graduation, patient outcomes will improve as well.

The course curriculum will include a syllabus with weekly lesson plans, a critical thinking textbook with assigned readings, class room activities, assigned readings from professional publications, and student portfolios. The small group work and class presentations are considered team building learning (TBL). According to Currey et al (2015), TBL builds critical thinking skills, as well as assists in problem solving and clinical decision-making. There will be a professionally written paper critiquing a critical thinking article from an assigned peer-reviewed research article.

Before learner-centered instruction can begin, the nurse educator must understand what a challenge it will be. Faculty members have been shown to resist this change because they feel it is more time consuming than the teacher-centered format. They complain that they do not have the time to prepare the classroom and lecture (Colley, 2015). Another factor is faculty's determination to hang on to past teaching strategies, even though researchers have shown that "learner-centered education leads to responsible, active learners who demonstrate higher levels of achievement than those taught with traditional teaching methods" (Colley, 2015, p. 229).

The expected student learning outcomes for the course are as follows. By the end of this course the student will be able to:

1. Define critical thinking.
2. Identify Bloom's six cognitive skills.
3. Apply Bloom's cognitive skills to real life patient case scenarios.
4. Build critical thinking skills using patient case scenarios to include patient charting, concept maps, small group in-class discussions, professional research paper submission, demonstration of communication skills, and

showing competency in directing a positive outcome for real life patient case scenario exercises.

5. Define conflict resolution and demonstrate its implementation using a case scenario.
6. Maintain a student portfolio to be turned in during the 8<sup>th</sup> week of class.

Assessment of the students' critical thinking skills will be in the form of online critical thinking assessments as found on the Insight Assessment, Inc. (2016) web site. Insight Assessment sets the "standard for objective, validated group and individual analytics on the strength and weakness of core components of thinking skills and mindset" ("Health Sciences," 2016). The evaluation plan for the course will be an online survey at the end of the course. Lastly, the students will maintain a portfolio which, according to Rossetti et al (2016), supplies "authentic assessment that provides direct evidence of mastery of complex skills and abilities" (pg. 1), including critical thinking.

### **Rationale**

The curriculum plan genre was chosen to address the lack of critical thinking education the participants received in their ADN programs, which they verbalized during their interviews. All seven participants agreed that their critical thinking education in their ADN program was insufficient to prepare them for the realities of nursing. The participants, though they gave different times when they felt they had become skilled critical thinkers, agreed that the majority of their critical thinking education occurred on the job.

I chose to create a course that would begin critical thinking education on the first day of the nursing program. As noted in Section 2, the review of the literature and feedback gathered from interviews with educators, nursing students, and novice nurses, supported a need for enhanced critical thinking education in nursing programs. Through the use of simulation, case scenarios, small group work, student presentations, and research papers, the participants will be afforded the most comprehensive, critical thinking education available.

The scenarios with simulation allow the students to apply the didactic knowledge they have just learned in the clinical setting. Small group work allows a sharing of ideas, and the research paper exposes the participants to current standards of practice. Student presentations allow all students in the class to learn about a variety of topics, and have the added benefit of preparing students to develop good communication skills.

### **Review of the Literature**

The foci of the second literature review were: new graduates' critical thinking development; transitioning from a teacher-centered education model to a learner centered one; and the role advanced technology plays in shaping higher thinking nurses. A literature search was conducted using the following sources: Walden University's library databases, Google Scholar, and the World Wide Web. The Boolean words included *critical thinking, new graduates, nursing students, curriculum changes, "flipped classroom," concept-based learning, learner-centered learning, technology, and teacher centered learning.*

Colley (2012) summarized the common presumptions found in the literature that focus on learner-centered education. Some of the presumptions are:

1. The classroom should be a safe and comfortable environment.
2. Students share control of their learning, encouraging them to take responsibility for it.
3. By making learning relevant, the students can apply past lived experiences that enrich their learning process, and enable them to apply their education to real life.
4. The classroom's focus is less on the teacher and more on the learning process.

### **Conceptual Framework**

The conceptual framework used to guide the project development was Bloom's taxonomy. Bloom's taxonomy consists of six categories intended to assist teachers in encouraging higher order thinking in their students. The six categories are:

1. Knowledge "involves the recall of specifics and universals, the recall of methods and processes, or the recall of a pattern, structure, or setting."
2. Comprehension "refers to a type of understanding or apprehension such that the individual knows what is being communicated and can make use of the material or idea being communicated without necessarily relating it to other material or seeing its fullest implications."
3. Application refers to the "use of abstractions in particular and concrete situations."
4. Analysis represents the "breakdown of a communication into its constituent elements or parts such that the relative hierarchy of ideas is made clear and/or the relations between ideas expressed are made explicit."

5. Synthesis involves the “putting together of elements and parts so as to form a whole.”
6. Evaluation engenders “judgments about the value of material and methods for given purposes.” (“Bloom’s Taxonomy,” 2017).

In 2001, Anderson and Krathwohl revised Bloom’s original Taxonomy to develop a connection between the cognitive process and knowledge dimensions (“A Model of,” 2012). Anderson and Krathwohl posited that these dimensions of Bloom’s taxonomy required clearer cut definitions and directions in creating learning objectives. The knowledge dimension requires learners to acquire or construct learning that progresses from concrete to abstract thinking, while the cognitive process dimension “represents a continuum of increasing cognitive complexity-from lower order thinking skills to higher order thinking skills” (Anderson & Krathwohl, 2012, p. 46).

Bloom’s taxonomy is applicable to nursing education as it assists learners in meeting educational goals and outcomes. In meeting these goals and outcomes, nursing students are building their critical thinking skills as they apply didactic knowledge to patient care in the clinical setting. Table 2 below outlines Bloom’s paradigm, and shows how it closely mirrors the nursing process steps: assessment, diagnosis, plan, interventions, and evaluation. The application of Bloom’s taxonomy assists nursing students in building critical thinking skills from lower order thinking to higher order thinking.

Table 2

*Bloom's Taxonomy Paradigm*

|            |   |
|------------|---|
| Create     | Produce new or original work: design, assemble, construct, conjecture, develop, formulate, author, and investigate.                     |
| Evaluate   | Justify a stand or decision: appraise, argue, defend, judge, select, support, value, critique, and weigh.                               |
| Analyze    | Draw conclusions among ideas: differentiate, organize, relate, compare, contrast, distinguish, examine, experiment, question, and test. |
| Apply      | Use information in new situations: execute, implement, solve, use, demonstrate, interpret, operate, schedule, and sketch.               |
| Understand | Explain ideas or concepts: classify, describe, discuss, explain, identify, locate, recognize, support, select, and translate.           |
| Remember   | Recall facts and basic concepts: define, duplicate, list, memorize, repeat, and state.  |

*Table 2: "Bloom's Taxonomy," (2017).*



### **Critical Thinking in Nursing Education**

Nursing program curricula changes are needed, especially the trend in nursing education over the last two decades to switch from teacher centered education to learner centered education. These changes have been stimulated by changes in healthcare's payee systems, increased patient acuity, and expanding and evolving content areas (Duncan and Schulz, 2015, p. 16). Learner centered education assists the students in building and applying critical thinking skills.

Optimal teaching practice requires learning outcomes and finding ways to assist students to reach those outcomes (Kantar, 2014). However, there is minimal published research that addresses how to teach critical thinking skills to first year ADN students. Chan (2013) reported that there is minimal literature about critical thinking in nursing education, yet the nursing student's ability to critically think has been exhaustively researched.

Implementing a learner centered philosophy is difficult for faculty. They report being too busy due to faculty shortages and a variety of other demands on their time (Field et al. 2014). Changing curriculum is difficult work, and requires faculty that are knowledgeable about curriculum and the areas targeted for change, that are committed to the process, and that are determined to affect said change (Field et al. 2014). Offering standardized curricula, which provides tools for transitioning to a learner centered teaching environment, has been shown to encourage faculty to implement this new teaching style. In addition to this lack of learner centered education, clinical practitioners feel nursing education does not address the changes in, and challenges of, the current clinical setting (Ruth-Sahd, 2014).

Learner centered teaching encourages the student to take responsibility for his/her own learning and begin to “think like a nurse.” Ward (2016) identified that thinking like a nurse demands assessing a situation, formulating a plan of care, implementing that plan, and reflecting on the outcomes from the plan that may require modifying standard approaches, or creating new ones that are tailored to the patient’s needs. In other words, the student nurse must build critical thinking skills in order to further build their patient care tools, which include technical, psychosocial, cognitive, and conceptual skills. Undergraduate nursing education focuses on the procurement of skills and knowledge to assist the novice nurse in adapting to the new role as a registered nurse (Morrall & Goodman, 2013).

Critical thinking requires more than hands on skills. It requires advanced assessment skills, prioritization, anticipation, organization, analysis, and evaluation. Burrell (2014) determined that fostering critical thinking ability in our students involves new teaching strategies threaded throughout the entire curriculum. Some of these teaching strategies include concept mapping, simulation, reflection, and evaluation, as previously discussed by this researcher.

Perhaps most important in transitioning to a learner based curriculum is the preparation of the student nurse to successfully pass the National Council Licensure Examination (NCLEX). As the questions on the NCLEX are critical thinking based, the literature focuses on how to improve the poor critical thinking skills of nursing students in order to improve NCLEX pass rates. NCLEX pass rates can affect a college’s recruitment and retention, as well as highlight areas of instruction that need to be reassessed to improve student outcomes.

Yeo (2014) reported a trend to empower new nurses with increased autonomy, which requires the new nurse to integrate information from a variety of sources. The new nurse then must analyze the patient situation, develop interventions to treat the patient's issues, recommend the best course of action to ensure a positive patient outcome, and evaluate the success of his/her treatment plan. The vast majority of new graduate nurses are not able to meet even the most basic entry-level expectations for clinical judgment (Mann, 2012).

New nurses are challenged by the vast technological advances requiring advanced critical thinking skills. To achieve the autonomy Yeo (2014) spoke of, the new nurse has a plethora of advanced technological tools to assist him/her in delivering comprehensive and thorough care to society's multiply diagnosed, ill patient population. In order to effectively utilize these technological tools, the new nurse must possess advanced critical thinking skills. The nurse is the patient's first line of defense against illness, therefore he/she must act based solely on his/her informed, practiced, and critically thought out care giving techniques. The teaching of these techniques falls to nurse educators, who must promote investigative skills critical thinking, and problem solving abilities that prepare knowledgeable and safe practitioners (Bernard, 2015).

Providing a safe and comfortable learning environment for the student nurse requires a culture of nurturing and empowerment. This culture should exist whether in the classroom or clinical setting. Nursing has a high incidence of bullying, as defined by Wilson (2016), as intentional and repetitive psychological violence and humiliation. Wilson reported that as high as 25% of nurses have experienced bullying in their careers. These statistics do not bode well for nursing students or novice nurses.

Pai, Eng, and Ko (2013) conducted a study of responses to the nursing profession's tendency to "eat their young." The authors wondered if there was a relationship between caring behaviors and critical thinking skills. Since caring is the foundation of nursing practice (Pai et al., 2013), and critical thinking skills are vital to clinical practice, the assumption exists that a nurse's caring behaviors are closely related to his/her critical thinking skills. In addition to applying one's caring behaviors to one's nursing care, Westin, Sundler, and Berglund (2015) suggested that the new nurse should be cognizant of the importance their life experiences bring to the development of their critical thinking skills. Past and present life experiences allow the nurse to reflect and broaden his/her world view, while serving as a "platform for learning" (p. 2).

### **Problem-Based Learning**

Colley (2012) posited that the fourth presumption she noted in current nursing literature was the need for educators to present progressive and relevant information to the student, information that enables the student to adapt quickly to the changing and challenging healthcare arena of today (McGrath, 2015). Problem based learning (PBL) is considered an effective teaching tool that guides nursing students through a patient case study, encouraging them to find solutions to the patient's problems. The student is responsible for learning, while the teacher serves as a mentor (Mok, Whitehill, & Dodd, 2014).

PBL is often incorporated into nursing curriculum using the HPS. Ling-N et al (2014) reported that PBL has been shown to enhance student's critical thinking skills, and that previous literature has indicated a positive correlation between PBL and improved critical thinking in nursing students. Nurse educators present patient case scenarios to the

student, and require the student to solve a patient problem using their critical thinking skills. There is literature to support this type of instructional strategy, however Roh, Kim, and Kim (2014) were quick to point out that there is little research data supporting a positive effect of small group work in the classroom on students' stress levels.

### **Simulation**

In order to develop clinical judgment skills resulting in improved critical thinking skills, current technology needs to be of superior quality and available to all nursing students. Simulation was originally developed to fill the void caused by a lack of clinical placements. The lack of clinical placements prompted Rushton (2015) to suggest the use of simulation, which assists student to develop their technical and critical thinking skills.

A HPS lab is a large part of an ADN nursing program. The HPS simulates a live patient, and substitutes for actual clinical time spent in hospitals with real patients (Shinnick & Woo, 2013). Most HPS are quite lifelike. The student listens to heart, bowel, and breath sounds, and can insert a bladder catheter, nasogastric tube, or intravenous catheter. The HPS's skin can change color, indicating a change in oxygenation levels. Students report that the HPS is not a substitute for "the real thing." Students report having difficulty taking the HPS simulation scenarios seriously, and prefer caring for live patients.

The data collected during the Roh et al. (2014) study indicated that the participants desired more clinical time with live patients. Students reported not receiving enough clinical time in which to apply their theory learning. They felt a subtlety existed in real life scenarios that cannot be replicated in a lab simulation using the HPS. This subtlety was integral in the participants' development of critical thinking skills.

The majority of simulation case scenarios are developed by educators. Wane and Lotz (2013) conducted a study exploring the use of simulations as a platform for promoting critical thinking and clinical judgment in nursing students. They posited that there is minimal research data on case scenarios created, implemented, and evaluated by students, rather than just faculty and/or administration.

Wane and Lotz (2013) divided the students into small groups to create simulation scenarios. The participating students reported being appreciative of the complex and challenging work needed to create simulations that were indicative of a patient's deteriorating condition, and the rapidity with which they would be required to act. The authors noted improved clinical judgment and critical thinking skills development in the participants, and concluded that small group work is an effective teaching strategy.

Another teaching strategy that may prove useful in assisting nursing students to apply their didactic knowledge using simulation is to have the students create their own patient case scenarios. Samawi, Miller, and Haras (2014) posited that simulation builds the students' self-confidence as they are allowed to learn in a non-threatening and supportive environment. The patient scenarios foster the students' critical thinking development, and allow them to make errors without worrying about performing unsafely or being judged.

### **Clinical Experience**

Local ADN programs report they continue to struggle with finding quality clinical placements for their students. Clinical placements are difficult to find, and quality student experiences are as well. "As learning in the clinical setting comprises a core component of pre-registration nursing education, it is logical that clinical placement opportunities

would follow the workforce growth in this setting” (McInnes et al 2015, p. 437). A concentrated effort must be made by nurse educators to increase and improve clinical placements for their students.

Importance of nursing educators finding new and innovative teaching methods that support the growing of critically thinking nurses is vital. Kang et al. (2013) reported that as the clinical environment evolves, the nurse educator is hard pressed to find challenging opportunities for hands on skills for their students. Nursing programs may consider implementing HPS along with PBL to improve students’ clinical judgment that will improve their critical thinking skills.

### **Project Description**

The project of a critical thinking course to be implemented in the first semester of an ADN program requires the following resources:

1. A classroom with whiteboard and audio-visual technology (i.e. projector, screen, computer and speakers).
2. The required text, which will be added to the students’, a required reading list, and research articles, which the instructor will supply.

Existing supports include the college library, which the students have access too, and a department secretary, who will assist students with registration in the course, arrange the classroom to be used, and any other clerical needs that may arise.

I do not see any specific barriers to implementing the course. I have concerns about convincing co-faculty to embrace the course in order to present a united front to students, and to provide continuity in teaching critical thinking skills. Chien et al. (2013)

reported that it is an acceptable expectation that nurses apply evidence based research to improve and inform their clinical performance, resulting in improved patient outcomes.

A potential solution to the faculty barrier is to conduct extensive faculty training in the course's mission and content, and to have faculty audit the course to get a realistic view of how the course should be conducted. A proposal for the course implementation is as follows:

1. Near the end of the spring semester, meet with the college's curriculum committee to complete the process of adding the critical thinking course to the nursing program's curriculum.
2. Add the course to the college catalog.
3. Once accepted into the program, inform incoming freshmen to register for the course and to purchase the course text.
4. In the first week of the fall semester, complete the course syllabus and email it to registered students.
5. Arrange an assigned classroom and make hard copies of the syllabus.
6. On the first day of class, distribute and review the syllabus, and have the students sign an acknowledgment of receipt form.
7. Begin the course and follow the weekly schedule (see Appendix A).

The roles and responsibilities of the student are to attend every lecture, complete assignments in a timely matter, participate in group work and group presentations, communicate with the instructor to address any difficulties early, and devote a minimum of 20 hours per week to studying. The roles and responsibilities of the instructor are to be a mentor and guide. The instructor will impart expectations clearly, and will maintain



office hours that are convenient to the students to discuss questions and/or concerns. The instructor will maintain a learner centered culture in the classroom at all times. Lastly, the instructor will foster open communication between herself and the students, and student to student. There will be no bullying allowed in the classroom.

### **Project Evaluation Plan**

In order to evaluate the effectiveness of the project study, an orderly approach must be followed. According to the United Nations Development Programme (UNDP), there are three steps to performing a summative evaluation of a project: assessment, mid-term evaluation, and final evaluation. The UNDP requires inclusion of “data collection, analysis, and interpretation of results” (2014, p. 9). A summative evaluation assists the educator in creating or revising a current educational plan (Teaching & Learning Laboratory (TLL), n.d), and is beneficial in assessing the effectiveness of the proposed critical thinking course to be added to the first semester curriculum of an ADN nursing program.

Summative evaluation was chosen because it can be used to improve the critical thinking course, and it provides constructive criticism of an educational effort (TLL, n.d.). This outcome based evaluation will use outcome measures to determine the course’s success. These outcome measures will assess the effectiveness of the course in teaching nursing students how to build their critical thinking skills, how to discern if critical thinking can be taught in the classroom as well as at the bedside, and to incorporate student feedback into any course revisions.

The key stakeholders of this project are ADN programs locally and nationally. Specifically, they are colleges which have ADN programs, college administrators,

students, faculty, and their communities. This study's initial objective was to teach nursing students how to critically think, beginning early in their education. This objective remains, along with the additional objective of graduating nursing students who are able to put the puzzle pieces of a patient's health concerns together in order to deliver safe and competent care, which will improve patient outcomes. Nurses who possess critical thinking skills have been shown to respond quickly to changes in patients' conditions, and adjust their care accordingly (Shoulders, Follett, & Eason, 2014).

### **Project Implications**

The social change implications of the study were improved critical thinking skills of student and novice nurses, resulting in decreased medication errors and patient injuries, and improved novice nurse retention and recruitment. The project increased novice nurses' competency and confidence, both which assist in building trusting relationships with physicians, patients, and community members. Nurses' improved critical thinking skills sharpen their clinical reasoning, allowing them to recognize a patient's deteriorating health status quickly, and react to deliver safe and competent care.

A long term goal of this study was to share the critical thinking course with nationwide nurse education communities, so that future nurses are prepared to care for communities while improving patient outcomes. The course could be expanded to include other health care disciplines as well, such as respiratory therapy, nutrition services, and pharmacy. Including these disciplines would encourage treating the patient holistically, while ensuring all care members were focused on the tailored needs of the patient.

In the following section, the project strengths and limitations are discussed. Sample size, the study assessment tools, and the phone interviews are included. The need

for future evidence based research into how to assist our future nurses to improve and master their critical thinking skills is discussed as well.

## Section 4: Reflections and Conclusions

### **Project Strengths and Limitations**

The strengths of this project study are three-fold. First, the qualitative, case study design provided me with rich, personal descriptions of human behavior, emotions, and individual personality traits (Madrigal & McClain, 2016), as shared by the participants. Second, it gave the participants the opportunity to reflect and self-assess their critical thinking skills, which were provided by the HSRT assessments.

The HSRT assessments addressed the first research question: How did novice nurses reconcile their HSRT results with their perception of their critical thinking skills? These first two project strengths provided me with data that related to the second research question: What evidence did the novice nurses present for whether, in their first year of practice, they felt prepared and confident in their ability to critically think and clinically reason?

The third strength of the project study was that it offered insight into a subject that was minimally researched and available in current literature. Current literature is lacking the need for, and benefit of, a critical thinking course added to the curriculum of an ADN program. I outlined an area of nursing education research that is vital to delivering safe and competent patient care.

The study's limitations are three-fold as well. First, the sample size was small. Over 300 students received the invitational email introducing the study. I received 12 responses from novice nurses interested in learning more about the study. I sent them the informational study, and I received 10 responses. Of the 10, eight signed the informed consent, and I sent them the HSRT assessment. Seven of the eight took the assessment.

Although the small size allowed me the opportunity to delve deeply into the participants' lived experiences, it also limited the results being applied to a larger population of novice nurses. As mentioned in section two, three of the respondents were from the first college, two from the second college, and two from the third college. The participants were also ethnically diverse, and their cultural beliefs may have influenced their responses to the HSRT assessment and interview questions.

Second, the lengthy data collection may have skewed the participants' assessment of their critical thinking skills because they continued to work, which may have improved their critical thinking skills. Last, by limiting the study to three colleges in Southern California, further research into the differences in ADN programs in other geographical regions may require the tailoring of the critical thinking course to fit the other regions needs.

### **Recommendations for Alternative Approaches**

A recommendation to address the small sample size would be to increase the number of colleges chosen to participate in the study, thus increasing the potential participant pool. This would increase the demographic pool and decrease the potentially limiting geographical differences. A tighter period of data collection would improve the outcomes as well.

An alternative approach to critical thinking education in nursing would be a short term seminar for students. The seminar would not demand all of the curriculum development requirements, and the dates could be more flexible and accommodating for the students. Another alternative approach would be an on-line course. This approach

would allow the students to progress through the class on their own time, and free up faculty and classroom time.

### **Scholarship, Project Development, and Leadership and Change**

Choosing to seek my doctorate in education was a difficult and lengthy decision for me. It would be my first non-nursing degree, and I worried I did not have the scholarly tools to be successful. I considered myself a scholar with my MSN degree, but have learned during this journey that scholarship demands more from the learner.

First, I had minimal experience conducting research, which proved to be a challenge. From my experience as a practicing nurse and a nurse educator, I have learned that nurses are hesitant to participate in research studies. I felt I was too busy with my career and family to participate. Professionally, it was difficult to find a time that was good for the nurses and their varied shifts to teach a 10-minute in-service.

Second, I have considered myself an excellent writer. However, I discovered the difference between college writing and scholarly writing. It has been a challenge for me to learn to scale back and focus my writing during this program. I have felt comfortable with the course work, which I attribute to receiving my MSN online from Walden University. I have persevered and feel my scholarly writing has improved. Once I complete this journey, I will be comfortable conducting further research and producing scholarly articles for publication.

### **Self as Scholar**

I believe I have grown into the role of a scholar. The transition from adult learner to scholar has been an enlightening, arduous, and empowering process. I have had highs and lows in relationship to my confidence and feelings of self-worth. I feel now, as I near

the end of my doctoral journey, that I have mastered the tools required to be a scholar who is comfortable researching a variety of socially relevant topics and affecting change as I do so.

This study has assisted me in my role as an educator in the classroom. I teach ADN students, and I find myself referring to the importance of developing critical thinking skills to improve patient care. My students have embraced the teaching strategies, such as case scenarios, small group work, simulation, and presentations. Statistically, my students' scores have increased over 20% on the NCLEX-RN type online testing, which we administer once per semester to assess their learning, since I joined the college faculty 4 years ago. This success has impassioned me to continue to grow my scholarship, and to implement critical thinking education in our program at every opportunity.

### **Self as Practitioner**

I have noted throughout this journey that I have affected change in my faculty members, students, and community stakeholders. This change has improved my communication skills and critical thinking acumen, and it has increased my compassion for my students' educational process. As a nursing student over 45 years ago, I felt there had to be a better way to learn. My nursing education was based on negative reinforcement, and I felt I could do nothing right. I avowed that if I ever became a nursing instructor, I would not perpetrate the same demoralizing experiences upon my students that I endured.

The study data supports my hypothesis that ADN programs fall short in teaching the critical thinking skills that are vital to functioning as a safe practitioner in an

overwhelmed, litigious, and often unsafe health care arena. My project of adding a critical thinking course to ADN program curriculums will ensure that nurse educators are supplying their students with every possible tool to make them successful as they enter the nursing workforce. The proposed 9-week course will dispel the decades old nursing education paradigm that is linear in its approach. This linear approach hinders the critical thinking process; a process that requires the student to “think outside of the box.” Students must learn to anticipate, to project ahead of a patient’s illness, to include all patient data when making care plan decisions, and to understand that no patient will fit into the textbook definition of how a disease process presents. The study participants were adamant that increased clinical time is the most effective way to apply theory and build critical thinking skills.

I have learned during this journey to implement the most current teaching strategies, specifically learner-focused modalities, and have discovered that my students blossomed under this approach. I learn as my students do, ensuring I remain a current, competent, and safe practitioner. Students want to have a say in their education. They want to be challenged, respected for their opinions, and able to apply their lived experiences to their educational process. I pride myself on my students’ successes. I am merely a guide and mentor as they seek higher education and become safe, competent, and compassionate nurses.

### **Self as Project Developer**

During my 40 years as a professional nurse, I have been tasked often with developing projects in the clinical and educational settings. I am a productive time manager, an organized and task oriented practitioner, and possess a relentless attention to



detail. I am also a committed life-long learner, and I know I will continue to learn something new every day of my life. I have garnered life lessons during my doctoral journey, and my project development was no exception.

I struggled during my research and data collection. Then I struggled with determining what my solution to the poor critical thinking skills of novice nurses could be. As I pondered what would be the most effective response to this lack as evidenced by my participants' feedback, I felt overwhelmed and inadequate to produce a viable and realistic project. Through my second literature review, I realized that adding a critical thinking course to the curricula of ADN nursing programs would be the most direct way of ensuring nursing students would be exposed to critical thinking education.

Once I found evidence of the lack of critical thinking education in nursing through the literature search, I felt confident I could affect change with my project, and developing it became much easier.

### **Reflection on the Importance of the Work**

The researched literature, the participants' contributions, and my professional and personal experiences as a nurse and educator, support the original hypothesis that novice nurses, with one year or less of clinical practice experience, would benefit from a critical thinking course added to the curricula of ADN nursing programs. Lee, Lee, Gong, Bae, and Choi (2016) reported that since the 1990s, nursing education has developed several nontraditional learning strategies to improve the critical thinking skills of nursing students. These strategies included PBL, self-directed learning (SDL), simulation, and concept mapping. However, there is not a well-defined teaching method that all nursing educators can agree on.

For this reason, I feel the next logical step in nursing education is to implement these teaching strategies into a critical thinking course to expose nursing students to the process early on in their education. Sarver, Cichra, and Kline (2015) stated that nurses “are often the key providers involved in emergency interventions that require advanced problem solving skills, intuition, critical thinking, and in-depth clinical expertise to maintain excellent patient outcomes” (p. 153). New nurses need to have the foundation for critical thinking laid early on in their careers so they are competent and confident.

### **Implications, Applications, and Directions for Future Research**

The novice nurses participating in this study reported a lack of critical thinking skills and feelings of insecurity and incompetence in the workplace. They reported receiving minimal critical thinking education while in their ADN nursing programs. It is vital that hospitals are assured their novice nurses are ready to practice and respond to emergency situations quickly and competently. As the role of the professional nurse increases in complexity, critical thinking and independent decision making become more crucial in maintaining patient safety (Forsgren, Christensen, & Hedemalm, 2014).

It was a major goal of this study to explore the critical thinking skills of novice nurses in their first year of practice. The study data showed that the participants feel there is a need for a critical thinking course to be added to the first year curriculum of ADN programs. The course will improve nursing students’ critical thinking skills, clinical reasoning, and decision making, and prepare them for providing safe nursing.

The study results suggested that the decades old nursing process needed to be reevaluated to fit the advancing technology and higher patient acuity seen in nursing today. In order to teach an improved and in-depth nursing process to students, Tanner’s

(2010) CJM was chosen as the theoretical foundation of the study. The CJM expands on the nursing process, and guides the nursing student in assessing all aspects of a patient's health care profile: physical, psychological, and spiritual.

Directions for future research include conducting studies into the efficacy of a critical thinking course in ADN programs. Some potential studies include following those ADN programs' graduates in the workplace to assess their critical thinking performance, and surveying faculty opinions on the success of using alternative teaching methods to improve their students' critical thinking skills. Additional studies may include larger sample sizes from a variety of geographical areas and ethnicities.

The study's potential to affect positive social change is multifaceted. The individual nursing student has the potential to improve his/her caregiving, and deliver safe, competent care. This will positively impact and improve the patient's health, thus improving the novice nurse's contributions to society, both locally and globally. As these new nurses advance in their careers, they will have many nursing jobs, each one affording them the opportunity of affecting positive social change. Improving patients' health will impact their families and society as a whole as they remain productive members of both.

The potential to impact positive social change at the organizational level could result from including the critical thinking course in ADN programs' curriculum, locally and globally. It was an outcome of this study to add a critical thinking course to local ADN programs, and then determine its generalizability to nationwide and international programs. Inadequate critical thinking skills in novice nurses are not only a local problem, but a global one as well, as evidenced by my literature reviews and research study data. Positive social change would be realized if organizations supported improving

novice nurses' critical thinking skills, resulting in positive patient outcomes. This would save organizations money by decreasing errors and extended hospital stays.

Nursing education is dictated by a state's nursing board. To implement a change in the nursing curriculum of ADN programs, policy change must occur. In order to affect positive change in the nursing care delivered by novice nurses, their critical thinking must be well developed and applicable to the severely ill patients seen in hospitals today. The potential for positive social change will be realized with the curriculum change, as it will result from improved novice nurses' competency, safety, and commitment to preventing adverse patient outcomes.

### **Conclusion**

The project chosen to teach nursing students how to critically think and clinically reason is a critical thinking course to be added to the first semester curriculum of an ADN nursing program. My research identified a lack of critical thinking skills in novice nurses practicing in a variety of nursing areas. The participants communicated a lack of critical thinking education during their nursing programs, and agreed a critical thinking course added early on in their education would have been beneficial.

Teaching methodologies to be implemented in the classroom to enhance critical thinking education are case scenarios, simulation, small group work, and reflective journaling. These methodologies have been researched and proven to improve the student nurses' critical thinking and clinical reasoning. Applying simulation to case scenarios allows the learner to apply didactic knowledge, and then to apply this knowledge in a simulated environment.

Small group work involves several students, sharing their experiences and teaching each other. Student reflection solidifies the learning and suggests ways to improve performance patient scenarios activities. The learner is actively learning while playing the roles of participant, observer, and evaluator (Richardson and Claman, 2014).

My doctoral journey has been frustrating, exhilarating, humbling, challenging, and worthwhile. I learned from my study that there is a need for early critical thinking education in ADN programs. My participants were open in sharing their triumphs, challenges, fears, and future goals with me. Their participation helped me delve deeply into how I and other nurse educators can better prepare our future nursing students for the harsh, yet fulfilling, reality that is bedside nursing today.

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## Appendix A: The Project

The project is a 9-week critical thinking course in the first semester of an ADN program at a community college. Most first semester nursing students have minimal critical thinking skills. It is one of the goals of the course to introduce to students the importance of understanding an evolving patient scenario, and be able to safely and competently respond in a timely manner to assure positive patient outcomes.

### **Curriculum Plan**

The curriculum plan genre was chosen to address the lack of critical thinking education, which the study participants stated was a grave concern of theirs, impacting the type of competent and safe care they are committed to delivering. The course will provide immediate assistance to nursing students in building their critical thinking skills as they progress through their ADN programs. It will be instrumental in ensuring they present themselves as skilled and competent novice nurses in the workplace.

The delivery of the course will be over 9-weeks. It will be included in the first semester of the ADN program. It will incorporate critical thinking simulations in the NRL lab, small group work on patient case scenarios, and class presentations, all which are geared to assisting the students in putting all of the puzzle pieces of a patient's care together. There will be a didactic component to the course, which will include course readings that focus on building critical thinking skills, and review and presentation of a research paper that reinforces the theory of critical thinking learning and application.

At the conclusion of the course, a summative evaluation in the form of the students' concept maps (See Appendix A) will be reviewed. I will use this evaluation formatively to make improvements or student suggested changes to the course (Carnegie

Mellon University, 2015). A formative evaluation of the course, supplied by the college and administered by Survey Monkey, will be completed online by the students. Survey Monkey (2017) uses survey methodology to collect data through user friendly surveys tailored to the client's specific needs. This data can be used by educators to assess a student's learning, determine if the course outcomes were met, and gather valuable feedback on how to improve future student learning. Because the survey is anonymous, the respondents can feel comfortable and protected in sharing their feedback.

### **Purpose, Level, Learners, Scope, & Sequence**

The critical thinking syllabus, which follows, contains the scope and sequence of the project. It contains teaching-learning strategies such as learning to decipher a research article and discern if the resulting data supports the author's hypothesis. This will teach the students that research should be based on evidence-based practice, helping them understand it's applicability to patient care.

Other learning strategies to be used are small group work, with students receiving patient care scenarios to explore, deciding on the best approach to the patient problem. This activity encourages collaboration, giving each student the opportunity to present their opinions, and to work toward a common goal for positive patient outcomes. Lastly, the course will include student presentations on an assigned disease process. This activity requires the students to thoroughly research their topic and develop ways to teach their findings to a variety of different learners. This activity prepares the student to learn to communicate with the culturally diverse patients they will care for, as well as other stakeholders of nursing, such as physicians, administration, and community members.

**Materials, Units, & Lessons**

Materials to be used in the course are text books, research articles, and presentation materials, such as poster boards, Power Points, handouts, and overhead projectors. The instructor will supply patient case scenarios that focus on critical thinking resolution. One of the course objectives is that the students, working in small groups, will resolve the scenario issue, and then present their findings to the class.

The course will carry a three-unit weight. It will be in session once a week for four hours. A passing grade of 75% or better is required in order for the student to progress to the next level of the program. The nine weekly lesson plans are outlined in the syllabus which follows (See Appendix A).

**Details of the Plan**

The syllabus for the course follows. It includes the objectives of the course, required text readings, in-class activities, simulation of evolving case scenarios, application of critical thinking, and several composition activities using current, evidence-based research articles. Due dates for assignments are clearly delineated, and points will be deducted from the student's final grade if assignments are missing or late.

The course will conclude with the administration of an online critical thinking assessment, created by Survey Monkey. This assessment will assist the educator in noting areas in need of revision. At the end of the course, a survey to allow the students to critique the validity and helpfulness of the course will be administered.

## **Course Syllabus**

Anywhere Community College  
Associate Degree in Nursing Program  
N005 Concepts of Critical Thinking in Practice

### **Required text:**

1. Alfaro-LeFevre, R. (2013). *Critical thinking, clinical reasoning, and clinical judgement: A practical approach* (5<sup>th</sup> ed.). Elsevier Saunders: St. Louis, MO.  
ISBN: 9781437727760.
2. Professional articles (supplied in class).

### **Student Learning Outcomes**

Week 1: Define critical thinking

- Read: Chapter 1
- Break into three small groups of eight members and discuss assigned reading.
- Each group creates a list of the steps for developing critical thinking.

Week 2: Developing critical thinking

- Read: Chapter 2
- Find a professional, peer reviewed journal article with a focus on Emotional Intelligence (EI).
- Write a synopsis of the article to be presented in class; due next class meeting.
- NRL: simulation using the HPS with evolving case scenarios below.

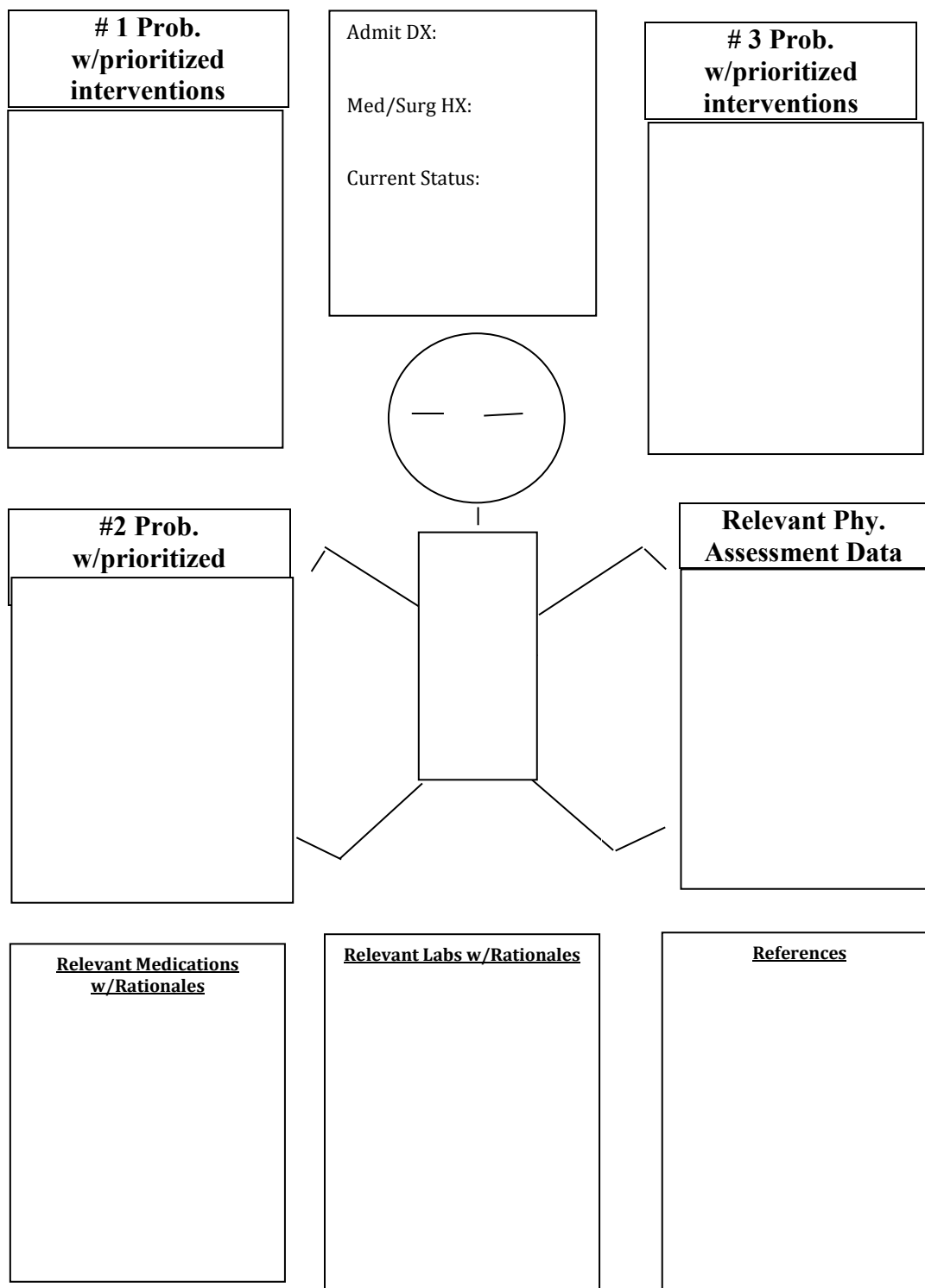
**Case #1:** A 15-year-old male softball player was struck in the temporal region with a soft ball during a practice game. He fell to the ground with a brief ten seconds' loss of consciousness. When assisted to stand, he complains of a headache, nausea without vomiting, dizziness, and amnesia to the incident. He is brought to the Emergency Department for assessment. How will you plan his care?

**Case #2:** Frank is an 80-year-old male who is admitted to your hospital after falling from a standing position at home. He has an obvious hematoma on his left forehead area and a bruise on his right lower abdomen. During shift report, you are told that Frank is sleepy, but when he awakens he is oriented to person, place, and time, and follows your commands. His home medications include warfarin for atrial fibrillation, and he has a history of hypertension for which he takes metoprolol. What is your first priority?

**Case #3:** Jamie is a 28-year-old woman who was admitted to the intensive care unit following an overdose of Lorazepam (100 tabs of 1mg each). She is found unresponsive at home by family members. Paramedics are called, find Janet in asystole, and begin CPR. Jamie arrives in the Emergency Department with CPR in progress. She received four doses of adrenaline and was intubated in the ambulance. A CT scan of the head shows diffuse hypoxic brain damage. Her family is understandably concerned. What will you tell them?

- Break into three groups of eight members and create a concept map for your patient with the following information: three diagnoses: two nursing and one psychosocial. For each diagnosis develop five interventions, five labs, five diagnostics, and five medications. Be sure to include rationales for each of your choices.
- Groups write maps on the board and present their case scenarios. To the class.
- The required concept map template follows.

## Concept Map Template





Week 3: Identify Bloom's Taxonomy: Spindler, M. (2015). Collaborative analysis and revision of learning objectives. *North America Colleges and Teachers of Agriculture (NACTA)* 59(1), p111-115.

- Draft a two-page research paper using APA format, which answers the question: which cognitive, critical thinking skills did this article require you to apply in order to understand it? Due next class meeting. Make enough copies for each of your group members.

Week 4: Apply Bloom's Cognitive Skills to Real-Life Case Scenarios

- Research paper due
- Read: chapter 3
- Students break into three groups of eight members. Each member gives the remaining members copies of his/her paper.
- Groups define the problem focus of Spindler's article and discuss suggestions presented in each member's research paper to address the problem.

Week 5: Building Critical Thinking Skills

- Read: chapter 4
- Break into three groups of eight members, review your assigned scenarios below, and answer any questions related to it.

**Case #1:** A 38-year-old Asian male was admitted to the skilled nursing facility after surgery for newly diagnosed neck cancer. Extensive incision of the tumor was performed, and the patient received a tracheostomy and

feeding tube. On admission, the patient reported he has been living in a homeless shelter for three years, and has been an active drug user for decades. On postoperative day one, the patient is anxious, trying to pull apart his tracheostomy connections, and complaining of surgical site pain of 10/10. Patient wants “strong pain medication now or I’m leaving this place.” How would you respond to your patient?

**Case #2:** Donna is a 50-year-old woman who collapsed at home.

Paramedics arrived and found Donna unconscious with labored breathing. Donna was intubated in the field and transported to the Emergency Department. During the transport, Donna’s pupils became fixed and dilated, she was hypertensive at 120/102, then rapidly became hypotensive at 90/58. A CT scan of Donna’s brain showed a rapidly expanding brain stem hemorrhage. Donna’s daughter arrived at the hospital and stated “I do not want anything heroic done for my mom.” Donna has no advanced directive or living will. How will you respond to Donna’s daughter?

**Case #3:** A 42-year-old male was diagnosed as HIV-positive 15 years ago.

He is admitted to the hospital with AIDS. He has been receiving anti-retroviral therapy for the last 14 years. His CD4+ cell count has consistently been over 500/mm during drug therapy. The man reports “cold-like” symptoms for a week. His labs reveal a CD4+ count of 300, WBC count of 4000, and decreased RBC count. The patient reports he has been having difficulty remembering to take his medications. He admits he’s “tired of taking so many meds; they make me feel horrible.” His

partner of 20 years wants the patient to “try everything, do not give up!”

How would you respond to your patient’s partner?

- Each group prepares role play of their scenarios, and presents them to the class. Each group member must play a role. The role play presentation is limited to ten minutes.

#### Week 6: Clinical Reasoning: Applying the Nursing Process

- Read: chapter 5
- Break into 3 small groups of eight members.
- Each group is assigned one of the 3 scenarios below:

**Case #1:** Caitlin, a 20-year-old single female who attends college, comes to the campus health clinic and reports she has lost 90 lbs. over the last six months. Her previous weight was 183 and she is 5’7”. She was admitted with malnutrition and abnormal electrolytes. She thinks she looks great and is happy she can wear a size 2. Mary states she is not sure why she is here. Her Hemoglobin is 3.0 and hematocrit is 26. The primary physician would like you to assist Caitlin with learning healthy eating habits and weight management. What is your plan of care?

**Case 2:** You’re assigned to the medical surgical unit tonight and you have one patient that you are concerned about, Mrs. R. The patient does not present as the previous nurse reported. Your report stated that she is resting comfortably and is scheduled for surgery tomorrow. All vitals were reported as normal and her family just left for the night. Mrs. R is

currently on a morphine pump, has a history of being a smoker, and was on Coumadin in the recent past for a blood clot. Upon your assessment, you note that Mrs. R is groggy but easily arousable. Her respirations are shallow and 14/bpm, she is on oxygen at 2L/min via nasal cannula, and her saturation is 90%. At 6 AM the nursing technician comes to you and states she cannot arouse Mrs. R. You go to the room and immediately notice her shallow respirations. What do you do to treat Mrs. R?

**Case #3:** Mr. G. is a 71-year-old patient who is hard of hearing and is being admitted to the hospital for shortness of breath and possible pneumonia. The patient came from his home where he lives with his 70-year-old wife. It is the start of your shift, and you walk into his room to find Mr. G. slumped down in his bed, the oxygen tubing is off, and he is difficult to arouse. The patient is to receive insulin before breakfast for his Type II Diabetes. What is your first priority?

- Each group creates a concept map for its scenario with the following information: three diagnoses: two nursing and one psychosocial. For each diagnosis develop five interventions, five labs, five diagnostics, and five medications. Be sure to include rationales for each of your choices.
- Groups write maps on the board and present their case scenarios to the class.

#### Week 7: Conflict Resolution

- Read chapter 6.

- Break into three groups of eight members. Each group is assigned one of the conflict management scenarios below.
- Each group creates a list of five possible conflict resolutions to the scenario.
- Groups write their resolutions on the board and present them to the class.

**Case #1:** You are at work on a busy surgical floor. Your manager asks you if you need help, and you state, “I’m doing fine for now”. The manager becomes angry and tells you to come to her office. She tells you that “you have to take help when you are offered it, otherwise I will write you up for insubordination.” You are surprised and confused as to what you did wrong, and you feel your manager is “out to get” you. How will you respond to your manager?

**Case #2:** You are caring for a dying baby in the NICU. You are told by the doctor to “keep the patient comfortable.” You rely on the cardiorespiratory (CR) monitor to indicate elevations in heart rate and respirations, both of which can alert you to an increase in pain and agitation. Your coworker asks for the CR cables for an incoming severely premature infant. You explain you need the cables to track the patient’s vital signs to know when to medicate him. She states, “A good nurse would not need the cables. The baby is dying anyway.” How would you respond to your coworker?

**Case #3:** Tom has been a clinical nurse on the unit for three years and tonight is charge nurse for a fully occupied 40-bed medical/surgical unit. In shift report, Tom is informed about a patient’s family, which has been problematic

for the last week. The patient is a 79-year-old patient with COPD and mild dementia. He is currently hospitalized with the diagnosis of cerebrovascular accident (CVA), leaving him with partial paralysis of the right side and aphasia. The staff has complained constantly about the family's rudeness and constant requests. The family expects the nurses to do everything for the patient, even though he is able and willing to do a number of basic care functions. The son comes to the nurses' station, screaming at the unit secretary about the staff's incompetence, and demanding to see the nursing supervisor. The charge nurse arrives on the unit. What actions should the charge nurse take?

#### Week 8: Patients' HIPAA Rights, Role of the Nurse, and Medical Errors

- Below is a paraphrased and condensed copy of the patient's privacy rights under the Health Insurance Portability and Accountability Act (HIPAA).
- Break into your groups, discuss HIPAA, and create a scenario in which the nurse violates or upholds it. You have one hour.
- Each group presents their scenario to the class. The presentation time limit is ten minutes.
- The class presentation grading rubric follows.

## Class Presentation Grading Rubric

### Student Presentation Grading Rubric

Student Name: \_\_\_\_\_

Date: \_\_\_\_\_

| Area to Cover  | Possible Points | Awarded points |
|--|-----------------|----------------|
| Creativity   | 20              |                |
| Attire   | 10              |                |
| Audio/Visual aids  | 10              |                |
| Role performance: projection, eye contact, audience engagement, and cohesiveness of group. | 35              |                |
| <b>TOTAL POINTS</b>  | <b>75 pts.</b>  |                |

#### **Instructions:**

Presentation time is limited to 15 minutes. Students will receive between 0–75 points, depending on their performance and audience engagement. You will be presenting as a team, and you will be graded as a group AND individually.

**Each group is required to give their classmates handouts and utilize visual aids.**

**HIPAA: The Health Insurance Portability and Accountability Act**

In 1996, the Employee Retirement Income Security Act (ERISA), which regulates employee benefit plans, was amended to include the Health Insurance Portability and Accountability Act (HIPAA). HIPAA is split into two major parts: Title I protects employed Americans from discrimination in connection to their health coverage; Title II requires doctors and medical professionals to keep patient records confidential.

**HIPAA Title I - Health Care Access, Portability, and Renewability**

The protections of HIPAA Title I make it easier for the insured to change jobs without losing health care coverage. Title I limits a new health plan from denying coverage based on pre-existing medical conditions. It provides opportunities to enroll in a new group health care plan or individual health insurance policy, and prohibits discrimination. In addition to these HIPAA protections, the insured is protected by the laws of the state, and the recent Affordable Care Act regulations.

**Protections for Preexisting Conditions**

Under HIPAA, employer health plans are no longer allowed to refuse health coverage for a new employee with preexisting conditions, as long as the employee follows certain procedures for approval. HIPAA protects the insured from being denied health care due to a preexisting condition if he/she is seeking health insurance under an employer's plan.

HIPAA does not protect against the following:

- Employers do not need to offer health coverage.
- A new employer's health plan is not required to cover every medical condition, past or present.



- A new plan can require a preexisting condition exclusion period, meaning non-treatment for a condition within the past six months.

### **Special Enrollment Opportunities for Those Previously Declined Coverage**

Special enrollment situations may be:

- Divorce or separation causes loss of coverage under a spouse's insurance.
- A young dependent is no longer covered under a parent's plan.
- A spouse dies and his/her coverage ends.
- A spouse's employment ends, terminating plan coverage.
- An employer reduces work hours, thus disqualifying employee for coverage.
- A client moves out of the coverage area.
- A health claim that will meet or exceed the plan's lifetime limit on benefits.

### **Protections against Discrimination**

Under HIPAA, a family cannot be denied eligibility or benefits or charged more for the coverage based on certain health factors. A health plan cannot use health status, medical conditions (physical or mental), claims experience, past receipt of health care, medical history, genetic information, evidence of insurability, or disability as reasons for denying medical coverage. Evidence of insurability includes participation in activities like motorcycling, snowmobiling, horseback riding, skiing, or proof that the client is a victim of domestic violence.

### **HIPAA Title II - Preventing Health Care Fraud and Abuse; Administrative Simplification; Medical Liability Reform**

Title II contains standards for the protection of electronically stored medical information, and mandatory guidelines on the rules, contracts, and procedures used by

administrators of medical offices. The HHS enacted what is called "The Privacy Rule," which requires doctors and medical professionals to protect any individually identifiable information that relates to the physical or mental condition, or the provision of health care to an individual. There are situations in which the medical professional is allowed to share a patient's medical information, such as when the patient gives them permission, is unable to make medical decisions, if the government requires it (i.e. birth and death records), or if the patient makes their health an issue in court (HIPAA: the Health Insurance, 2017).

- Make a list of five examples of patient care situations in which you would apply the HIPAA act. Break into your groups of five members and compare lists. Compile a list of your top five examples and present your list to the class.
- DVD: Nursing errors and their outcomes.
- We will watch the DVD in class. Each group creates a concept map for one of the patients shown in the movie. See attached concept map template to be completed on your patient.
- Presentations of the concept maps will be next week, our last class meeting. You are required to use audio/visual aids, create a handout for the class, and each member must play a role. The time limit for the presentations is 30 minutes. See attached grading rubric for requirements. You are to dress in business attire, except for those members whose roles require different attire.

### Week 9: Elsevier HESI Proctored Critical Thinking Assessment

- The assessment will be taken in class on college computers. It is 90 questions and you have two hours to complete it. You must achieve a Level 2 or greater to receive full points.
- At the start of class, choose a computer from the cupboard, plug it in, and allow it to perform updates. Go to <https://evolve.elsevier.com/education/hesi/resources/> and login. Your instructor will give you access and proctor the assessment.
- You are free to leave after you have completed the course assessment.

## Appendix B: Directors' Invitational Email

Dear 2012 & 2013 ADN graduates,

I have been asked to pass on information to you from a doctoral student, Sheila Tyne, RN, MSN, EdDc. Sheila is conducting a study about critical thinking performance of newly graduated Associate Degree in nursing registered nurses during their first year of clinical practice. One of Ms. Tyne's study goals is to give novice nurses the opportunity to share their experiences and suggestions for improving critical thinking education in ADN programs. If you are interested, please contact Ms. Tyne at: [REDACTED]

Best regards,

Director

xxx ADN program

### Appendix C: Researcher's Informational Email

Dear Potential Study Participant,

Thank you so much for voicing an interest in participating in my research study entitled: “Critical Thinking and Clinical Judgment in Novice Registered Nurses.”

Your involvement in the study is crucial to the future of nursing education, and to ensuring the delivery of safe and competent nursing care. It is an opportunity for you, the novice nurse, to affect change in how our future nurses are educated.

Your participation involves two easy steps. First, I will email you an online critical thinking assessment entitled the Health Sciences Reasoning Test (HSRT). It is a multiple choice assessment presented in a patient case scenario format. It takes 50 minutes to complete, and instructions for submitting it to Insight Assessment, the company that developed it, will be included with the assessment. Once all of the assessments have been completed and submitted, I'll contact each of you to arrange a phone interview. That concludes your requirements of the study.

After I have reviewed the assessments and interviews, I will send you a summary of the study results. I will share the results with your college and its stakeholders as well, encouraging them to consider the addition of a standalone critical thinking course to the first semester of the college's ADN program curriculum. It has long been my goal to include critical thinking curriculum in an ADN program's first semester in hopes of laying a critical thinking foundation for students to build on throughout their program and career.

Attached you will find a confidentiality agreement from me, promising to hold all of our communications and your involvement in strictest confidence, and a consent

giving me permission to audio-tape our interviews. If for any reason you decide you do not want to participate, please feel free to communicate that to me. I appreciate your time and willingness to listen to my proposal, and I hope you choose to join me on this journey.

Sincerely,

Sheila Tyne, RN, MSN, EdDc

#### Appendix D: Phone Interview Questions

1. What is your current area of clinical practice?
2. How long have you been in clinical practice as an ADN/RN?
3. Please define critical thinking in your nursing practice.
4. Do you understand the concept of combining what you know with how to implement it in practice, in other words, are you a critical thinker?
5. If you answered yes to the previous question, when did you experience the transition from knowing to applying in your clinical practice?
6. Do you feel your nursing education prepared you to become a critical thinker in your clinical practice? If yes, how? If no, why not?