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A Mixed Methods Study Comparing Nursing Preceptored Clinical Learning Experiences and Nursing Simulation Clinical Learning Experiences of Nursing Students in a Midwest Community College

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Community College

by

Teresa R. Hamra

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at Lindenwood University by the School of Education

Dr. John A. Henschke Dissertation Chair 4/26/19 Date

Dr. Kevin Winslow, Committee Member 4/26/19 Date

Professor Deb Chanasue, Committee Member 4.26.19 Date

Dr. Deb Kiel, Committee Member 4-26-19 Date

Declaration of Originality

I do hereby declare and attest to the fact that this is an original study based solely upon

my own scholarly work here at Lindenwood University and that I have not submitted it

for any other college or university course or degree here or elsewhere.

Full Legal Name: Teresa R. Hamra

Signature: _Teresa Hamra_____ Date: _4.26.19_

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Abstract

Among schools of nursing nationwide, the competition for clinical sites, and insufficient numbers of nurse preceptors led nursing schools to turn away thousands of qualified applicants. Due to a shortage of clinical sites, shortage of nurse preceptors, and an increase in simulation technology, nursing schools used simulation clinical in place of traditional clinical experiences. Much of the literature supported using simulation as a replacement for traditional clinical hours. The literature discussed a gap in transition to practice from student nurse to professional nurse and pointed to safety issues as the highest concern in practice settings.

One Midwest community college faced the challenge of finding qualified nurse preceptors for senior nursing students to participate in traditional preceptored clinical experiences. The community college operated nursing schools on two campuses. One campus replaced the traditional preceptored clinical with simulation clinical experiences. The second campus continued the preceptored clinical experience. The researcher proposed a mixed-methods study to compare the nursing preceptored clinical learning experience to the nursing simulation clinical learning experience. First, the researcher utilized standardized nursing pre- and post-test exams, second the researcher utilized an andragogical assessment instrument seeking insights into students' beliefs, feelings, and behaviors during their participation in the clinical practicum experience. And, third the researcher interviewed students to explore issues, to examine use of andragogical principles, and to gain students' perspectives of the two types of clinical practicums.

The data results from the standardized test showed a bias due to a difference in post-test policies on the two college campuses. The test data could not be used to

compare the two practicum experiences, but proved useful for analysis of individual student data and standardized test policy changes. The assessment instrument revealed the simulation clinical experience scored higher on experience-based learning techniques/ learner centered learning processes. The key data from the student interviews revealed the simulation clinical experience provided students an opportunity to make clinical decisions on their own without the safety net of a preceptor or faculty. Recommendations within the study addressed implementing simulation clinical learning experiences to replace preceptored clinical learning experiences for senior nursing students' final clinical practicum.

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Chapter One: Overview

According to Hayden, Smiley, Alexander, Kardong-Edgren, and Jeffries (2014), lack of clinical site availability, and competition for clinical sites among health professions created obstacles to expanding enrollment in nursing programs. In a report from a nationwide study, Hayden et al. (2014) noted the increasing number of pre-licensure nursing programs, and the hospital safety protocols limiting the number of students allowed to practice on a unit, contributed to "competition for clinical placement sites" (p. 4). The American Association of Colleges of Nursing (AACN, 2017) report revealed "U.S. nursing schools turned away 64,067 qualified applicants from baccalaureate and graduate nursing programs in 2016 due to an insufficient number of faculty, clinical sites, classroom space, and clinical preceptors, as well as budget constraints" (para. 7).

The nursing shortage in the United States developed into a complex issue over time. Therefore, the shortage cannot be fully attributed to enrollment in nursing programs. Nonetheless, the obstacles that limited the number of students admitted to nursing programs contributed to the nursing shortage. An overall shortage of nurses seemed difficult to determine and depending on the source, the numbers varied. Even so, the Bureau of Labor Statistics projected "the need for 649,100 replacement nurses in the workforce bringing the total number of job openings for nurses due to growth and replacements to 1.09 million by 2024" (American Association of Colleges of Nursing, [AACN], 2017, para 2). In 2014 the Health Resources and Service Administration (HRSA) report found the number of registered nurses projected in

the report could meet the demands in 34 states, leaving 16 states with a shortage

through 2025 (U.S. Department of Health and Human Services [USDHHS], 2014).

In 2005, an AACN task force reached out to stakeholders, including Universities,

Schools of Nursing and faculty to develop strategies to address faculty shortage issues

and in turn help solve issues surrounding the nursing shortage (AACN, 2005). The task

forced examined five main issues, and noted in issue three, "Nursing clinical education is

resource intensive . . . but is critically important for the safe teaching of nursing as a

practice discipline" (AACN, 2005, p. 18). The AACN (2005) task force suggested

nursing education examine the traditional clinical experience to optimize the human and

material resources already available and suggested a strategy to increase the use of

simulation clinical experiences in place of traditional hospital clinical experiences.

The Institute of Medicine (IOM) (2010) reported on the future of nursing

education and promoted incorporating simulation technology in nursing education to

engage students in "higher level learning opportunities" (p. 20). Jeffries, a

recognized nursing simulation expert, spoke at the IOM forum and related clinical

simulations provided a student-centered approach exposing students to real-life

patient situations where students learn important nursing skills of prioritization,

delegation and clinical decision making (as cited in Institute of Medicine [IOM],

2010). Mendenhall, president of Western Governors University (WGN), a

spokesperson at the IOM forum, supported replacing traditional clinical experiences

with simulation technology as a means to increase student numbers in schools of

nursing (as cited in IOM, 2010).

Larue, Pepin, and Allard (2015) reported on the rise in the use of simulation clinical experiences to replace traditional clinical experiences. In a systematic review of the literature from 2008 through 2014, Larue et al. (2015) used the Curriculum Index of Nursing and Allied Health Literature (CINAHL), MedLine, PubMed, Google, and Google Scholar, and selected 33 articles for review to examine substituting simulation for clinical placement and to examine benefits of simulation if any. Larue et al. (2015) broke the literature review down into two themes and five subthemes: Theme (1) Studies on the effects of simulation; and sub-themes; (a) Effects on the development of clinical competency and critical thinking; (b) Effects on acquisition of knowledge and expertise; and (c) Effect on self-confidence; Theme (2) Preparation for clinical practice; and sub-themes; (a) Effects on self-confidence and critical thinking, and (b) Effects on integrating expertise. In their conclusion Larue et al. (2015) stated almost all 33 studies favored using simulation for clinical training and noted simulation contributed to learner self-confidence and critical thinking skills needed to provide safe, quality patient care.

Studies showed debriefing as another important component of simulation clinical experiences. Debriefing occurred post-simulation and provided a time for guided reflection and group feedback where students synthesized knowledge and learned the most (IOM, 2010, Larue, Pepin, & Allard, 2015; Neill & Watton, 2011) Other studies found simulation clinical experiences improved students' nursing abilities in medication administration (Harris, Pittiglio, Newton, & Moore, 2014); enhanced communication effectiveness (Vecchia & Sparacino, 2015) and provided

opportunities to practice psychomotor skills (Sportsman, Schumacker, & Hamilton, 2011).

Bradley University (2017) noted the negative impact of the nursing shortage included (a) decreased quality of patient care, (b) increased patient mortality rates due to high patient-to-nurse ratios, (c) increased number of medication errors due to nurse fatigue and insufficient education, and (d) increased cost of care due to nursing turnover. Simulation provided nursing faculty a research-based teaching methodology to address the issues stemming from the nursing shortage. For example, faculty could create real-life simulated scenarios for nursing students that focused on key issues, such as medication administration to decrease the number of medication errors.

In the position of nurse faculty, the researcher of this study developed interest in using simulation as a clinical learning experience while working with undergraduate nursing students at a four-year nursing college. The nursing college provided training for faculty in simulation technology, simulation guidelines, and instructional design for simulation. Additionally, the researcher utilized materials from simulation product experts, and collaborated with simulation staff and clinical faculty to design and set up simulation scenarios.

The researcher facilitated operation of simulation scenarios in high-tech simulation centers at the nursing college that supported a variety of human patient simulators (HPSs) including infants, pre-term infants, adolescents, pregnant females, and adult female and male simulators. The simulation labs contained over 30 low-fidelity, medium-fidelity, and high-fidelity HPSs utilized to meet specific learning experiences and learning outcomes. "Faculty had access to approximately 75 simulation scenarios

purchased from simulation companies Laerdal and Pearson, including scenarios created

by nursing staff and faculty" (C. Tobnick, personal communication, May 24, 2018).

Tobnick held the position of Director for Educational Technology at the time this

researcher worked at the four-year nursing college.

  The researcher learned through a nurse faculty colleague, employed at a Midwest

community college, the nursing program at the community college had difficulty securing

preceptors for the final semester one-on-one preceptored clinical practicum. The

Midwest community college had nursing programs on two campuses, referred to in this

study as Campus A and Campus B. One nurse faculty on Campus B reported to the

researcher, "A decision was made on Campus B to substitute one-on-one simulation

clinical experiences to replace the one-on-one preceptored clinical experience due to a

lack of available preceptors and lack of quality clinical sites" (D. Chanasue, personal

communication, March 10, 2017).

  The decision on Campus B at the community college, to use one-on-one

simulation clinical experiences in place of the one-on-one traditional preceptored clinical

experiences, provided an opportunity to conduct a research study to compare the two

types of clinical learning experiences. The rise in the use of simulation as a teaching

methodology, along with the lack of clinical sites and the lack of available nurse

preceptors, supported the need for comparing the two types of clinical experiences

through a research study. At the time of this study, Campus B replaced the one-on-one

preceptored clinical experiences with simulation clinical experiences for the third

semester. According to D. Chanasue (personal communication, April 5, 2018), Campus

A and Campus B used the one-on-one preceptored clinical experience for senior nursing students' clinical practicum over the past 20 years she had been employed.

The researcher proposed a research project to compare the traditional nursing preceptored clinical learning experiences and the nursing simulation clinical learning experiences of the nursing students on Campus A and Campus B of the Midwest Community College to determine if a simulation clinical learning experience could prove a valid substitute for a traditional preceptored clinical learning experience, The researcher added the word 'learning' to the clinical experiences for this research study, and in the study referred to the clinical experiences as, the nursing preceptored clinical learning experience (NPCLE) and the nursing simulation clinical learning experience (NSCLE). The researcher entered the research setting as stranger to all nursing students on Campus A and Campus B. The researcher applied for permission to conduct the study with the community college Human Subject Review Board (HSRB) and Lindenwood University Internal Review Board (IRB).

Purpose Statement

The purpose of the mixed-methods study was to compare nursing preceptored clinical learning experiences (NPCLE) and nursing simulation clinical learning experiences (NSCLE) of a purposive sample of senior nursing students in a final semester clinical practicum in a Midwest community college nursing program. The objective of the study was to determine; how, if at all, is it possible to achieve management skills in nursing to meet the principles of managing the nursing care of a group of patients in the role of beginning staff nurse in a nursing management practicum? To answer the question, the researcher gathered data using three methods, (1) pencil and paper survey

instrument results, (2) students' test results on standardized nursing exams, and (3)

individual student interview data. The researcher planned the data to be used as evidence

for making decisions about final semester practicum experiences and to provide a

template for further research.

The researcher gathered quantitative data utilizing two methods. First, the

researcher gathered data from students' results on the Modified Instructional Perspectives

Inventory (MIPI) survey instrument. The researcher adapted the instrument for use in this

study and created two versions of the MIPI survey instrument, one for each clinical

practicum group. The Campus A students participated in a one-on-one nursing NPCLE

and responded to the MIPI-NPCLE survey instrument. The Campus B students

participated in one-on-one NSCLE and responded to the MIPI-NSCLE survey

instrument.

For the second method, the researcher utilized secondary data from students'

scores on Assessment Technology Institute (ATI) standardized nursing pre-and post-test

exams taken at the end of the final semester of the nursing program. For the third method

of data collection, the researcher gathered qualitative data through in-depth individual

interviews conducted with students from both clinical practicum groups, upon completion

of the clinical learning experiences. The researcher constructed the interview questions

based on the overarching research question and research sub-questions to gain students'

perspectives of issues with the clinical practicum learning experiences, to assess use of

andragogical principles in the learning experiences, and to gain insight into whether the

design of the clinical practicum helped students develop management skills in nursing to

care for a group of patients.

Issues with ATI on Campus B. Regarding the data collection of students' scores on ATI exams, the researcher developed this study with the understanding, the ATI pre- and post-test were mandatory for all students on Campus A and Campus B. During the data gathering process, the researcher learned the nursing director on Campus A declared the ATI post-test was not mandatory for all the nursing students on Campus A, but only for students who scored below a certain percentage on the ATI pre-test. However, if Campus A students wanted to take the ATI post-test as practice for preparation for state board exams, any student could take the post-test. In the end, only Campus A students, required to take the post-test, took the post-test, since it was not a mandatory requirement. In contrast to Campus A, all students on Campus B completed the ATI post-test, which was mandatory for Campus B students. The researcher explained the details of the program director's decision about the ATI post-test and student data results on Campus A and Campus B in further detail in Chapter Three.

Rationale of the Study

Nursing students paired with a nurse preceptor in the final semester clinical experience is a tradition in nursing perceived in the profession, as an accepted approach of linking theory to practice in preparation for transition into nursing practice (IOM, 2010; Madhavanpraphakaran, Shukri, & Balachandran, 2014). However, the preceptor model posed major concerns, including an insufficient number of clinical sites, ever-decreasing number of preceptors, and insufficient research on the preceptor clinical model. Additionally, Earle-Foley, Myrick, Luhanga, and Yonge (2012) reported nurse preceptors had the stress of a complex job with the added stress of helping prepare a new nurse for transition to practice.

Cant, McKenna, and Cooper (2013) explained, the ability of the preceptors to objectively assess the students' "skills, knowledge, attitudes, values and abilities" (p. 163) to perform safe, quality, competent patient care, was often questioned, due to the variety of ways in which assessment was done, lack of valid or reliable instruments, and unpredictability of student experiences. It is understood, nurse preceptors are experienced clinicians; however, Witt, Colbert, and Kelly (2013) pointed out "being a great clinician does not necessarily translate into being a great preceptor" (p. 172). The perspective of preceptors, noted in a study by Wu, Enskar, Heng, Pua, and Wang (2016) revealed preceptors, themselves, felt capable as clinicians, but some felt discomfort in the role of educator with the responsibility of passing or failing students in a nursing clinical.

In contrast to traditional clinical experiences conducted in a variety of ways and variety of settings, simulation clinical experiences could be structured using best practice guidelines from nursing organizations (Laerdal, 2017). One reputable nursing simulation organization is the International Nursing Association for Clinical Simulation and Learning (INACSL) (as cited in Laerdal, 2017). The INACSL Standards Committee (2016b) developed 10 criteria of Standards of Best Practice for Simulation Design to "meet identified objectives and optimize achievement of expected outcomes" (p. S5). INACSL provided free access to the Standards of Best Practice on the organization's website.

The lack of clinical sites, barriers to student learning reported in the traditional clinical experience, and advances in simulation, prompted an increased use of simulation in schools of nursing (Hayden, Smiley, Alexander, Kardong-Edgren, & Jeffries, 2014). The increase in the use of simulation in nursing education led to nursing schools

requesting permission from Boards of Nursing to replace some clinical hours with

simulation hours as a solution to the issues (Hayden, et al., 2014). In response to the

nursing schools' request, the Boards of Nursing looked to nursing literature to "make a

decision on simulation as a replacement strategy" (p. S3) for traditional clinicals, and

according to Hayden et al. (2014), they found a lack of evidence in the literature for

guidance to propose a policy.

Due to the lack of research evidence, the National Council of State Boards of

Nursing (NCSBN) conducted "the NCSBN National Simulation Study, a large scale,

randomized, controlled study encompassing the entire nursing curriculum" (p. S3) to

provide the needed evidence (Hayden et al., 2014). The NCSBN award-winning study

"provided substantial evidence that up to 50% simulation can be effectively substituted

for traditional clinical experiences in all prelicensure core nursing courses under

conditions comparable to those described in the study" (Hayden, et al., 2014, p. S38).

Earlier studies (Meyer, Connors, Hou, & Gajewski, 2011; Sportsman et al., 2011; Watson

et al., 2012) also supported simulation as a replacement for clinical hours.

The National League of Nursing (NLN) (2015) endorsed the NSCBN's study and

supported the use of simulation as a valid "teaching methodology to prepare nurses for

practice across the continuum of care in today's complex healthcare environment" (para.

1). According to Willhaus, Burleson, Palaganas, and Jeffries (2014), since the award

winning NCSBN National Simulation study, simulation continued to evolve, and studies

looked at the evolution of simulation in nursing education, including the "development of

high-stakes simulation scenarios" (p. e177) "as a valuable method of assessing

competence" (p. e178). Cooper, Prion, and Pauly-O'Neill (2015) reported simulation

provided educators a way to plan complex learning experiences, that students may or may

not witness in traditional clinical, to improve critical thinking and clinical decision-

making skills.

In reviewing the literature, this researcher found numerous studies comparing

traditional clinical experiences to simulation clinical experiences. However, the

researcher did not find a study comparing NPCLEs to NSCLEs of senior nursing students

in a final semester management practicum in a community college nursing program. This

research provided that study. This study provided qualitative and quantitative data to be

used as evidence, showing to what extent NSCLEs compare to NPCLEs to guide future

support of final semester clinical practice.

The researcher developed an overarching research question, three hypotheses, and

four research sub-questions to guide the data gathering process for the mixed-method

study.

Overarching Research Question

How, if at all, is it possible to achieve management skills in nursing to meet the principles

of managing the nursing care of a group of patients in the role of beginning staff nurse in

a nursing management practicum? The researcher used the hypotheses to guide analysis

data.

Hypothesis 1. There is a difference between the MIPI results of students Total of

the quantitative data and the research questions to guide analysis of the qualitative

Scores, Factor 3-Planning and Delivery, Factor 4-Accomodating Uniqueness of Myself as

a Learner, Factor 6-Experience-Based Learning/Learner Centered Learning Process, and

Factor 7- Preceptor (Centered Learning Process)/Simulation (Centered Learning Process)

in the preceptored clinical learning experience compared to the students in the simulation

clinical learning experience.

Hypothesis 2. There is a difference between the MIPI results of Factor 1-

Learner Empathy with Self, Factor 2- Leaner Trust of Self and Factor 5- Learner

Insensitivity toward Self, comparing the preceptored clinical learning group to the

simulation clinical learning group.

Hypothesis 3. There is a difference between student's scores on a pre- and post-

ATI nursing management standardized test when comparing students in nursing

preceptored clinical learning experiences to students in nursing simulation clinical

learning experiences.

Research sub-question 1A. What are the issues with nursing preceptored

clinical learning experiences in achieving management skills to meet the principles of

managing the nursing care of a group of patients in the role of beginning staff nurse?

Research sub-question 1B. What are the issues with nursing simulation clinical

learning experiences in achieving management skills to meet the principles of managing

the nursing care of a group of patients in the role of beginning staff nurse?

Research sub-question 2. In what way, if any, is the process of the Theory of

Adult Learning – Andragogy, integrated into a nursing students' educational experience

in a nursing practicum?

Research sub-question 3. How, if at all, does the design of the practicum meet

the goal of helping the nurse develop the following nursing management skills;

therapeutic communication, interdisciplinary patient care, clinical decision making,

culturally competent care, ethical and values centered care, delegation, prioritization,

safety, conflict resolution, and time management?

Limitations

In this study of the comparison of preceptored clinical learning experiences and

simulation clinical learning experiences, the researcher appraised the following

limitations:

- The overall student nursing population in the U.S. was huge. The researcher's study

  included a small population of nursing students which characterized a limitation of

  this study.

- The study looked at only one final semester comparison of nursing clinical learning

  experiences.

- The study was limited to one city, one college.

- The students did not choose a nursing clinical practicum experience as the students

  were in assigned groups based on the campus program they entered upon registration.

- The researcher noted herself to be in a nursing leadership position which could

  impact a student's response to each interview question.

- The secondary data from the ATI test analysis showed a bias.

- None of the interview participants were males. Males represented 15% of the

  population in this study.

- The wording of Factor 7 on the MIPI, adapted for use in this study, needed

  clarification for use in this study.

Definition of Terms

  Andragogy:

A scientific discipline for the study of the theory, processes, technology, and anything else of value and benefit including learning, teaching, instructing, guiding, leading, and modeling/exemplifying a way of life, which would bring adults to their full degree of humaneness. Thus, andragogy's primary principle being the desire, potential and ability for self-directedness on the part of the learner. (Henschke, 1998, p. 8)

Clinical Reasoning:

A process that involves both thinking (cognition) and reflective thinking (metacognition) to gather and comprehend data while recalling knowledge, skills (technical and nontechnical), and attitudes about a situation as it unfolds. After analysis, information is put together into meaningful conclusions to determine alternative actions. (INACSL Standards Committee, 2016a, p. S40)

Debriefing: "Activity that follows a simulation experience led by a facilitator wherein feedback is provided on the simulation participants' performance while positive aspects of the completed simulation are discussed, and reflective thinking encouraged" (INACSL Standards Committee, 2016a, p. S41).

Fidelity:

The ability to view or represent things as they are to enhance believability. The degree to which a simulated experience approaches reality; as fidelity increases, realism increases. The level of fidelity is determined by the environment, the tools and resources used, and many factors associated with the participants. Fidelity can involve a variety of dimensions. (INACSL Standards Committee, 2016a, p. S42)

Clinical Preceptor: "An RN supervising a student in the clinical setting" (Hayden et al., 2014, p. S42).

Instructional Perspectives Inventory: "An assessment instrument to answer the following question: what beliefs, feelings and behaviors do adult educators need to possess to practice in the emerging field of adult education" (Henschke, 1989, p. 86)?

Management Skills in Nursing: For this study, the nursing skills of delegation, prioritization, critical thinking, leadership, conflict resolution, time management, collaboration, safety, cultural competence, and change taken from the junior college nursing syllabus for the management course, NUR 253 Management Skills in Nursing.

Modified Instructional Perspectives Inventory-Nursing Preceptored Clinical Learning Experience: For this study, the researcher, in conjunction with Dr. John Henschke, author of the IPI, modified the 45 statements on the MIPI directed to adult educators to 45 statements on the MIPI-NPCLE directed to nursing students participating in a preceptored clinical learning experience (see Appendix A).

Modified Instructional Perspectives Inventory-Nursing Simulation Clinical Learning Experience: For this study, the researcher in conjunction with Dr. John Henschke, the author of the IPI, modified the 45 statements on the MIPI directed to adult educators to 45 statements directed to nursing students participating in a simulation clinical learning experience (see Appendix B).

Preceptored Clinical Experience: "The training and orientation provided by experienced nurses. . . . by teaching others in the clinical environment, experienced nurses are preparing new nurses to face the nursing care challenges of the future" (Schaubhut, 2014, p. 5).

Self-Directed Learning:

a process in which individuals take the initiative, with or without the help of

others, in diagnosing their learning needs, formulating learning goals, identifying

human and material resources for learning, choosing and implementing

appropriate learning strategies, and evaluating learning outcomes. (Knowles,

1975, p. 18)

Simulation Clinical Experience:

An attempt to mimic essential aspects of clinical situation with the goal of

understanding and managing the situation better when it occurs in actual clinical

practice. A technique that uses a situation or environment created to allow persons

to experience a representation of a real event for practice, learning, evaluation,

testing, or to gain understanding of systems or human actions. (National League

of Nursing Simulation Innovation Resource Center [NLN-SIRC], n.d., para. 1)

Traditional Clinical Experiences:

 In the clinical environment, students are assigned patients and provide care under

the supervision of a clinical instructor . . . experiences ideally offer a wide breadth

of learning opportunities, allowing students to practice skills; increase clinical

judgment and critical thinking; interact with patients, families, and members of

the healthcare team; apply didactic knowledge to actual experience; and prepare

for entry to practice. (Hayden et al., 2014, p. S4)

Summary

There were currently insufficient numbers of clinical sites and insufficient

numbers of nurse preceptors to support one-on-one NPCLE for senior nursing students in

schools of nursing across the nation. The NPCLE traditionally provided a pathway for

student nurses' transition to nursing practice. The lack of clinical sites and lack of

clinical nurse preceptors were two factors that led to qualified student applicants being

turned away from entry into nursing programs. The obstacles limiting student admittance

into nursing programs contributed to the complexity of issues surrounding the nursing

shortage in the United States. In 2014, the NCSBN conducted a nationwide study which

determined simulation clinical experiences as a valid teaching methodology and

supported replacing up to 50% of traditional nursing clinical experiences with NPCLEs.

The NLN supported the NCSBN study. Two simulation nursing organizations developed

as nursing programs began using simulation in place of traditional clinical hours, the

NLN Simulation Learning Institute (NLN-SIRC) and INACSL, to support simulation

education and the Standards of Best Practice for Simulation education grew out of those

organizations.

The AACN (2005) and the IOM (2010) recommended using NSCLE in place of

NPCLE. Many studies supported simulation for clinical training as studies showed

evidence of increased learner self-confidence and critical thinking skills contributing to

safe, quality patient care (Larue et al., 2015). With the support from state boards of

nursing and nursing organizations, nursing education felt encouraged to move in the

direction of using NSCLE to replace traditional clinical learning experiences. Simulation

continued to evolve, which led to the development of high-stakes simulation scenarios,

viewed as a valuable method of assessing student competence. Educators used

simulation to plan complex learning experiences to improve students' critical thinking

and clinical decision-making skills.

Chapter Two will review the literature in adult education to explore the adult learning theory andragogy and its application to nursing practice and review the literature in nursing education for traditional nursing clinical learning experiences and nursing simulation clinical learning experiences.

Chapter Two: Literature Review

Chapter Two consists of five key areas. Each area is uniquely significant to the others and to this research project. The areas include: (a) the adult learning theory - andragogy, (b) the traditional nursing clinical experience, (c) the nursing preceptored clinical experience, (d) simulation in nursing education, and (e) nursing simulation clinical experiences versus nursing preceptored clinical experiences. Studies involving each of these areas will be discussed.

In reviewing the literature, the researcher noted, when searching the terms preceptored clinical learning experience and simulation clinical learning experience, the word 'learning' did not appear in the title designation. The review showed clinical experiences in nursing education intended learning to occur, even though 'learning' was not included in the title designation. In this study, the researcher explored the learning that occurred in both types of clinical practicum experiences and referred to the clinical experiences in this research as NPCLEs and NSCLEs.

The Adult Learning Theory - Andragogy

Merriam, Cafarella and Baumgartner (2007) outlined aspects of five different "traditional learning theories" (p. 275) as behaviorist, humanist, cognitivist, social cognitive, and constructivist, developed by well-known psychologist from the 1940s through 1950s. In their comprehensive guide, *Learning in Adulthood,* Merriam et al. (2007) related how aspects of those traditional learning theories provided rich substance from which educators developed adult learning theories in the early 1970s. Many educators in the field of adult education in the early 1970s focused their attention on adult education as a specialty field and determined a need to distinguish adult education from

education of children (McClusky, Illeris, & Jarvis, 2007). At a unique time in the history

of adult education, educators learned about the distinct characteristics of the adult learner

and began to pull away from the research of well-known psychologist and educational

psychologists, such as Pavlov, Skinner, Maslow, Roger, Lewin, Piaget, Bandura, and

Dewey, who had examined learning "in a more general way" (as cited in McClusky et al.,

2007, p. 103).

According to McClusky, Illeris, and Jarvis (2007), adult educators, including

Houle (1972), Tough (1979), Kidd (1973), and Knowles (1970, 1973), started

questioning whether adults learned differently than children. In addition, through their

research and insights on adult learners, they changed the way educators and learners

thought about adult education (McClusky et al., 2007). In a classic example of a study of

adult learners, Tough (1979) examined 11 adult research studies about the adults'

intentional efforts to learn and publish the research and findings in *The Adult's Learning*

Projects: A Fresh Approach to Theory and Practice in Adult Learning. Tough (1979)

found interest in researching adult learners and learning projects when he noticed "how

enthusiastically" (p. 17) adults approached learning. Other adult researchers found

Tough's (1979) research interesting, due to his unique approach of examining adult

learners who were implementing self-planned learning projects.

In his approach to study adult learners, Tough (1979) decided to carefully select

people to interview from seven populations: "blue-collar factory workers, women and

men in jobs at the lower end of the white-collar scale, beginning elementary school

teachers, municipal politicians, social science professors, and upper-middle-class women

with preschool children" (p. 17). The research about the ways adults planned their own

learning led Tough and others to examine the responsibilities the learners put upon

themselves when planning and completing a project. Although Tough's (1979) work

stimulated much interest among adult educators about self-planned or self-directed

learning, it was Knowles (1970, 1973, 1975, 1980, 2989, 1995) who soon became the

most well-known and influential figure in adult education (as cited in Smith, 2002).

Knowles (1970, 1973, 1975, 1980, 2989, 1995) reintroduced andragogy and self-

directed learning through his research, books, and his work as a professor in the field of

Adult Education (as cited in Smith, 2002). Knowles first book, published in 1950,

Informal Adult Education, provided insights into adult learners outside of the formalities

of the traditional education system (as cited in Henry, 2009). Throughout his life,

Knowles (1970, 1973, 1975, 1980, 2989, 1995) authored 25 books, and articles, too

numerous to count, through which Knowles developed and shared his views about adult

learners, self-directed learning, andragogy, and his development of andragogical

principles, which continued until his death in 1995 (as cited in Henry, 2009).

With the development of interest in adult learning, early educators worked

diligently to create one theory that focused on the self-directness of adult learners to

differentiate adults from children. However, they soon found the complexity of adult

learners and creativity of adult educators could not be contained in a single theory

(Merriam et al., 2007). Many adult learning theories focused on self-directed learning

and gained popularity, such as; Kolb's Experiential Learning Theory, Mezirow's

Transformative Learning Theory, McClusky's Theory of Margin, Illeris's Three

Dimensions of Learning and Jarvis's Learning Process, however, Knowles's Adult

Learning Theory – Andragogy remained the most popular among all (as cited in McClusky et al., 2007; Merriam et al., 2007).

Knowles (1970, 1973, 1975, 1980, 2989, 1995) became a respected figure in adult education, due in part to his writings, which served as guidebooks and reference books for adult educators. In addition to his guidebooks, Knowles (1970) encouraged adult educators to explore andragogy in seeking "a comprehensive theory that will give coherence, consistency, and technological direction to adult education practice" (p. 5). To differentiate pedagogy, "the art and science of teaching children" (p. 37), Knowles (1970) described andragogy as "a new technology" (p. 38), defined as "the art and science of helping adults learn" and extended andragogy further to "helping human beings learn" (p. 38).

Henschke (1973) researched Knowles' contributions to the theory and practice of adult education and conducted personal interviews with Knowles for his doctoral dissertation research. In his dissertation, Henschke (1973) described how Knowles felt a desire to be warm and accepting of people, which led to Knowles's understanding of the needs of adult learners to be "self-accepting, self-respecting, and therefore accepted and respected by others" (p. 42). Knowles reportedly moved from an operational view of education, meaning building good programs, to a focus on people and their motivations to learn things that applied to their life situations (Henschke, 1973). As an example, Henscke (1973) reported, Knowles reflected on the request of adult students seeking advanced degrees who wanted to develop competencies in their area of study, and Knowles responded by developing learning labs where learners participated in internships and trainer training. About the same time, Knowles became involved with nurse

educators, and used principles of andragogy to create continuing education programs in

nursing education by conducting workshops (as cited in Henschke, 1973).

Knowles recognized the uniqueness of adult learners through his personal

observations and experiences with adult learners and through his relationships with

mentors, whose views inspired him (as cited in Henschke, 1973). According to Henschke

(1973), Lindeman (1926) made a significant impact on Knowles, which influenced

Knowles' understanding and beliefs about adult education. Lindeman's (1926) work,

The Meaning of Adult Education, greatly influenced Knowles. Lindeman (1926)

suggested:

> Adult education is an attempt to discover a new method and create a new
>
> incentive for learning; its implications are qualitative, not quantitative. . . . adult
>
> learners are precisely those whose intellectual aspirations are least likely to be
>
> aroused by the rigid, uncompromising requirements of authoritative,
>
> conventionalized institutions of learning (p. 28).

Inspired by Lindeman's influence, Knowles, according to Henschke (1973), moved away

from assessing students' competencies using testing and other objective measurements,

toward measuring students' competencies using observation.

Later, Knowles (1989) suggested his thirst for knowledge about adult learners led

to his reading many books by adult educators. It is important to note, his theory of adult

learning stemmed not only from Lindeman's (1926) writings, but also from the works of

adult educators he admired. In his book, *The Making of an Adult Educator,* Knowles

(1989) credited the works of others who impacted him most, as noted in the following

quotes:

a) Thorndike (1928) *Adult Learning* proposed "adults could learn" based on his research

findings which were in opposition to assumptions by many at the time who felt "you

can't teach an old dog new tricks" (as cited in Knowles, 1989, p. 75).

b) Hewitt and Mather (1937) *Adult Education: A Dynamic for Democracy* "deepened

my appreciation of the importance of adult education (to save democracy) and gave

me practical guidelines for conducting group discussions and other participatory

methods" (as cited in Knowles, 1989, p. 75).

c) Sheffield's (1936) *Creative Discussion* strengthened Knowles "commitment to and

understanding of the discussion method" (as cited in Knowles, 1989, p. 75).

d) Cantor's (1946) *Dynamics of Learning* "deepened my understanding of the concepts

of learner-centered education and learners' ego involvement" (as cited in Knowles,

1989, p. 75).

e) Dewey's (1947) *Experience and Education* " gave me a theoretical justification for

emphasizing the role of the learner's experience in learning" (as cited in Knowles,

1989, p. 75), and

f) Lewin's (1948) *Resolving Social Conflicts,* "introduced me to field theory and the

concept that forces in social systems operate to facilitate or inhibit learning" (as cited

in Knowles, 1989, p. 75).

Thus, Knowles' perspective of andragogy and Knowles' development of andragogical

principles stemmed from an interpretation and compilation of the rich source of writings

from many adult educators.

In support of andragogy. Tennant (2006) stated, "Adults generally do better

with self-directed learning (emphasizing learner control, autonomy, and initiative), an

explicit rationale for learning, a problem-oriented rather than subject-oriented approach, and the opportunity to use their experiences and skills to help others" (p. 65). In her dissertation on andragogical orientation of nurse educators, Porterfield (2004) stated, "Nursing students are adults who are goal-directed, have an immediate application for their learning, are motivated and are ready to learn" (p. 106). Porterfield (2004) believed faculty best equipped to facilitate teaching and learning experiences for adult students understood adult learners and put into practice andragogical principles. The theory of andragogy offered a framework relatable to nursing in that it provided "a humanistic educational process that values the individual" (Milligan, 1997, p. 487). Additionally, Milligan (1997) defended andragogy stating, "An educational process based upon andragogy mirrors important parts of the nurse-patient/client relationship" (p. 487).

Henschke (1973, 1989, 1998, 2009) studied with Knowles at Boston University and developed a deep interest in the adult learning theory, andragogy. Henschke carried the torch for andragogy throughout his career in adult education, through his work which included his writings, and classroom facilitation of adult learner sessions, seminars and workshops focused on sharing and applying andragogical principles (T. Hamra, personal observation as a student, January 2015 - November 2018). Henschke' s (1973, 1989, 1998, 2009) research on andragogy spanned over 45 years and continued at the time of this writing, as evidenced in his vitae (see Appendix D).

From his perspective and compilation of research works on andragogy, Henschke (1998) expanded on Knowles definition of andragogy and comprehensively defined andragogy as:

a scientific discipline for the study of theory, processes, technology, and anything

else of value and benefit including learning, teaching, instructing, guiding, leading

and modeling/exemplifying a way of life, which would bring adults to their full

degree of humanness . . . andragogy's primary principle of being the desire,

potential and ability for self-directedness on the part of the learner. (p. 8)

In a Teaching and Technology conference at the University of Missouri St. Louis

(UMSL) campus for teaching adults and nontraditional students, Cooper, Henschke, and

Isaac (2003) presented the principles of andragogy to the audience noting:

Adults enter into an educational activity with a greater volume and a different

quality of experience than youths. This means that adults are themselves the

richest learning resource for one another for many kinds of learning. Hence, the

greater emphasis in adult education is on such techniques as group discussion,

simulation exercises, laboratory experiences, field experiences, problem-solving

projects, and interactive media. (p. 1)

In search of an adult learning theory useful as a framework for instruction

designed for adult learners, Cercone (2008) proposed instruction designed for adults

needed to be "based on the needs of adult learners" (p. 137). Cercone (2008) reviewed

the framework of andragogy and compared andragogy to three other popular adult

learning theories, self-directed learning, experiential learning, and transformational

learning, in relation to online learning design. To examine the theories more closely for

one that would best benefit adult learners, Cercone (2008) created a framework of 13

characteristics and integrated the four adult learning theories into a framework.

Interestingly, through a comparison of the 13 characteristics, Cercone (2008) found

"andragogy is the most comprehensive of the adult learning theories as it considers 10 of the 13 characteristics . . . while experiential learning theory considers four of the characteristics, and self-directed learning . . . and transformative learning theory considers three of the characteristics" (p. 150). In Cercone's deduction, andragogy wins!

In another study, Bradley, Rachal, and Harper (2013) compared andragogical and pedagogical online learning modules, and at the end of their study, concluded the andragogical model was not a superior instructional methodology, but it was at least as good as the pedagogical method. Despite Bradley et al.'s (2013) conclusion, results of the study from the students' perspectives revealed the andragogical participants were more satisfied than the pedagogical participants, which prompted Bradley et al. (2013) to report "the assumptions of andragogy are an excellent starting point for creating such welcoming and nonthreatening learning environments" (p. 191). McClusky et al. (2007) understood, no one theory provided for every element of adult learning as each "contributes something to our understanding of adult learners" (p. 83). However, Knowles (1970, 1973, 1975, 1980, 2989, 1995) distinguished andragogy as a theory of adult learning, through his development of the assumptions of adult learners, his passion for teaching and learning, and his ability for continued revisions of his work over time (as cited in McClusky et al., 2007).

In an example of the application of andragogical principles, Isenberg (2007) brought online learning and andragogy together through a research project using a real-life case study. In her study to assess how adults learn online, Isenberg (2007) understood the internet provided a convenient way for busy adult learners to choose from an endless number of online learning opportunities and understood adult learners'

frustration with the linear nature of online learning. Throughout her research, Isenberg

(2007) addressed important issues surrounding adult learning, technology, and the

internet, and found "the teacher of adult learners will benefit by seeking ways to apply

andragogical principles to technology" (p. 153), especially in a time when adults "are

using the Internet to meet learning needs just to keep up with today's fast pace world" (p.

153).

Patton, Higgs, and Smith (2013) studied the clinical environment and explored the

need to incorporate learning theories to provide clinical educators a foundation for "wise

educational practices" (p. 493) to improve students' learning in clinical. Educators

supported incorporating sound learning theories into clinical teaching and learning

experiences to enhance valuable clinical time (Patton, Higgs & Smith, 2013). A theory

noted to work well in nursing education, according to Idczak (2007) was andragogy.

Adapting the concept of andragogy to the field of nursing made sense to Idczak (2007)

who stated, "Nursing is defined and described as both an art and a science" (p. 66). The

science of nursing encompassed nursing theory and scientific evidence used to direct

nursing practice; the art of nursing described by (Idczak, 2007) "is created in the human

realm . . . through the . . . interaction of the nurse and the patient (p. 67).

Palos (2014) stated something similar to Idczak (2007) in the comment,

"Competent nursing requires a strong knowledge base and technical skills . . . in

combination with . . . caring, compassionate and communicative . . . patient centered

care" (p. 247). Several nurse educators noted the practical applications of andragogical

principles to nursing practice, and as Henschke related to this researcher, "approximately

15 to 20 nurse educators at the University of Missouri St. Louis (UMSL) choose adult

education with an emphasis on andragogy, as a preferred doctoral degree, and some

asked me as their chair" (J. A. Henschke, personal communication, May 23, 2018).

     The principles of andragogy. Knowles (1975) explained self-directed learning

was based on the theory and practice of andragogy and stated, "Andragogy is defined,

therefore, as the art and science of helping adults (or, even better, maturing human

beings) learn" (p. 19). According to Knowles, (1975) adult learners displayed an attitude

of self-directedness, whether focused on accumulating new information or focused on

achieving competencies. The key is, they enter learning situations "motivated by internal

incentives, such as the need for esteem, the desire to achieve, the urge to grow, the

satisfaction of accomplishment, the need to know something specific, and curiosity"

(Knowles, 1975, p. 21).

     Andragogical principles supported self-directed learning, self-motivation, learner

past experiences, desire and readiness to learn, and applicable problem-centered learning

(Knowles, 1975, 1980). Adult learners, according to Knowles (1980), brought with

themselves a rich base of experiences and frames of reference into the learning

environment. Even in learning climates which appeared more pedagogical than

andragogical, Knowles (1975) discussed how adult learners "may need to be taught" (p.

21), but they will enter those situations with "a probing frame of mind and will exploit

[those occasions] as resources for learning without losing their self-directedness" (p. 21).

     In Knowles (1970) classic text, *The Modern Practice of Adult Education:*

Andragogy Versus Pedagogy, Knowles referred to four assumptions of the adult learner

as the learner's self-concept, the role of the learners' experience, the adult learner's

readiness to learn, and the adult learner's orientation to learning. Later, Knowles (1989)

wrote about how his ideas and assumptions about andragogy were "enriched and influenced" (p. 81), and how they evolved over time. Knowles (1989) expanded on the four assumptions of the adult learner, and developed the six assumptions of the adult learner:

1) Regarding the need to know: Adults need to know why they need to learn something before undertaking to learn it. Tough (1979) found that when adults undertake to learn something on their own, they will invest considerable energy in probing into the benefits they will gain from learning it and the negative consequences of not learning it. Consequently, one of the new aphorisms in adult education is that the first task of the facilitator of learning is to help the learners become aware of the "need to know" (a process akin to Freire's consciousness-raising).

2) Regarding the learner's self-concept: Adults have a self-concept of being responsible for their own lives (the psychological definition of adult). Once they have arrived at this self-concept, they develop a deep psychological need to be seen and treated by others as being capable of self-direction. They resent and resist situations in which they feel others are imposing their will on them. But this presents a problem to us in adult education: the minute adults walk into an activity labeled "education" or "training" or any of their synonyms, they hark back to their conditioning in previous school experience, put on their dunce hat of dependency, sit back, and say, "Teach me." As we have become aware of this problem, adult educators have been working at creating front-end learning experiences in which adults are helped to make the

transition from dependent to self-directed learners. (Knowles, 1975; Smith, 1982)

3) Regarding the role of the learner's experience: Adults come into an educational activity with both a greater volume and a different quality of experience from youths. This difference in quantity and quality of experience has several consequences for adult education. For one thing, it assures that in any group of adults there will be a wider range of individual differences in terms of background, learning style, motivation, needs, interests, and goals than is true in a group of youths—hence, the great emphasis being placed in adult education on individualization of learning and teaching strategies. For another, it means that for many kinds of learning the richest resources for learning are within the learners themselves. Hence, the greater emphasis being given in adult education to experiential techniques—techniques that tap into the experience of the learners, such as group discussion, simulation exercises, problem-solving activities, case method, and laboratory methods—over transmittal techniques. Hence, too, the greater emphasis on peer-helping activities. But the fact of greater experience also has some potentially negative effects. As we accumulate experience, we tend to develop mental habits, biases, and presuppositions that may cause us to close our minds to new ideas, fresh perceptions, and alternative ways of thinking. Accordingly, adult educators are trying to develop ways of helping adults to examine their habits and biases and open their minds to new approaches. Sensitivity

training, value clarification, meditation, and dogmatism scales are among the techniques that are used to tackle this problem.

4) Regarding readiness to learn: Adults become ready to learn those things they need to know or to be able to do in order to cope effectively with their real-life situations. An especially rich source of readiness to learn is the developmental tasks associated with moving from one developmental stage to the next. The critical implication of this assumption is the importance of timing learning experiences to coincide with those developmental tasks.

5) Regarding orientation to learning: In contrast to children's and youths' subject-centered orientation to learning (at least in school), adults are life centered (or task-centered or problem centered) in their orientation to learning. Accordingly, learning experiences in adult education are increasingly organized around life tasks or problems—for example, "Writing Better Business Letters" rather than "Composition l," and

6) Regarding motivation to learn: While adults are responsive to some extrinsic motivators (better jobs, promotions, salary increases, and the like), the more potent motivators are intrinsic motivators (the desire for increased self-esteem, quality of life, responsibility, job satisfaction, and the like). Tough (1979) found in his research that all normal adults are motivated to keep growing and developing, but that this motivation is frequently blocked by such barriers as negative self-concept as a student, inaccessibility of opportunities or resources, time constraints, and programs that violate principles of adult learning. (Knowles, 1989, pp. 83-85)

In 1975 Knowles work included nine competencies of self-directed learning to support the process of adult learning and the process of program development. Knowles (1975) listed the nine competencies in his guidebook for learners and teachers on self-directed learning:

1) An understanding of the differences in assumptions about learners and the skills required for learning under teacher-directed and self-directed learning, and the ability to explain these differences to others.

2) A concept of myself as being a non-dependent and a self-directing person.

3) The ability to relate to peers collaboratively, to see them as resources for diagnosing needs, planning my learning, and learning; and to give help to them and receive help from them.

4) The ability to diagnose my own learning needs realistically, with the help from teachers and peers.

5) The ability to translate learning needs into learning objectives in a form that makes it possible for their accomplishment to be assessed.

6) The ability to relate to teachers as facilitators, helpers, or consultants, and to take the initiative in making use of their resources.

7) The ability to identify human and material resources appropriate to different kinds of learning objectives.

8) The ability to select effective strategies for making use of learning resources and to perform these strategies skillfully and with the initiative.

9) The ability to collect and validate evidence of accomplishment of various kinds of learning objectives. (p. 61)

Knowles (1970) described the andragogical process of program development and listed seven components of the process. Then, Knowles (1995) updated the components of an andragogical process design to include the following eight components, with the first component as the new edition of the list:

1) Preparing the learners for the program

2) Setting the climate

3) Involving learners in mutual planning

4) Involving learners in diagnosing their learning needs

5) Involving learners in forming their learning objectives

6) Involving learners in designing learning plans

7) Involving learners in carrying out their learning plans

8) Involving learners in evaluating their learning outcomes. (p. 5)

The adult learning theory, andragogy, allowed for an approach to teaching and learning that met the needs of adult learners and appeared in the teaching principles of faculty, described as "facilitators of learning motivated to engage students and promote creativity" (Skiba, 2013, p. 202). Students benefitted from the andragogical approach to teaching and learning, noted through their participation and clear contribution to learning (Skiba, 2013). Nestel and Bearman (2015) proposed "educators can use theory to understand why a simulation activity [or clinical activity] did not go so well or how to better articulate alignment with clinical practice" (p. 351). Knowles' (1970, 1975, 1995) process elements and competencies of self-directed learners provided a theoretical framework for assessing use of andragogical principles in nursing clinical education settings of the one-on-one NPCLE and one-on-one NSCLE.

The Traditional Nursing Clinical Experience

The Accreditation Commission for Education in Nursing (ACEN, 2019) identified clinical/practicum learning experiences as learning activities that incorporated program learning outcomes, student learning outcomes, and nursing competencies overseen by nursing faculty responsible for supporting student learning through communication and feedback. Clinical experiences developed students' critical thinking and leadership skills and provided faculty insight into students' abilities to provide nursing care (Flott & Linden, 2016). Hayden et al. (2014) described the traditional clinical experience in nursing:

> In the clinical environment, students are assigned patients and provide care under the supervision of a clinical instructor … experiences ideally offer a wide breadth of learning opportunities, allowing students to practice skills; increase clinical judgment and critical thinking; interact with patients, families, and members of the healthcare team; apply didactic knowledge to actual experience; and prepare for entry to practice. (p. S4)

The ACEN (2019) noted practice environments included "acute-care and specialty hospitals, long-term care facilities, ambulatory care centers, physician offices, community and home health care, and on-campus laboratory with low- fidelity, moderate-fidelity, and high-fidelity simulation" (para. 1). Clinical education in healthcare professions remained central in preparing students for transition to professional practice. Nursing students in the clinical setting learned through inter-professional collaboration, demonstration of clinical competencies, opportunities for

decision making on real practice problems, and through application of theory to practice (Patton et al., 2013).

   Concerns with nursing traditional clinical experiences. Although nursing traditional clinical experiences provided a gold-standard or hallmark for nursing clinical education training, problems with the traditional methods led to difficulties in the transition from student nurse to professional nurse. McGrath, Lyng, and Hourican (2012) noted, educators were responsible for assisting nursing students in transition to nursing practice and further commented, simulation offered educators a means to meet the responsibility of training nursing students. Hospitals and other agencies identified concerns about the safety and quality of patient care provided by newly graduated nurses. In response to the concerns and identified gaps in the transition to practice from student nurse to staff nurse, two well-known organizations, the Robert Wood Johnson Foundation (RWJF) and the Institute of Medicine (IOM) collaborated for the *Initiative on the Future of Nursing* and developed "a set of action-oriented recommendations for the future of nursing" (IOM, 2010, p. *xi*).

   The IOM (2010) recommendation stressed the importance of the need to focus on nursing education to "rethink approaches to safety, patient-centered care, cultural competence, and clinical judgment" (p. 11). It is notable both Tanner (2006) and the IOM (2010) pointed out the traditional clinical in which nursing faculty assigned students to provide total patient care had been in place for over 50 years and needed revision. In agreement with the IOM and Tanner (2006), nursing researchers Giddens, Caputi, and Rodgers (2015) widely recognized for their expertise in nursing education, agreed nursing programs needed a change from the traditional clinical model. An older study

conducted by Ironside and McNelis (2010), discussed nursing students' perspectives of the traditional clinical experience and reported students felt there was too much down time during clinical, too much time spent doing repetitive task, and too little time learning to make decisions using critical thinking skills. In a more recent study, from the perspective of nursing clinical faculty, faculty related their own frustrations, noting most of their clinical time revolved around performing routine care with students and not around teaching nursing concepts to increase student learning (Giddens, Caputi, & Rodgers, 2015).

From an extensive literature search of peer reviewed journals from 1995 to 2014 about the nursing clinical education environment, Flott and Linden (2015) reported some nursing graduates lacked critical thinking and leadership skills needed to enter professional practice. The review also noted, although traditional clinical experiences revealed flaws, nursing programs could improve clinical education by ensuring consistency in student orientation, providing education for nurse managers and nursing staff, determining methods to ensure students are prepared for clinical practice, and by substituting alternative clinical experiences (Flott & Linden, 2015).

The literature review covered almost a 20-year time span in which Flott and Linden (2015) found several similar attributes identified as necessary for a successful clinical learning experience. The Clinical Learning Environment in Nursing Education needed:

- physical space   - necessary and functioning equipment

- psychosocial and interaction factors - communication and interaction among

  everyone in the clinical learning environment, including students, instructors,

  and staff nurses

- organizational culture - manager and organization's view on the importance of

  nursing education, organizational policies determining the scope of practice

  for nursing students, emphasis on providing quality patient care; and

- teaching and learning components - effectiveness of instruction provided by

  designated instructor, variation in patient care opportunities provided, student

  engagement in the learning process. (Flott & Linden, 2015, p. 506)

In conclusion Flott and Linden (2015) suggested a model clinical day would include all

the attributes listed, where a clinical day missing attributes may result in the student

meeting some learning outcomes, and a clinical day missing most of the attributes would

not be considered a learning experience.

Educators found in addition to implementing strategies to improve student

outcomes in the traditional clinical experience, a need existed for valid and reliable tools

to assess student learning. Cant et al. (2013) conducted a systematic search for

quantitative studies from 2000 to 2011 on assessment techniques and tools for measuring

clinical competence of nursing students and found most assessment tools lacked validity

and reliability. Although many tools proved unreliable, in a study with over 1,765

students, Cant et al. (2013) reported the Objective Structured Clinical Examinations

(OSCEs) assessment tools provided formative and summative assessments to identify

student strengths and weaknesses but stated a negative caveat of using the instruments

was added time and cost. Clearly, traditional clinical experiences remained a relevant

component of nursing education, but equally clear, changes needed to be made to provide

nursing students with clinical learning experiences that incorporated a sound learning

theory appropriate for adult students, with guidelines implemented to enhance learning

outcomes and with valid and reliable tools for assessment.

The Nursing Preceptored Clinical Experience

In the final semester of nursing programs, senior students participated in a special

type of traditional nursing clinical experience known as the one-on-one nursing

preceptored clinical experience. For the preceptored clinical experience, faculty paired

each student nurse with a professional nurse in a health care practice environment,

usually in a hospital setting. Schaubhut (2014) noted the experienced nurses provided

training in a clinical environment to "prepare new nurses to face the nursing care

challenges of the future" (p. 5). The preceptor supervised a single student, while working

as a nurse, performing nursing duties, and taking on the responsibility of assessing the

student's performance (Haggman-Laitila, Elina, Riitta, Kirsi, & Leena, 2007).

The one-on-one nursing preceptored clinical experience focused on students

actively participating "in the role of beginning staff nurse under the guidance of agency

staff and the instructor" (Dorsey, Chanasue, Clark, 2016, para. 1). The goals of the

preceptored clinical experience included enhancing nursing leadership skills of

organization, communication, time management, interdisciplinary patient care,

prioritization, delegation, critical thinking and decision making, cultural competence,

ethical and value centered care, safety, and teamwork (Gore, Johnson, & Wang, 2015;

Dorsey et al., 2016) to manage the care of a group of patients.

Under the guidance of the nurse preceptor, students practiced clinical activities

and skills, including medication administration, treatments, assessment, and

documentation (Gore et al., 2015). The nursing preceptored clinical experience required

coordination among healthcare organizations, schools of nursing, nurse educators, nurse

managers, and the nurse preceptor assigned to an individual student (Haggman-Laitila et

al., 2007). Those involved in promoting clinical practice to facilitate students to meet the

goals of the preceptored clinical experience comprehended the complexity and challenges

of the task. Nursing schools and healthcare organizations valued the nursing preceptored

clinical model, as it provided nursing students clinical time with patients in real-life

situations and a one-on-one mentorship experience with a professional nurse

(Madhavanpraphakaran et al., 2014).

In a study on the role of the nurse preceptor, McClure and Black (2013) reviewed

research articles from 2000 – 2013 and looked at the perspective of nursing students,

nursing faculty and preceptors and found "nursing students identify preceptors as key to

their learning in the clinical setting" (p. 335). McClure and Black (2013), pointed out

students rated a good relationship with the preceptor as more important than learning new

experiences or techniques, and a negative experience with the preceptor led to

dissatisfaction with the overall experience. Nursing faculty relied on the preceptors for

their expertise in the clinical environment and nurse preceptors relied on faculty support

to assess student learning in relation to course objectives (McClure & Black, 2013).

Concerns with Nursing Preceptored Clinical Experiences. The traditional

nursing preceptored clinical experience, although valued as an important and critical part

of nursing education, needed change, as suggested by numerous research studies. Cant et

al. (2013) noted the ability of the preceptors to objectively assess the students' "skills, knowledge, attitudes, values and abilities" (p. 163) to perform safe, quality, and competent patient care was often questioned, due to the variety of ways in which this was done, often without use of valid or reliable instruments. Wu et al. (2016) looked at experienced nurses who underwent a two-day preceptorship training in the hospital facility where they worked and explored the preceptors' perspectives about assessing students in the final semester clinical experience. Wu et al. (2016) reported the results strongly indicated preceptors agreed a valid and reliable assessment tool was needed to guide and clarify assessment and provide feedback to students and faculty. The researchers concluded preceptors had positive comments, enjoyed helping students learn, and felt highly capable as clinicians, but some expressed discomfort with the responsibility of passing or failing students in a nursing clinical and suggested stronger connections needed with the university (Wu, Enskar, Heng, Pua, & Wang, 2016).

Nurse educators trusted nurse preceptors as experienced clinicians, but as Witt et al. (2013) pointed out, "being a great clinician does not necessarily translate into being a great preceptor" (p. 172). Another concern for preceptors, according to Earle-Foley et al. (2012), was the added workload and stress to an already complex working environment, which created concerns about safe practice, especially when "precepting an unsafe student" (p. 27). According to Hill and Melender (2015), one action research project revealed similar findings, noting preceptors reported added stress along with feelings of inadequacy caring for patients, while precepting a student. Preceptors called for more communication with educators and requested assessment tools to provide feedback on nursing students (Hill & Melender, 2015). On a more positive note, Hill and Melender

(2015) reported students enjoyed caring for patients under the guidance of an experience

nurse and felt welcomed to the units, while preceptors felt inspired and pressed to stay up

to date with complex practice guidelines.

Standiford and Covington (2017) presented information in an INACSL webinar

and indicated healthcare organization administrators did not trust new graduate nurses to

provide safe care for patients (personal communication, February 20, 2017). In a

descriptive, longitudinal study of senior-level nursing students, nurse researchers from

Texas State University tracked clinical judgement of senior nursing students using an

evidence-based survey tool and found students scoring in the 50th percentile or lower in

clinical judgment were at risk for providing unsafe patient care as a new graduate nurse

(Standiford & Covington, personal communication, February 20, 2017). A follow up

study planned to track junior year students to program completion to assess clinical

judgment (Standiford & Covington, personal communication, February 20, 2017).

In an earlier study Fink, Krugman, Casey, and Goode (2008) explored the "role

conflict and stress" (p. 341) of new graduate nurse residents using survey data from

nurses at 12 academic hospital sites, taken over three timed periods during the first year

of transition to practice. The researchers used a convenience sample of 1,058 graduate

nurses, gathered data from 434 completed surveys using qualitative data analysis and

found new nurses experienced "fear, lack of confidence, and concerns of harming

patients continuing through the first year of practice" (Fink, Krugman, Casey & Goode,

2008, p. 348).

The issues with new graduate nurses is nothing new. Even older studies, such as

Kramer (1974), discussed a noticeable gap in the ability of new graduate nurses to

displaying confidence, to display skills proficiency, or to display the ability to provide

safe, quality, competent patient care. Due to the concerns with traditional nursing

preceptored clinical, educators sought methods of instruction to better prepare nursing

students for transition to practice. One method of instruction, simulation, used in nursing

education for years, gained new popularity among educators, due to advancements in

technology. Many schools of nursing incorporated simulation clinical education to help

bridge the gap between nursing theory and nursing practice (Fey & Jenkins, 2015)

Simulation in Nursing Education

Pilots, healthcare professionals, firefighters, the military, NASA, and others used

simulation for decades to provide training in a safe environment (O'Connell et al., 2014).

The first flight simulator from the 1920s featured a small wooden plane driven by an

electric pump (Abersold, 2016). In Roman times commanders simulated military war

games using colored stones and miniature soldiers; early educators used classrooms to

conduct case study simulations with debriefings and table top simulations to build

projects, lawyers participated in mock trial simulations, sometimes for days, to simulate

real-life trials, and in nursing the first mannequin used for training was a life-sized doll

built by a doll maker in 1911 (Abersold, 2016). During the 1950s analog computers

contributed to making simulation more complex and real, then in the 1960s and 1970s

NASA held simulation workshops using visual and hydraulic motion systems for training

(Rosen, 2008).

Laerdal, a manufacturer of medical equipment, contributed significantly to

medical simulation in 1960 with the introduction of the plastic mannequin product,

Resusci Annie, designed with a spring in her chest for healthcare professionals to practice

cardiopulmonary resuscitation (CPR) (Rosen, 2008). Then, it was not until the 1990s

when advancements in computer systems, imaging systems, and technology allowed

physicians to become competent in performing surgical procedures using simulation in

medical training (Rosen, 2008). Technology helped advance simulation products known

as human patient simulators (HPS), described by Ober (2009) as "life-like, anatomically

correct, computer driven mannequins with physiologic responses that mimic real

patients" (p. vi). Laederal (2013), introduced SimMan 3G, a completely wireless human

patient simulator for use with wireless monitors and advanced audio-video systems,

including software for educators to create real life scenarios for learners. Companies that

made simulation equipment, also constructed simulation labs with technology that

resembled high tech hospital rooms and hospital units, to better prepare students for

transition to practice.

The National League of Nursing Simulation Innovation Resource Center (NLN-

SIRC) (n.d.) described simulation learning experiences as,

> an attempt to mimic essential aspects of a clinical situation with the goal of
>
> understanding and managing the situation better when it occurs in actual clinical
>
> practice. . . . a technique that uses a situation or environment created to allow
>
> persons to experience a representation of a real event for the purpose of practice,
>
> learning, evaluation, testing, or to gain understanding of systems or human
>
> actions. (para. 1)

Initially nursing programs included simulation in nursing curriculum for basic training of

skills competencies. Students engaged in simulation scenarios to practice patient care in

a safe, non-judgmental clinical learning environment. A study conducted by Shinnick,

Woo, Horwich, and Steadman (2011) demonstrated simulation led to knowledge gains with further increases in knowledge gains after debriefing sessions, an essential component of simulation experiences. Debriefing sessions took place to give students and facilitators time to reflect on the learning coming out of the simulation experience. Dreifuerst (2015) pointed out, debriefing is key to clinical teaching and learning, and suggested using a Socratic questioning method during debriefing to "foster student's reflective thinking and learning" (p. 268).

The INACSL Standards Committee (2016a) defined debriefing as "an activity that follows a simulation experience led by a facilitator wherein feedback is provided on the simulation participants' performance while positive aspects of the completed simulation are discussed, and reflective thinking encouraged" (p. S41). A study by Fey, Scrandis, Daniels, and Haut (2014) concluded students learned during debriefing and saw it as a positive aspect of simulation. Shinnick et al. (2011) concluded most learning occurred in simulation during the debriefing session, where students reflect on the actions and decisions made during simulation.

Simulation increased in use in nursing education, due to limited clinical site availability, limited number of nurse preceptors and shortage of faculty. Other factors, such as limited access to patient electronic medical records, a limit to the number of students allowed on a hospital unit, and restrictions to patient care for safety purposes, often limited students to observation experiences in place of hands-on patient care experiences (Hayden et al., 2014). Curl, Smith, Chisholm, McGee, and Das (2016) reported nursing programs "increased enrollment and extended clinical resources by using High Fidelity Simulators (HFS) for half of students' learning experiences in four

clinical specialty areas: obstetrics, pediatrics, mental health, and critical care" (p. 77).

These four clinical specialty areas caused deferred enrollment due to limited number of

clinical sites, a problem solved through incorporating specialty simulation learning

experiences into the curriculum (Curl, Smith, Chisholm, McGee, & Das, 2016)

Recent rise of simulation in nursing education. Prior to 2009, nurse educators

were just beginning to learn how to create simulation scenarios and how to infuse

simulation in nursing curriculum (Jeffries, 2015). Simulation clinical hours began to

replace traditional clinical hours to overcome obstacles, such as lack of clinical site

availability and lack of preceptor availability. Jeffries (2015) noted "the evolution of

clinical simulation in just over half a decade has been phenomenal, not only in nursing,

but in all our health care professions" (para. 2). Advances in technology led to the

development of simulation learning centers, HFS, and web based virtual learning

environments, which allowed students to have as close to a real-life experience as

possible.

In 2009, at the INACSL conference, members discussed using simulation for

"high-stakes testing" (p. e19), defined as "test with the potential to fail students at the end

of a course or program on the basis of a simulation experience" (as cited in Kardong-

Edgren, Hanberg, Keenan, Ackerman, & Chambers, 2011, p. e19). INACSL members

discussed high stakes simulation again at the 2011 conference where important points

evolved from the discussion related to the nursing certified licensure exam (NCLEX).

INACSL members agreed the nursing licensure exam needed to be updated to include

more than just multiple-choice questions (Kardong-Edgren et al., 2011).

The INACSL members discussed the benefits of simulation to:

- decrease medical errors and increase patient safety

- incorporate inter-professional communication and collaboration

- practice experiential and applied learning

- practice patient care management to test critical thinking to make clinical judgments, and

- use simulation as an andragogical model for patient care management. (Kardong-Edgren et al., 2011, p. e22)

Until recently, educators and students viewed simulation learning environments under the premise that simulation labs provided a "psychologically safe environment" (Willhaus, et al, 2014, p. 178). The technology available to create complex simulation scenarios generated interest in using simulation for practice exercises in early semesters of nursing programs and then evolving to high stakes testing in final semesters. The change from a quiet, safe learning environment to a high-stakes testing environment caused concern among some educators, who viewed simulation as a safe place for students to make mistakes without judgment, with the sole intent of simulation focused on learning.

By the time of the 2014 INACSL conference, survey data collected from 609 nurse educators across the nation in pre-licensure nursing programs revealed 43% of respondents used simulation for high stakes evaluation (Rutherford-Hemming, Karting-Edgren, Gore, Ravert, and Rizzolo, 2014, p. 606). Once simulation was used for testing and assessment, new concerns arose about the reliability and validity of simulation scenarios (Rutherford-Hemming et al., 2014). Other concerns included the expertise of

the nurse educator as a simulationist, and the training of nurse educators as evaluators when simulation was used for high-stakes testing (Rutherford-Hemming et al., 2014).

      Simulation standards and simulation framework. As nursing simulation clinical experiences grew in use and became accepted as an alternative for clinical hours, it was important for nursing to develop practice guidelines for simulation and to conduct studies that supported the use of simulation in nursing education. Jeffries (2005), a well-known researcher in nursing simulation education, developed the NLN/Jeffries framework to provide a guide for designing and implementing simulations in an "organized and systematic fashion" (p. 97). In 2011 the NLN/Jeffries framework underwent revisions and updates after a literature review was conducted on the learning outcomes constructs (as cited in O'Donnell, Deckaser, Howard, Levett-Jones, & Miller, 2014). The team working on the revisions received input from INACSL in a collaborate effort to update the framework constructs (O'Donnell et al., 2014).

      INACSL developed the INACSL Standards of Best Practice in Simulation[SM] in 2013 and described the standards as a living document to provide evidence-based guidelines for simulation and simulation training (INACSL Standards Committee, 2016b). The INACSL website provided a free resource for the Standards of Best Practice in Simulation, research tools and evaluation instruments along with contact information to seek permission for use from their authors. The National League for Nursing (NLN), a strong supporter of nursing education, provided simulation education, simulation leadership programs, and access to journal articles in the NLN Simulation Innovation Resource Center (NLN/SIRC). The NLN/SIRC and INACSL collaborated to provide resources for nursing simulation education and research.

Simulation a valid teaching methodology. Curl et al. (2016) conducted a quasi-experimental study to investigate replacing 50% of traditional clinical experiences with simulation learning experiences in specialty areas in nursing and concluded simulation can replace 50% of traditional clinical experiences in associate degree nursing programs. The study findings also revealed combining simulation learning experiences with traditional clinical experiences led to students scoring higher on "exit exams" (p. 72) than students who participated in only traditional clinical experiences (Curl et al., 2016).

In response to request from schools of nursing to use simulation for clinical hours, the National Council of State Boards of Nursing (NCSBN) looked to the literature for evidence to justify using simulation in place of traditional clinical hours and found there was not enough evidence in the literature to make a policy statement (Hayden et al., 2014). Therefore, in response to the needs of nursing programs, in 2014 the NCSBN conducted a nation-wide, longitudinal, randomized, controlled study replacing traditional clinical hours with simulation clinical hours in pre-licensure nursing education (Hayden et al., 2014). The "award-winning" (NCSBN, n.d. para.1) research study published in 2014 led to increased use of simulation in programs of nursing. The study provided "substantial evidence" (Hayden et al., 2014, p. S3) for substituting "high-quality simulation experiences" (p. S3) for up to 50% of traditional clinical hours, to produce "comparable end-of -program educational outcomes" (Hayden et al., 2014, p. S3). The NLN endorsed the NCSBN study stating simulation:

is an evidence-based strategy to facilitate high-quality experiences that foster thinking and clinical reasoning skills for students and now more than ever-with changes in health care access and technological advances in healthcare delivery,

the increasing complexity of patient care, and the growing lack of clinical

placements for students, it is imperative to embed quality simulation experiences

throughout the nursing program of learning. (National League of Nursing, 2015,

para. 7)

Nursing Simulation Clinical Learning Experiences versus Nursing Preceptored

Clinical Learning Experiences

The American Nurses Association (ANA) and the Association of Colleges of

Nursing (AACN) recommended nursing programs weave content throughout the nursing

curriculum to develop leadership skills in undergraduate nursing students (as cited in

Gore et al., 2015). Nurse Managers who placed newly graduated nurses in charge, nurse

roles in their first year of practice, found new graduates unprepared for the role of a

leader (Gore et al., 2015). NSCLEs and NPCLEs provided two types of practicum

learning experiences for nursing students to achieve management skills in nursing to meet

the principles of managing the nursing care of a group of patients in the role of beginning

staff nurse. The goal of both experiences was to prepare the student nurse with the skills

to provide safe, high quality patient care in preparation for transition to professional

nursing practice. Professional nursing regards safety as the highest priority when

providing patient care.

The NPCLE provided students an opportunity to learn in a real-life setting;

however, nursing students were limited to the care they could provide to patients, due to

hospital safety protocols. The simulation clinical learning experience allowed educators

to create simulated real-life scenarios of complicated patients using human patient

simulators. Educators prepared simulations with focused learning objectives giving

students opportunities to develop critical thinking skills to make clinical decisions without risking harm to a live patient.

The number of medical mistakes leading to prolonged hospital stays posed another important issue that led to an increase in the use of simulation training in nursing clinical education. In 2010, Levison, then Inspector General of the USDHHS, led a study on medical mistakes (Levinson, 2010). The study showed among Medicare patients, "One in seven patients (13.5%) experienced at least one serious instance of harm from medical care that prolonged their hospital stay, caused permanent harm, required life-sustaining intervention, or contributed to their deaths" (Levinson, 2010, para. 4). The USDHHS study reported medication errors, such as giving the wrong dose of medication, giving the wrong drug, and missing drug side effects, contributed to more than half of the patient fatalities (Levinson, 2010, para. 6). The results of the USDHHS and IOM studies showed the need for all stakeholders (pharmaceutical companies, healthcare organizations, pharmacist, physicians, and nurses) to find ways to improve the safety and quality of patient care. The results of the IOM and USDHHS studies impacted nursing, because administering medications and providing safe, high-quality patient care are primary nursing responsibilities.

Harris, Pittiglio, Newton, and Moore (2014) cited numerous studies that agreed, although nursing students underwent training on medication administration, students failed to demonstrate proficiency in medication administration, as evidenced by unacceptable scores on medication administration examinations. In a quasi-experimental pilot study, researchers Harris et al. (2014) examined using simulation learning experiences to improve nursing students' abilities to perform dosage calculations and

abilities to administer medications. In the pilot study, 79 students in the control group

attended a didactic session to review medication administration, and 79 students in the

intervention group participated in a simulation review session where study results

revealed, "The intervention group scored significantly higher (M = 95 percent, SD = 6.8)

than the control group (M=90 percent, SD = 12.9) at the p = .004 level" suggesting the

"simulation facilitated student success" (Harris et al., 2014, p. 26). A study by Sears,

Goldsworthy, and Goodman (2010) stated simulation learning experiences improved

safety in medication administration.

Cooper et al. (2015) felt traditional clinical experiences allowed students time to

interact with real-life patients and members of the healthcare team, and time to practice

psychomotor skills. However, although students gained real-life experiences, the

opportunities for exposure to complex patients could not be planned in the traditional

clinical setting (Cooper, Prion, & Pauly-O'Neill, 2015). Simulation on the other hand,

provided educators the opportunity to create complex patient scenarios "to provide

prescriptive learning opportunities targeted specifically to the level of the learner"

(Cooper et al., 2015, p. 31).

Blodgett, Blodgett, and Bleza (2016) suggested multiple patient simulations

provided students an opportunity to care for more than one patient at a time and gave

nursing educators an opportunity to closely observe student performance. Multi- patient

simulations, according to Gore, Johnson, and Wang (2015), "are essential for senior-level

nursing to adequately practice leadership concepts, such as delegation, critical thinking,

and prioritization" (p. 56). The nursing preceptored clinical provided an opportunity for

students to work with a preceptor caring for a team of patients, and take part in patient

care; however, the student nurses made clinical decisions under the guidance of a

preceptor (Gore et al., 2015; Madhavanpraphakaran et al., 2014). The constraints of the

traditional clinical experiences hindered opportunities for students to develop necessary

leadership skills (Chunta & Edwards, 2013).

In the preceptored clinical experience, as suggested earlier, preceptors are caring

for a team of patients, in a high-stress environment, while mentoring a student nurse

(Earle-Foley, Myrick, Luhanga, & Young. 2012), resulting in students performing patient

care, at times without supervision or close observation. Simulation opened the door for

educators to develop simulation learning experiences to include specific events for

students to learn to recognize signs and symptoms that required "an appropriate and

timely nursing response" (Cooper et al., 2015, p. 32). It is crucial student nurses learned

to recognize subtle changes when assessing a patient to deter possible critical events that

could lead to poor patient outcomes. Faculty can ensure students are exposed to patient

situations that provide students the opportunity to develop the skills to recognize subtle,

yet significant changes in patients, through simulated real-life situations (Cooper et al.,

2015).

Studies in opposition. While many studies supported simulation as a valid

teaching methodology and as a replacement for clinical hours, Larue et al. (2015)

reported an opposing point of view, which suggested simulation "does not seem to have a

significant impact on clinical competency, critical thinking, knowledge acquisition, and

self-confidence" (p. 132). In fact, after Larue et al. (2015) reviewed 33 articles they

acknowledged the advantages of simulation, but also questioned the substitution of

simulation for clinical and listed some disadvantages, such as:

- possible stressful situation for students

- exigencies of preparation and active listening and involvement can lead to
  cognitive burnout in students

- risk of interfering with the development of professional socialization and
  communication resources

- risk of "simulated" learning

- risk of blurring reality with simulation

- risk of reducing professional development and standards of practice, and

- heavy financial burden of material and human resources invested in
  simulation. (p. 134)

According to Lancaster, Anderson, Jambunathan, Elertson, and Schmitt (2016), concern

existed about nursing faculty across the country implementing simulation into curricula

in a variety of ways, using various strategies. Lancaster et al. (2016) suggested nursing

schools adopt a process to meet accreditation requirements, and to "institute competency-

based simulation training for faculty" (p. 407), and finally to implement evaluations for

simulation within program evaluations.

Summary

Since the early 1970s adult educators concluded adults learn differently than

children. Several researchers (Bradley, Rachal, & Harper, 2013; Cercone, 2008;

Henschke, 1998; Isenberg, 2007; Knowles, 1970; Tough, 1979) studied adult learners and

noted the intuitive self-directedness of adult learners. Knowles (1970) popularized the

adult learning theory – andragogy, in support of adult learners as self-directed learners.

Nurse researchers (Idczak, 2007; Isenberg, 2007; Milligan, 1997; Palos, 2014; and

Porterfield, 2004) supported using the adult learning theory – andragogy, as a theoretical framework for research studies and suggested applying andragogical principles for use in nursing education.

In a review of the literature on nursing clinical learning experiences, the researcher found roadblocks in nursing clinical education included the lack of available clinical sites and the lack of available nurse preceptors to meet the needs of nursing programs nationwide. These roadblocks contributed to the complicated issue of the nursing shortage in the United States. The literature revealed the traditional one-on-one NPCLE, in place for over 50 years (IOM, 2010), needed updates to prepare today's nursing students for transition to nursing clinical practice. The literature pointed to the gap in transition from student nurse to professional nurse and noted patient safety was the highest concern among hospital managers regarding newly graduated nurses in practice settings.

Jeffries (2015) discussed an explosion in the use of simulation in nursing education since 2009, due to the need for an alternative to the traditional clinical, an advancement in technology, and the opportunity to structure simulated real-life patient scenarios to meet learning outcomes. The NCSBN (2014) landmark study validated using simulation in place of up to 50% of traditional clinical hours, which provided nursing schools a new policy for incorporating simulation to replace traditional clinical hours. Throughout the literature, many studies discussed the problems associated with the traditional preceptored clinical learning experience, and many studies reported the advantages of the simulation clinical learning experience. However, the researcher found no studies specifically comparing a one-on-one preceptored clinical learning experience

to a one-on-one simulation learning experience of senior nursing students in an associate

degree nursing program. This study provides that research.

In Chapter Three, the researcher describes the mixed-methods design, the research

instrument, and the participants in this research study utilized to explore the overarching

research question; how, if at all, is it possible to achieve management skills in nursing to

meet the principles of managing the nursing care of a group of patients in the role of

beginning staff nurse in a nursing management practicum?

Chapter Three: Methodology

Using a mixed-methods design the researcher compared the learning experiences of senior nursing students in a NPCLE to senior nursing students in a NSCLE in a final semester clinical practicum, in a Midwest community college. The researcher examined how the process of andragogy was integrated into the students' learning experiences. The researcher sought a deeper understanding of the students' perspectives of their own learning during their clinical practicum experiences. The methodology chapter is divided into six sections: (1) the null hypotheses and research questions, (2) study participants, (3) research instrument, (4) study design, (5) data collection, and (6) methodology of data analysis.

This study sought to determine, to what extent a NSCLE was equal to, worse than, or better than a NPCLE to meet the student learning goals of the nursing clinical practicum. The learning goal of the clinical practicum focused on students achieving the management skills in nursing to meet the principles of managing the nursing care of a group of patients in the role of a beginning staff nurse. The study compared two types of clinical practicum learning experiences of senior nursing students on two separate campuses of the same community college, referred to in this study as Campus A and Campus B. Campus A students participated in a NPCLE, and Campus B students participated in a NSCLE.

The researcher used three methods to collect data for the comparison of the students' experiences. The first method included use of secondary data from students' pre- and post-test scores from standardized Assessment Technology Institute (ATI) nursing exams. The second method included use of students' responses to a particular

version of the research instrument, the Modified Instructional Perspectives Inventory

(MIPI). The researcher adapted the instrument for use for two particular audiences, one

version for the NPCLE students, the MIPI-NSCLE, and the other version for the NSCLE

students, the MIPI-NSCLE. The third method included use of student responses to

interview questions, collected during in-depth individual interviews.

The researcher developed an overarching research question, three hypotheses, and

three research sub-questions to conduct research comparing the two clinical practicum

learning experiences.

Null Hypotheses and Research Questions

Overarching research question. How, if at all, is it possible to achieve

management skills in nursing to meet the principles of managing the nursing care of a

group of patients in the role of beginning staff nurse in a nursing management practicum?

Null hypothesis 1. There is no difference between the MIPI results of students'

Total Scores, Factor 3-Planning and Delivery, Factor 4-Accomodating Uniqueness of

Myself as a Learner, Factor 6-Experience-Based Learning/Learner Centered Learning

Process, and Factor 7- Preceptor (Centered Learning Process)/Simulation (Centered

Learning Process) in the preceptored clinical learning experience compared to the

students in the simulation clinical learning experience.

Null hypothesis 2. There is no difference between the MIPI results of Factor 1-

Learner Empathy with Self, Factor 2- Leaner Trust of Self, and Factor 5- Learner

Insensitivity toward Self, comparing the preceptored clinical learning group to the

simulation clinical learning group.

Null hypothesis 3. There is no difference between students' scores on a pre- and post- ATI nursing management standardized test when comparing students in preceptored clinical learning experience group to students in simulation clinical learning experience group.

Research sub-question 1A. What are the issues with nursing simulation learning experiences in achieving management skills to meet the principles of managing the nursing care of a group of patients in the role of beginning staff nurse?

Research sub-question 1B. What are the issues with nursing preceptored clinical learning experiences in achieving management skills to meet the principles of managing the nursing care of a group of patients in the role of beginning staff nurse?

Research sub-question 2. In what way, if any, is the process of the Theory of Adult Learning – Andragogy, integrated into nursing students' educational experience in a nursing practicum?

Research sub-question 3. How, if at all, does the design of the practicum meet the goal of helping the nurse develop the following management skills; therapeutic communication, interdisciplinary patient care, clinical decision making, culturally competent care, ethical and values centered care, delegation, prioritization, safety, conflict resolution, and time management?

Nursing school selection. In undergraduate schools of nursing, faculty matched student nurses with professional nurse preceptors for a one-on-one NPCLE, as a common practice for the final nursing clinical practicum. The preceptor model used experienced nurses to prepare student nurses for transition to professional nursing practice (Schaubhut, 2014). Nursing valued the preceptored clinical model as a means for

students to gain real-life experience providing nursing care to patients under the guidance of an experienced mentor (Madhavanpraphakaran et al., 2014). In years recent to this writing, nursing schools encountered challenges, such as competition for clinical sites, and lack of preceptor availability (Hayden et al., 2014), lack of valid and reliable assessment instruments (Wu et al., 2016), and safety concerns due to added stress for preceptors in an already stressful job (Hill & Melender, 2015).

In nursing education, faculty used plastic mannequins for simulation-type scenarios as far back as 1960 (Rosen, 2008). Over time, simulation developed to where it is at the time of this writing, from plastic mannequins to Wi-Fi capable, high-fidelity human patient simulators that mimic real-life patients. Jeffries (2015) reflected on the phenomenal development of simulation in nursing education over the past few years, from 2009 through 2015, and its place in nursing education today. Simulation technology allowed nursing education to create scenarios to engage students in problem solving and critical thinking "essential for nursing education" (IOM, 2010, p. x). In 2014 the National Council of State Boards of Nursing (NCSBN) released a report from their award-winning, nationwide study that determined simulation a valid teaching methodology to be used in place of, up to, 50% of clinical hours in nursing programs (Hayden et al., 2014).

Numerous studies reported on nursing errors made by new graduate nurses despite the training students underwent in nursing programs and the rigorous testing students underwent to pass state board exams (IOM, 2010; Harris et al., 2014). Simulation provided a way to create structured scenarios, using guidelines and assessment instruments to allow students to practice in a safe environment to improve

patient outcomes. The ANA and the AACN supported use of simulation in nursing curriculum (Gore et al., 2015). The NLN (2015) endorsed the NSCBN study and supported the use of simulation as a valid teaching methodology.

One Midwest community college conducted their nursing program on two separate campuses, referred to in this study as Campus A and Campus B. Campus B faced issues with lack of clinical site availability, and lack of qualified preceptor availability for several years, leading faculty on Campus B to replace the NPCLE with the NSCLE. The change in the final semester clinical practicum on Campus B provided a unique opportunity to conduct a study to compare the two types of clinical practicum learning experiences. In reviewing the literature, the researcher found many studies comparing nursing traditional clinical learning experiences and NSCLEs, but found no studies exclusively comparing one-on-one NPCLEs and one-on-one NSCLEs of final semester nursing students, in a community college nursing program. This research study provided that comparison and provided new information comparing a traditional clinical learning experience to a simulation clinical learning experience.

Study Participants

The participants in this study consisted of two groups of senior nursing students in a final semester course of a nursing program on two campus sites of a Midwest community college. Student participants attended a full-time day nursing program. The research period took place during the end of the Fall 2017 semester from October through December. The senior nursing students enrolled in the final course in the nursing program, NUR 253-Management Skills in Nursing. The three-credit hour course

included theory and practicum, with the clinical practicum taking place upon completion

of the theory portion, during the final five weeks of the course. Both student groups

entered the nursing program under the same entrance guidelines and followed the same

curriculum, including testing, and standardized exams, with the only differences being

the final semester clinical practicum learning experience, and the faculty teaching the

Management Skills in Nursing courses.

Campus A students participated in NPCLE and Campus B students participated in

the NSCLE. Campus A admitted 30 senior students to the final semester of the nursing

program and Campus B admitted 39 senior students for a total of 69 students. Students

who failed the theory portion, failed the course and did not advance to the clinical

practicum. Seven of the 30 Campus A students failed the theory portion of the course

leaving a total of 23 students in the NPCLE group. Five of the 39 Campus B students

failed the theory portion of the course, leaving a total of 34 students in NSCLE group.

Due to student failures, the total number of participants dropped from 69 to 57 students.

The researcher did not anticipate the number of student failures, which unexpectedly

created smaller groups for comparison.

MIPI-NPLCE and MIPI-NSCLE participants. The researcher scheduled a

date with the Program Director on Campus A to meet on Campus A when all nursing

students were present at the completion of the NPCLE. The researcher provided the 23

NPCLE students with a paper copy of the MIPI-NPCLE, with instructions to complete

the MIPI survey anonymously. The researcher remained in the classroom to answer

questions and to collect the completed MIPIs. All students turned in the MIPI-NPCLE;

however, during the data analysis, the researcher found three MIPI copies were left blank.

The researcher scheduled a date with a faculty member on Campus B to meet on Campus B when all students were present at the completion of the nursing simulation clinical learning experience. The researcher provided each student a paper copy of the MIPI-NSCLE survey with instructions to complete the questionnaire anonymously. Although all students turned in the MIPI-NSCLE, during data analysis, the researcher found three MIPI copies left blank. The final number of participants to complete the MIPIs equaled 51 students, 20 students from Campus A and 31 students from Campus B.

ATI test participants. At completion of the theory portion of NUR 253 and prior to the start of the clinical practicum experience, students met on their respective campuses to take the ATI pre-test. A total of 57 students, 23 from Campus A and 34 from Campus B, completed the ATI pre-test. Toward the end of the students' practicum experiences, an unexpected event occurred which surprised the researcher and some nursing faculty. The researcher learned the Program Director on Campus A deemed the ATI post-test was 'not' mandatory for all of the Campus A students. The Program Director on Campus A determined only students scoring below a certain percentage on the ATI pre-test or students who wanted to take the post-test, even if their original scores did not require it, would take the ATI post-test. The decision resulted in 13 of the 23 students on Campus A taking the ATI post-test. Faculty on Campus B did not give students on Campus B the option of 'not' taking the ATI post-test, which resulted in all 34 Campus B students taking the ATI post-test.

A nursing faculty member from Campus B reported to the researcher, a meeting occurred with the community college Dean of Health Sciences at which a faculty member requested the Dean to revert the Program Director's decision and require the post-test

mandatory for students on Campus A. The faculty explained to the college Dean, the

interest in the comparison of the practicum experiences as the opportunity that may not

present itself again. The president determined, since students had already been given the

option, and it was nearing the end of the semester, the Program Director's decision about

the post-test for Campus A remained intact.

This researcher asked the Program Director for permission to speak to the

students on Campus A to personally request students to consider taking the post-test, to

which the Program Director agreed. The researcher met with Campus A students and

requested them to take the post-test on behalf of the research project, noting the

opportunity to answer more questions in preparation for state board exams, and

reminding students of their signed consent to participate in the research project. The

researcher reminded students they had already paid for the post-test and stressed the

advantages of taking the ATI post-test. Some students notified the researcher they had

scheduled themselves to work and so were unable to take the post-test, some stated they

were satisfied with their grade on the pre-test and not interested in the follow up test.

Others stated it was the end of the semester and they were preparing for graduation and

had little interest in taking a final test that was not mandatory. All students were pleasant

with their refusals to retake the test.

The researcher found, confusion about the ATI post-test requirements seemed to

stem from the community college's decision to change testing companies from

administering Health Educational Systems, Inc. (HESI) test to administering ATI test.

The community college decided to use the ATI standardized exam for the first time

during the Fall 2017 semester, when this research study took place. Previously, faculty

administered one standardized HESI exam upon completion of the final semester

management course. One faculty stated a misunderstanding occurred about ATI pre-and

post-test guidelines, even though faculty attended a meeting about the guidelines, in

which one faculty discussed comparing the two types of clinical practicum experiences

on Campus A and Campus B and emphasized the opportunity to collect rich data for the

community college. Another faculty stated the ATI representatives could have given the

faculty more information about the testing, remediation, and data usage from the test.

Student interview participants. The researcher obtained informed consent for

individual interviews from 10 students on Campus A, the NPCLE group, and seven

students on Campus B, the NSCLE group. The researcher randomly selected four

students from each group to conduct the individual interviews, for a total of eight

individual interviews. The researcher phoned students to set interview dates. The

researcher met with students one-on-one upon completion of their clinical practicum

experiences to gain insights into each student's personal experience.

Table 1 provides data summarizing student participation in this research study.

Table 1

Campus A and Campus B Study Participants

Campus	ATI pre-test	ATI post-test	MIPI	Individual Interview
Campus A	23 (100%)	13 (57%)	20 (87%)	4/4 (100%)
Campus B	34 (100%)	34 (100%)	31 (91%)	4/4 (100%)

Research Instrument - Modified Instructional Perspectives Inventory

The MIPI provided a research instrument to gain insight into students'

perspectives of their own learning experiences. A brief introduction of the original

instrument, the Instructional Perspectives Inventory (IPI), the modification of the IPI to

the MIPI, and the adaption of the MIPI to the MIPI-NPCLE and MIPI-NSCLE for this

study provided explanation for use of the instrument.

Instructional Perspectives Inventory (IPI). Henschke (2009) developed the

Instructional Perspectives Inventory in 1989, for use "as an andragogical assessment

instrument" (para. 134). Henschke (1989) conducted a study of the IPI with the stated

purpose to "take some major steps toward developing an assessment instrument

indicating the beliefs, feelings, and behaviors adult educators needed to possess" (p. 81).

According to Henschke (1989), from an andragogical perspective, "The instrument

emphasizes the teacher's personal and contextual identification, actions and competencies

in the classroom, and the philosophical beliefs for guiding practice" (p. 81).

Two rounds of study produced the original instrument the IPI. In the first study,

Henschke (1989) noted 600 adult educators answered 45 questions about beliefs,

feelings, and behaviors adult educators needed to possess to practice in the field of adult

education. Participants responded using a four-point Likert scale: A) Never, B) Rarely,

C) Sometimes, and D) Often. Then, Henschke (1989) conducted a factor analysis of the

first-round data and adjusted the IPI items. Next, 210 faculty took part in the second

round of the IPI study, and again Henschke (1989) conducted a factor analysis of the data

and made new adjustments to the instrument from which seven factors emerged; (1)

Teacher Empathy with Learners, (2) Teacher Trust of Learners, (3) Planning and

Delivery of Instruction, (4) Accommodating Learner Uniqueness, (5) Teacher

Insensitivity Toward Learners, (6) Experience Based Learning Techniques (Learner-

Centered Learning Processes), and (7) Teacher-Centered learning Processes.

At the completion of the study, Henschke (1989) determined the IPI "is in

useable form . . . and has some clear and beneficial factors" (p. 87). Rowbotham (2010)

stated, the validity and reliability of the IPI were "determined to be acceptable in the

original development of the instrument" (p. 5). Several researchers, including Thomas

(1995), Seward (1997), Dawson (1997), and Drinkard (2003) used the IPI assessment

instrument in their doctoral dissertations.

IPI modified to MIPI. Stanton (2005) made modifications to the IPI instrument,

and the modification resulted in the MIPI instrument. Stanton's (2005) modification

changed the Likert scale from four choices to five choices. The new Likert scale

included: A) Almost Never, B) Not Often, C) Sometimes, D) Usually, and E) Almost

Always. Stanton (2005) maintained the original 45 questions from the IPI and kept the

seven factors on the instrument intact from the IPI to the MIPI.

MIPI reliability and validity. Henschke and Kheang (2015) affirmed the MIPI's

validity and reliability and referenced three dissertations, which used "Chronbach's alpha

coefficient calculations" (p. 19) to validate the instrument. The three dissertation

research studies included, first, Stanton's (2005) research, second, Moehl's (2011)

research, and third, Vatcharasirisook's (2011) research. Stanton's (2005) study, *A

Construct Validity Assessment of the Instructional Perspectives Inventory (IPI),* validated

MIPI internal consistency for the first time. Moehl (2011) used Cronbach's alpha

coefficient and showed internal consistency reliability for the second validation of the

MIPI in a study of 426 college faculty across academic disciplines that explored

relationships between Myers-Briggs type and Instructional Perspectives.

Vatcharasirisook's (2011) research provided the third validation of the MIPI instrument,

based on responses of 524 completed surveys from employees in three industries;

banking, hospital, and hotel. According to Vatcharasirisook (2011), "The Cronbach's

alpha and a factor analysis were conducted" (p. 63). To date, researchers used the MIPI

in 26 doctoral dissertations (see Appendix D), including five nursing dissertations (J. A.

Henschke, personal communication, April 10, 2018). The MIPI, adapted for use in the

26 doctoral dissertations, revealed Factor Two-Trust, consistently found to be the

strongest of the seven factors measured by the assessment tool (J. A. Henschke, personal

communication, June 26, 2017). A strong factor indicated participant satisfaction.

For example, in Vatcharasirisook's (2011) research, "supervisor trust of

subordinates significantly predicted *Employee's job satisfaction*" (p. 74). The

Vatcharasirisook (2011) research revealed significant positive relationships between

"*Supervisor empathy with subordinates and Employee's job satisfaction*," ($p < 0.04$) (p.

74), "E*mployee's trust of subordinates and Employee's job satisfaction,"* ($p < 0.004$) (p.

74), and a significant negative path between "*Supervisor insensitivity toward*

subordinates and Employee's intention to remain in the company" ($p < 0.001$) (p. 75).

Overall, the results showed the 11 items under Trust and the five items under Empathy

scored high, while the seven items under Insensitivity scored low, revealing the inverse

relationship between Trust and Empathy, versus Insensitivity, and the significance of the

inverse relationship. The higher scores on Factor 1-Empathy, and Factor 2-Trust

revealed employee job satisfaction and related closely to employees' staying in the company where they worked (Vatcharasirisook, 2011).

In another example, Kheang (2018) adapted the MIPI for use in her study, *Guidelines for U.S. Teacher Leaders in Adult Classrooms to Enhance International Undergraduate Satisfaction.* Kheang (2018) found international students rated Factor 2-Teacher Trust of Learners at the top of the list for proposed guidelines for U.S. teacher-leaders in adult classrooms to "enhance international student satisfaction" (p. 125). In a final example, Klepper (2017) concluded the strongest correlation in her study about positive relationships between employees and their supervisors, focused on Factor 2-Trust. All three studies consistently showed trust as the strongest factor.

MIPI item alignment. This researcher's background in educational leadership with an emphasis in andragogy led to interest in using the MIPI for three reasons, first, the instrument was developed as an andragogical assessment tool by Henschke (1989), a known expert in study and application of andragogy, second, three major studies proved the validity and reliability of the MIPI, and third, for this researcher, the intrigue of the instrument was in relation to the complexity of its features found in the development, and its adaptability for use in a study whose researcher is interested in assessment of andragogical principles.

This researcher used the MIPI to compare learning experiences of nursing students in two types of nursing clinical practicum learning experiences. To accommodate the two clinical practicum learning experiences, the researcher adapted the MIPI into two versions, the MIPI-Nursing Preceptored Clinical Learning Experience (MIPI-NPCLE), and the MIPI-Nursing Simulation Clinical Learning Experience (MIPI-

NSCLE). The researcher first adapted the instructions on the original instrument, the IPI,

which addressed 'teachers of adults' and changed the instructions to address nursing

student learners. The adapted instructions for the NPCLE (see Appendix A) group read:

> Listed below are 45 statements reflecting beliefs, feelings, and behaviors
>
> beginning or seasoned learners may or may not possess at a given moment
>
> during the Nursing Preceptored Clinical Experience. Please indicate how
>
> frequently each statement <u>typically applies to you</u> as you actively engage
>
> yourself during the Nursing Preceptored Clinical Experience.

The adapted instructions for the NSCLE (see Appendix B) group read:

> Listed below are 45 statements reflecting beliefs, feelings, and behaviors
>
> beginning or seasoned learners may or may not possess at a given moment
>
> during the Nursing Simulation Clinical Experience. Please indicate how
>
> frequently each statement <u>typically applies to you</u> as you actively engage
>
> yourself during the Nursing Simulation Clinical Experience.

> The researcher utilized Stanton's (2005) five-point Likert scale. The five-

point Likert scale included: A) Almost Always, B) Not Often, C) Sometimes, D)

Usually, and E) Almost Never. Next, the researcher adapted each of the 45 questions

from the IPI intended for use with adult educators and edited the questions for use with

students participating in a NPCLE and students participating in a NSCLE. Table 2

shows the original 45 questions and the adapted version of the 45 questions for

this research study.

Table 2

Adaption of 45 Items of IPI to MIPI-NPCLE and MIPI-NSCLE

Item	45 Items Under the IPI	Item	45 Items Under the MIPI-NPCLE and MIPI-NSCLE
1	Use a variety of teaching techniques?	1	Feel the Clinical provided me with a variety of learning techniques?
2	Use buzz groups (learners grouped together to process information from lectures?	2	Use buzz groups (learners grouped together to process information from peers)?
3	Believe that your primary goal is to provide learners as much information as possible?	3	Believe that the primary goal of the information presented in the clinical is to provide me with as much information as possible?
4	Feel fully prepared to teach?	4	Feel responsible for my own learning and feel fully prepared to learn?
5	Have difficulty understanding learner points of view?	5	Have difficulty understanding my own point of view?
6	Expect and accept learner frustration as they grapple with problems?	6	Expect and accept my own frustration as I grapple with problems?
7	Purposefully communicate to learners that each is uniquely important?	7	Purposefully communicate to myself that I am uniquely important?
8	Express confidence learners will develop the skills they need?	8	Express confidence that I am developing the skills and knowledge I need?
9	Search for or create new teaching techniques?	9	Search for and create new learning techniques?
10	Teach through simulations of real-life settings?	10	Learn through real-life settings?
11	Teach exactly what and how you have planned?	11	*Learn exactly what and how the Preceptor has planned?

			** Learn exactly what and how the Simulation has been planned?
12	Notice and acknowledge the learners' positive changes in them?	12	Notice and acknowledge to myself positive changes in me?
13	Have difficulty getting your point across to learners?	13	Have difficulty getting the point across to myself?
14	Believe that learners vary in the way they acquire, process, and apply subject matter knowledge?	14	Believe that I vary in the way I acquire, process, and apply subject matter knowledge?
15	Really listen to what learners have to say?	15	Really listen to what I have to say?
16	Trust learners to know what my own goals, dreams and realities are like?	16	Trust myself to know what my own goals, dreams and realities are like?
17	Encourage learners to solicit assistance from other learners?	17	Encourage myself to solicit assistance from other learners?
18	Feel impatient with learner progress?	18	Feel impatient with my progress?
19	Balance your efforts between learner content acquisition and motivation?	19	Balance my efforts between my content acquisition and motivation?
20	Try to make your presentations clear enough to forestall all learner questions?	20	*Perceive the Preceptored Clinical Experience is clear enough to forestall all my questions? **Perceive the Simulation is clear enough to forestall all my questions?
21	Conduct group discussion?	21	Engage in group discussion?
22	Establish instruction objectives?	22	Incorporate the course objectives provided?

23	Use a variety of instructional media?	23	Use a variety of instructional media?
24	Participate in listening teams (learners grouped together to listen for a specific purpose) during lectures?	24	*Participate in listening teams (learners grouped together to listen for a specific purpose) during the Preceptored Clinical Experience?
			**Participate in listening teams (learners grouped together to listen for a specific purpose) during the Simulation?
25	Believe that your teaching skills are as refined as they can be?	25	Believe that my learning skills are as refined as they can be?
26	Express appreciation to learners who actively participating?	26	Express appreciation to myself for actively participating?
27	Experience frustration with learner apathy?	27	Experience frustration with my apathy?
28	Prize the learner's ability to learn what is needed?	28	Prize my ability to learn what is needed?
29	Feel learners need to be aware of and communicate their thoughts and feelings?	29	Feel I need to be aware of and communicate my thoughts and feelings?
30	Enable learners to evaluate their own progress in learning?	30	Ably evaluate my own progress in learning?
31	Hear what learners indicate their learning needs are?	31	Hear what I indicate my learning needs are?
32	Have difficulty with the amount of time learners need to grasp various concepts?	32	Have difficulty with the amount of time I need to grasp various concepts?
33	Promote positive self-esteem in learners?	33	Promote positive self-esteem in myself?

34	Require learners to follow the precise learning experiences you provided them?	34	*Require myself to follow the precise learning experiences provided in the Preceptored Clinical Experience?
			**Require myself to follow the precise learning experiences provided by the Simulation?
35	Conduct role play?	35	Engage in role play?
36	Get bored with the many questions learners ask?	36	Get bored with the many questions I ask?
37	Individualize the pace of learning for each learner?	37	Individualize the pace of learning for myself as a learner?
38	Help learners explore their own abilities?	38	Help myself explore my own abilities?
39	Engage learners in clarifying their own aspirations?	39	Engage myself in clarifying my own aspirations?
40	Ask the learners how they would approach a learning task?	40	Ask myself how I would approach a learning task?
41	Feel irritation at learner inattentiveness in the learning setting?	41	Feel irritation at my inattentiveness in the learning setting?
42	Integrate teaching techniques with subject matter content?	42	Integrate learning techniques with subject matter content?
43	Develop supportive relationships with your learners?	43	Develop a supportive relationship with myself?
44	Experience unconditional positive regard for your learners?	44	Experience unconditional positive regard for myself as a learner?
45	Respect the dignity and integrity of the learner?	45	Respect my dignity and integrity as a learner?

Note: * denotes changes made from IPI to the MIPI-NPCLE. ** denotes changes made from IPI to the MIPI-NSCLE

Instrument scoring alignment. Each of the 45 MIPI items received a score based on the student's response using the Likert scale and the MIPI scoring process. Each item fit into one of the seven Factor categories. The total scores in each factor revealed the use of andragogical principles, based on a percentage scale using the lowest and highest possible scores for each factor category. Table 3 shows the questionnaire items within each factor and the MIPI scoring process.

Table 3

MIPI Factors (F) with Associated MIPI Item Numbers

F1 Items	F2 Items	F3 Items	F4 Items	F5 Items	F6 Items	F7 Items
4 ____	7 ____	1 ____	6 ____	5 ____	2 ____	3 ____
12 ____	8 ____	9 ____	14 ____	13 ____	10 ____	11 ____
19 ____	16 ____	22 ____	15 ____	18 ____	21 ____	20 ____
26 ____	28 ____	23 ____	17 ____	27 ____	24 ____	25 ____
33 ____	29 ____	42 ____	37 ____	32 ____	35 ____	34 ____
	30 ____		38 ____	36 ____		
	31 ____		40 ____	41 ____		
	39 ____					
	43 ____					
	44 ____					
	45 ____					
Total	Total	Total	Total	Total	Total	Total
____	____	____	____	____	____	____

*Note***:** Scoring process A=1, B=2, C=3, D=4, and E=5. Reversed scored items are 3, 5, 11, 13, 18, 20, 25, 27, 32, 34, 36, and 41. (Factor 5 and Factor 7). These reversed items are scored as follows: A=5, B=4, C=3, D=2 and E=1

Table 4 includes the description of each of the seven factors and outlines the

seven Factors with associated items on the MIPI-NPCLE.

Table 4

Seven Factors of the MIPI-NPCLE and MIPI Items

Seven factors under MIPI-NPCLE	MIPI Items
1. Learner Empathy with Self	4, 12, 19, 26, 33
2. Learner Trust of Self	7, 8, 16, 28, 29, 30, 31, 39, 43, 44, 45
3. Planning and Delivery of Preceptorship	1, 9, 22, 23, 42
4. Accommodating Uniqueness of Myself as a Learner	6, 14, 15, 17, 37, 38, 40
5. Learner Insensitivity Toward Self	5, 13, 18, 27, 32, 36, 41
6. Experience Based Learning Techniques (Learner-Centered Learning)	2, 10, 21, 24, 35
7. Preceptor - Centered Learning Processes	3, 11, 20, 25, 34

Table 5 includes the description of each of the seven factors and outlines the

seven Factors with associated question items on the MIPI-NPSLE.

Table 5

Seven Factors of the MIPI-NSCLE and MIPI Items

Seven factors under MIPI-NSCLE	MIPI Items
1. Learner Empathy with Self	4, 12, 19, 26, 33
2. Learner Trust of Self	7, 8, 16, 28, 29, 30, 31, 39, 43, 44, 45
3. Planning and Delivery of the Simulation	1, 9, 22, 23, 42
4. Accommodating Uniqueness of Myself as a Learner	6, 14, 15, 17, 37, 38, 40
5. Learner Insensitivity Toward Self	5, 13, 18, 27, 32, 36, 41
6. Experience Based Learning Techniques (Learner-Centered Learning)	2, 10, 21, 24, 35
7. Simulation Centered Learning Processes	3, 11, 20, 25, 34

The researcher included Table 6 to show the minimum and maximum score

possible for each factor.

Table 6

MIPI Factors with Possible Minimum and Maximum Scores

FACTORS	MIN POINTS	MAX POINTS	TOTAL
1. Learner Empathy with Self	5	25	
2. Learner Trust of Self	11	55	
3. Planning and Delivery of the Preceptorship/Simulation	5	25	
4. Accommodating Uniqueness of Myself as a Learner	7	35	
5. Learner Insensitivity Toward Self	7	35	
6. Experience Based Learning Techniques-(Learner-Centered Learning Processes)	5	25	
7. Preceptor/Simulation Centered Learning Process	5	25	
Grand Total			

Table 7

Use of Andragogical Principles Category Levels from MIPI Instrument

Use of Andragogical Principles Category Levels		
Category Levels	Percentage	MIPI score
High Above Average	89-100%	225-199
Above Average	88-82%	198-185
Average	81-66%	184-149
Below Average	65-55%	148-124
Low Below Average	54%	<123

The MIPI instrument included a Use of Andragogical Principles Category Levels

Table (see Appendix A) or (see Appendix B). Table 7 shows a table reflective of the

table on the MIPI instrument, and the relationship between a total MIPI score, a

percentage score, and the category level that determined the use of andragogical

principles ranging from Low, Below Average to High, Above Average.

The researcher included Tables 5 through 7 to clarify use of the MIPI instrument

adapted for use in this study. The MIPI survey instrument included all tables (see

Appendix A) and (see Appendix B).

Study Design

The researcher designed a mixed-methods study using a purposive sampling

technique to gather nursing students to participate in the study. The students' results

from the MIPI-NPCLE and MIPI-NSCLE surveys, and secondary data from the nursing

students' results on standardized ATI pre- and post-test, provided the quantitative data.

Next, the researcher used a random sampling technique to choose a few students from the

larger sample of all students who consented to an interview, to participate in individual

interviews. The data from the individual student interviews provided the qualitative data

for analysis. The researcher conducted a series of t-Tests to analyze the MIPI-NPCLE

and MIPI-NSCLE data and ATI standardized test data. The researcher used a process of

coding to analyze the student interview data.

Mixed methods. To accomplish this study, the researcher gathered data using

three methods to ensure credibility and validity through data triangulation. Fraenkel,

Wallen, and Hyun (2015) described mixed methods research as research involving

"quantitative and qualitative methods in a single study" (p. 555) to provide a more

holistic understanding of the research problem. According to Fraenkel et al. (2015)

mixed methods research "can help to clarify and explain relationships found to exist

between variables" (p. 556), as well as allow a deeper dive into the exploration of the

relationships between variables.

Researchers utilized numerical data or quantitative data, "test scores, percentages,

grade point averages, ratings, frequencies" (p. 188) as a useful way to "simplify

information" (Fraenkel, Wallen, & Hyun, 2015, p. 188). Researchers conducted

qualitative research with interest in the subject's perspective and "the *quality* of a

particular activity" rather than "how often it occurs" (Fraenkel et al., 2015, p. 424).

Regarding qualitative research, Fraenkel et al. (2015) noted, "Research studies that

investigate the quality of relationships, activities, situations, or materials are frequently

referred to as qualitative research" (p. 424). Qualitative research places greater emphasis

on a holistic perspective, using a sample size between one and 20 (Fraenkel et al., 2015).

Fraenkel et al. (2015) noted, qualitative data can be drilled down into smaller categories

or "coding units" (p. 480) for analysis.

Homogenous purposive sampling. The researcher used a homogenous

purposive sampling technique. "The purposive sampling technique, also called judgment

sampling, is the deliberate choice of a participant due to the qualities the participant

possesses" (Etikan, Musa, & Alkassim, 2016, p. 2). "Purposive sampling is different

from convenience sampling in that researchers do not simply study whoever is available

but rather use their judgment to select a sample that they believe, based on prior

information will provide the data they need" (Fraenkel et al., 2015, p. 101). A

homogenous purposive sample is a sampling method selected for having shared

characteristic or set of characteristics. The nursing students in this research study shared a

set of characteristics of interest to the researcher conducting the study.

Random sampling. "A simple random sample is one in which each and every member of the population has an equal and independent chance of being selected" (Fraenkel et al., 2015, p. 95). Each nursing student had the opportunity to volunteer to participate in this study and an equal chance of being selected for an individual interview.

Dependent and independent variables. In this study the researcher identified the dependent variable as the test scores from the ATI standardized nursing exams and the data results from the MIPI assessment instruments. Schools of nursing used standardized tests as part of the nursing curriculum policies as one way to predict student success on passing the state board test and to direct remediation if needed (Barton, Wilson, Longfor, & Schreiner, 2014). "The most commonly used testing programs used in high-stakes testing are Health Educational Systems, Inc. (HESI) and the Assessment Technologies Institute (ATI)" (Phelan, n.d., p. 2). A commonly used assessment instrument in research studies and research dissertations is the MIPI assessment instrument. As previously stated, Henschke and Kheang (2015) asserted the MIPI had been validated in three dissertations using "Chronbach's alpha coefficient calculations" (p. 19) and used in over 24 dissertations. The independent variable was the NSCLE, the method of instruction used in place of the NPCLE.

Internal validity. Internal validity is threatened when a relationship between variables in a study is vague or obscure due to any number of factors, such as age or ability (Frankel, Wallen, and Hull, 2015). Researchers needed to consider threats to internal validity when planning a research study. In this study, the researcher utilized mixed-methods to increase credibility and validity through data triangulation. The researcher requested a nurse faculty expert in the field of undergraduate nursing clinical

to review the research questions to assure the research questions were closely related to the clinical experience, not leading, and easy to understand. The researcher used a valid and reliable instrument, the MIPI, to gain students' perspectives of the practicum experience, and utilized scores from proctored, standardized nursing exams.

The researcher was not an employee of the community college and was not known by any student in the study; thereby, avoiding relationship biases. The researcher conducted interviews at a time and place selected by the student to ensure student comfort with the climate and location. Due to the desire on the part of the researcher to obtain open and honest responses, the researcher extended trust to the students during the interviews and explained their responses were protected by anonymity. The researcher considered a threat to internal validity included the variations in teaching methods by the nursing faculty and nurse preceptors.

External validity. The researcher considered threats to external validity when considering population generalizability. This mixed-methods study included an appropriate sample size of 69 students from the onset; however, the researcher lost 12 students (17%) of the originally selected sample. Fraenkel et al. (2015) stated a loss of over 10% of the sample should be noted as a limitation in a study and the researcher "should qualify their conclusions accordingly" (p. 105). The research study utilized two groups of nursing students from the same community college studying on two separate campuses in one city. To ensure ecological generalizability, the setting conditions of a future study needed to be similar, prompting the researcher to cautiously conclude generalizations from one study (Fraenkel et al. (2015).

Data Collection

The researcher received permission to conduct the study from the Human

Subjects Review Board (HSRB) at the Midwest community college, (see Appendix E)

and the Internal Review Board (IRB) approval from Lindenwood University. The

researcher provided a paper copy of the letter of introduction to the study (see Appendix

F) to each student on Campus A and Campus B, inviting students to participate in this

research study. The nursing faculty posted a copy of the letter on the Blackboard

Announcement page in the NUR 253 Management Skills in Nursing course, as a

reference for students.

In addition to the letter, each student received two consent forms requesting their

signatures for voluntary participation in the research study. The first consent requested

students to volunteer to (a) participate in the study by filling out a particular version of

the MIPI (MIPI-NPCLE or MIPI-NSCLE), and (b) give permission to use their ATI pre-

and post-test results (see Appendix G). The second informed consent requested students

to volunteer to participate in an individual interview with the researcher (see Appendix

H). The researcher ensured protection of student anonymity and explained student names

would not be associated with the data. By the end of the Fall 2017 semester at the

community college, the researcher completed the data collection for this research study.

The collected data included, results from MIPI-NPCLE and MIPI-NSCLE survey

instruments, standardized nursing exam scores from ATI pre-test and ATI post-test, and

data from individual student interviews with students from both community college

campuses.

The researcher numbered the MIPI-NPCLE surveys, collected from the students

on Campus A, Forest Park MIPI Student 1 (FMS1), FMS2, FMS3, etc. The researcher

numbered the MIPI-NSCLE surveys collected from the students on Campus B, Meramec

MIPI Student 1 (MMS1), MMS2, MMS3, etc. The nursing faculty at the community

college provided the researcher copies of the students' ATI pre-test and post-test data.

The researcher removed the student identifiers from the Campus A-NPCLE student test,

then numbered the ATI pre-test Forest Park Pre-test Student 1 (FPS1), FPS2, FPS3, etc.,

and numbered each ATI post-test Forest Park Student 1 Post-test (FS1P), FS2P, FS3P,

etc. Next, the researcher removed the student identifiers from the Campus B-NSCLE

student test, and numbered each ATI pre-test Meramec Pre-test Student 1 (MPS1),

MPS2, MPS3, etc., and numbered each ATI post-test Meramec Student 1 Post-test

(MS1P), MS2P, MS3P, etc. The researcher labeled the recorded interviews from Campus

A students Forest Park Interview Student 1 (FIS1), FIS2, FIS3 and FIS4, and the

recorded interviews from Campus B students, Meramec Interview Student 1 (MIS1),

MIS2, MIS3, and MIS4.

Campus A - NPCLE study process design. The researcher collected students'

MIPI-NPCLE survey data, the ATI pre- and post-test data, and the individual interview

data from students on Campus A. The Campus A students participated in one-on-one

NPCLEs upon successful completion of the theory portion of the management course.

Campus A students completed the NPCLE during the last four weeks of the nursing

management course. Faculty matched each senior nursing student with a nurse preceptor

who worked at one of three hospitals utilized by the community college through

contractual agreements. The nurse preceptors worked on various units within each

hospital, including medical-surgical units, telemetry units, intensive care units, emergency departments, and obstetrical units.

The students completed the mandatory ATI pre-test prior to the start of their clinical practicum. Then, students met with their assigned preceptors to schedule approximately eight 12-hour shifts for a total of 84 to 90 required clinical hours. Students worked with their nurse preceptors on day and/or night shifts, depending on the preceptor's schedule. On some days, students worked with nurses other than their assigned preceptor, due to circumstances, such as the hospital giving the preceptor a low census day or the preceptor taking a sick day. Faculty did not expect students to change their schedules to adjust to preceptors' schedules; however, students could if possible.

Students performed various skills working with preceptors, including observation of procedures and diagnostic test, IV insertion, medication administration, bathing patients, assisting patients with ambulation, documentation via electronic charting, and titrating IV medications. Students communicated with patients, family members, and health care professionals, including physicians, pharmacists, nurses, respiratory therapists, and physical therapists. The nursing faculty made weekly visits to the clinical sites to check in with students and preceptors to answer questions and talk to students about the experience and their progress toward goals.

At the completion of the clinical experience, the NPCLE students and the nurse preceptors completed the same evaluation tool provided by the nursing faculty (see Appendix I). The tool listed two choices for evaluation; Satisfactory or Unsatisfactory. Students needed to obtain a 'Satisfactory' in all areas on the tool to meet the course objectives and pass the final course in the nursing program. According to D. Chanasue

(personal communication, July 13, 2018), in the 20 years she taught on Campus B, only one nursing student was given an Unsatisfactory evaluation score by a nurse preceptor.

Next, upon completion of the NPCLE, students took the ATI post-test and completed the MIPI-NPCLE survey instrument. Some students declined taking the ATI post-test, since it was not mandatory for all students. Finally, the researcher conducted individual interviews with four NPCLE students. Each student chose to meet at the hospital facility at the end of their final clinical day. All students consented to recorded interviews and the researcher assured anonymity of their responses. Students were asked to be as open and honest as possible to ensure gathering of rich data. All students stated their eagerness to discuss their experiences and were gracious with their time. Interviews lasted approximately 60 minutes.

Campus B NSCLE study process design. The researcher collected students' MIPI-NPCLE survey data, ATI pre- and post-test data, and the individual interview data from students on Campus B. The Campus B students participated in one-on-one NSCLE and a group research project. The students completed the mandatory ATI pre-test prior to the start of their NSCLE. Faculty conducted one-on-one simulation learning experiences with nursing students during the final four weeks of the semester. In the literature review from the NCSBN, the literature revealed there was no set policy of equating simulation clinical hours to clock hours, and it was up to the expertise of the faculty to determine the level of intensity of a simulation clinical experience in relation to the number of clinical hours designated (Hayden et al., 2014). The faculty utilized the course syllabus for NUR 253 Management Skills in Nursing as a foundation for creating simulation learning experiences (see Appendix P). The four weeks of NSCLE included the following:

Campus B - week 1 simulation: Medication administration. The goals included

the student making decisions about 10 medications and administering multiple

medications to an elderly complicated patient. The simulation assignment instructed

students to write a synopsis of a list of articles the faculty provided for review prior to the

simulation. The patient's diagnosis showed, diabetes mellitus Type I, chronic obstructive

pulmonary disease (COPD), hypertension and congestive heart failure, and non-

compliance. Faculty provided students a list of medications, a list of questions, and

articles relevant to the patient's condition, pre-simulation.

The faculty observed each student's individual performance in the Medication

Administration Simulation scenario. Students used the Clinical Evaluation tool for self-

evaluation at the end of each Human Patient Simulation (HPS) scenario (see Appendix J).

Faculty used the Clinical Evaluation tool to grade student performance in each HPS

scenario (see Appendix J). Informal debriefings occurred throughout Week 1 with

conversations about student performance, questions from students and faculty, and

sharing of individual reflections.

Campus B - week 2 simulation: Cardiac dysrhythmia identification. The

expectation for the cardiac simulation included the student performing a focused cardiac

assessment, diagnosing an abnormal cardiac rhythm, prioritizing interventions,

application of interventions, evaluation of outcome, and re-assessment. According to

faculty, the dysrhythmia identification included identification of normal sinus rhythm and

four common cardiac dysrhythmias within a specific time. Each student individually

participated in four scenarios with an HPS displaying an abnormal cardiac rhythm with

associated complications. The faculty utilized a Cardiac Dysrhythmia grading rubric for

the cardiac dysrhythmia HPS scenario (see Appendix K). Students participated in group debriefings throughout Week two, and then met with their faculty member for a one-on-one debriefing at the end of the week to review their graded rubric.

Campus B - week 3 simulation: Prioritization in multiple patient simulation. Faculty developed a script for multiple patient simulations for week 3 HPS scenarios (see Appendix L). Each student needed to decide which patient to see first and then prioritize nursing actions, based on patient developments. The first HPS scenario included a younger adult male patient with a history of epilepsy, admitted due to a recent tonic-clonic seizure episode while at work. The patient wanted to be discharged to go back to work as he needed money, needed his job, and did not want to miss work. This HPS patient presented in a hospital bed with padded side-rails, no other standard seizure precautions in place. During the simulation, the patient had a seizure, simulated by the HPS patient shaking violently and foaming at the mouth. The student expected intervention was to set up the room with oxygen and suction during the initial assessment and to follow seizure protocol.

A second HPS scenario included an older adult male patient, recently widowed, with a history of diabetes, non-compliance, an episode of diabetic keto acidosis (DKA), painful wound on right foot with an infection in need of debridement, and foot elevated on a pillow with a dressing covering the wound. The patient requested food but needed a blood glucose level checked prior to eating. Both HPS scenarios included patients with common conditions and complications often seen in hospitalized patients. The faculty assessed students' performance using the Student-Prep for the multiple patient simulation (see Appendix L).

Campus B - week 4 simulation: Group research project. Concurrently, during

the four weeks of simulation activities, students worked in groups on their group research

project (see Appendix M). The research projected focused on clinical issues and

addressed competencies and project requirements. Faculty graded projects using a rubric

(see Appendix N). During Week four, students provided group presentation of their

clinical projects. All students attended each group's presentation.

According to one faculty at Campus B who coordinated the NSCLE, the faculty

kept simulations consistent, using scripts, grading rubrics, and collaborative efforts. The

faculty utilized simulation guidelines from INASCL criteria, noting in simulation,

consistency was a high priority for comparison of experiences and group and individual

debriefing sessions. The faculty stated students understood the expectation to come to

simulation prepared to perform on their own, prepared to perform under rigid time

restrictions, prepared to rationalize their clinical decision making, and prepared to accept

critical feedback of their performance. Feedback included daily group feedback and one-

on-one feedback between student and instructor. Students completed a reflection

assignment after each simulation, which faculty utilized during the one-on-one debriefing

sessions with individual students (see Appendix O).

At the completion of the NSCLE, each student took the mandatory ATI post-test

and completed the MIPI-NSCLE survey instrument. The researcher met with four

NSCLE students for individual interviews at a time and place determined by the students.

The students consented to recorded interviews with the researcher assuring anonymity.

Students were asked to be as open and honest as possible to ensure gathering of rich data.

The researcher informed students the 30-minute time allotted for the interview would be

followed in respect of the students' time; however, students were eager to talk and most

interviews lasted 60 minutes. The researcher transcribed the audio data to typed data and

coded the interview data for analysis.

Methodology of Data Analysis

According to Fraenkel et al. (2015), "The *t*-Test for independent means is used to

compare the mean scores of two *different*, or independent groups" (p. 234). According to

Bluman (2013), a *t*-test should be used to test "difference between means when two

samples are independent and when the samples are taken from two normally or

approximately normally distributed populations" (p. 480). Furthermore, Bluman stated

"samples are independent samples when they are not related" (p. 480) and it will be

assumed the variances are not equal.

Null hypotheses 1 and Null Hypothesis 2; *t*-Test analysis. Null Hypothesis 1

and Null Hypothesis 2 focused specifically on the MIPI data results. The researcher

developed Null Hypothesis 1: There is no difference between the MIPI results of students

Total Scores, Factor 3-Planning and Delivery, Factor 4-Accomodating Uniqueness of

Myself as a Learner, Factor 6-Experience-Based Learning/Learner Centered Learning

Process, and Factor 7- Preceptor (Centered Learning Process)/Simulation (Centered

Learning Process) in the preceptored clinical learning experience compared to the

students in the simulation clinical learning experience. Next, the researcher developed

Null Hypothesis 2: There is no difference between the MIPI results of Factor 1- Learner

Empathy with Self, Factor 2- Leaner Trust of Self and Factor 5- Learner Insensitivity

toward Self, comparing the preceptored clinical learning group to the simulation clinical

learning group.

To determine if there was a difference in each Factor category on the MIPI survey instrument, between the NPCLE students and the NSCLE students, the researcher conducted a *t*-Test of two independent means. First the researcher totaled individual student scores in each factor category for both groups of students and then obtained the mean score for each factor using all students' scores. Next the researcher conducted a *t*-Test of two independent means to determine if there was a difference in mean scores between the NPCLE students' and the NSCLE students' results.

Null hypotheses 1 and Null Hypothesis 2; Use of andragogical principles analysis. As mentioned, Null Hypothesis 1 and Null Hypothesis 2 focused specifically on the MIPI data results. The researcher utilized the NPCLE students' and NSCLE students' mean scores from the *t*-test analysis for each of the seven MIPI factors to calculate the use of andragogical principles category levels, as shown on the MIPI instruments (see Appendix A) and (see Appendix B). The MIPI instrument provided a possible minimum and maximum score for each of the seven factors on the instrument based on the number of items contained in each factor. The researcher calculated a percentage using the *t*-Test data in relation to the possible minimum and maximum scores for each factor on the MIPI instrument to determine the use of andragogical principle based on category level percentages as noted on the MIPI instrument. The *t*-test data and the MIPI instrument data provided two methods of assessing the outcomes of the students' scores on the MIPI-NPCLE and MIPI-NSCLE.

Null Hypothesis 3; *t*-Test analysis. Null Hypothesis 3 focused specifically on the ATI data results. Null Hypothesis 3 stated: there is no difference between students' scores on a pre- and post- ATI nursing management standardized test when comparing

students in NPCLE group to students in NSCLE group. The researcher conducted a series of *t*-Test of two independent means to determine if there was a difference in the amount of gain on the ATI pre-test and ATI post-test scores, between the NPCLE students and the NSCLE students. The ATI pre-test revealed how students scored upon completion of the theory portion of the management course. The ATI post-test revealed how students scored on completion of the nursing clinical practicum. The researcher used the data to compare the pre- and post-test scores of Campus A students and Campus B students to see if the clinical practicum experience impacted test scores. The *t*-Test was conducted on each category of major content areas and on selected clinical content areas on the ATI pre-test and post-test.

Research Sub-Questions 1A, 1B, 2, and 3 coding analysis. The researcher developed four research sub-questions based on the overarching research question. The researcher then developed 11 interview questions (see Appendix Q), based on the four research sub-questions. With the students' permission, the researcher recorded the interviews, and then transcribed individual student's responses to the research questions from the recorded interviews. Next, the researcher coded the interview data using tables to organize the data and break the data into coding units. The researcher created separate tables for the NPCLE data and the NSCLE data.

Research Sub-Question 1A asked; what are the issues with NPCLEs in achieving management skills to meet the principles of managing the nursing care of a group of patients in the role of beginning staff nurse? Research Sub-Question 1B asked; what are the issues with NSCLE in achieving management skills to meet the principles of

managing the nursing care of a group of patients in the role of beginning staff nurse? The

researcher developed five interview questions for sub-questions 1A and 1B.

Research Sub-Question 2 focused on the process of the adult learning theory

andragogy and asked; in what way, if any, is the process of the Theory of Adult Learning

– Andragogy, integrated into a nursing students' educational experience in a nursing

practicum? The researcher developed three interview questions based on Research Sub-

Question 2. Research Sub-Question 3 asked; how, if at all, does the design of the

practicum meet the goal of helping the nurse develop the following management skills;

therapeutic communication, interdisciplinary patient care, clinical decision making,

culturally competent care, ethical and values centered care, delegation, prioritization,

safety, conflict resolution, and time management? The researcher developed two

interview questions based on Research Sub-Question 3.

Coding tables. Initially, the researcher transcribed each individual student's

responses to the research questions from the recorded interviews. Next, to compare the

two clinical practicum learning experiences, the researcher developed a table for the

NPCLE data and a separate table for the NSCLE data. The layout of the table supported

the overarching research question across the top of the table to focus awareness on the

main research question. Four columns under the overarching question provided an

organized structure for coding the interview data. The first column contained each

research sub-questions, the second column aligned each interview question related to the

research sub-question. Column three contained students' responses to the interview

questions, and column four contained an alignment of an andragogical principle to the

students' responses. The researcher coded student responses to each interview question,

and then reviewed the interview data in relation to Knowles (1975) competencies of self-

directed learning.

Table 8 provides a NPCLE coding table as an example of how the researcher

coded the data for analysis.

Table 8

Sample Coding Process of NPCLE Student Interview Data

Overarching Research Question: How, if at all, is it possible to achieve management skills in nursing to meet the principles of managing the nursing care of a group of patients in the role of beginning staff nurse in a nursing management practicum?			
Research Sub-Question	Interview Question	Student Response data Direct Quotes	Andragogical Alignment with Knowles (1975) Competencies of Self-Directed Learning
RSQ1A: What are the issues with preceptored learning experiences in achieving management skills to meet the principles of managing the nursing care of a group of patients in the role of beginning staff nurse?	IQ. Discuss events or insights, if any that occurred during or after the preceptored clinical learning experience that built your self-confidence in nursing management skills?	F1S1: More hands-on experiences, more planning on my part, The preceptor may ask what I want to do and let me make decisions, then we talk about the decision. I keep track of when meds are due, so I would run by her what I was doing. F1S2: To be honest, I have worked with 4 different nurses during my preceptored time. I think it has actually been better than one because each one does things differently and I feel like what you get	The ability to relate to peers collaboratively, to see them as resources for diagnosing needs, planning my learning, and learning; and to give help to them and receive help from them. The ability to relate to teachers as facilitators, helpers, or consultants, and to take the initiative in

out of this is how comfortable with me, some let you do more than others. Unfortunately, some treat you more like a student and they are very cautious, I got a better hands-on opportunity with a variety of nurses, I got to do a lot of things.

I learned I am a good listener, and I try to be involved in care, I let them know I hear what they are saying by repeating the information back to my nurse to let her know I hear.   I had my preceptor leave me alone with the patients when she went to lunch and she told me she trusted me to titrate a medication if I needed to, and I knew there were people around me I could ask questions, but I felt like "I got this"

F1S3. I would say explaining medications to my patients when I give meds, talking with patients about what the meds do, and answering

making use of their resources.

The ability to select effective strategies for making use of learning resources and to perform these strategies skillfully and with the initiative

The ability to identify human and material resources appropriate to different kinds of learning objectives

A concept of myself as being a non-dependent

	any questions. I feel confident in doing this.	and self-directing person
	Getting to do things on my own, like discharge teaching, giving report, so I am starting to do these things now, so I feel more independent.	The ability to identify human and material resources appropriate to different kinds of learning objectives
	Getting opportunities to observe diagnostic test like cardioversion, seeing what the nurses' role is.	
	F1S4: I feel like it depends on who your preceptor is. Mine is great she gives me constructive criticism, helpful tips like – it is something so small but every time I open a pill pkg. I hold on to the pill in the plastic, so I don't drop it. Starting IV's, she uses saline flush on the end, so when I get a blood return, I use the saline to help get the IV in. So, learning things is helping me build my self-confidence.	The ability to relate to peers collaboratively, to see them as resources for diagnosing needs, planning my learning, to give and receive help from them

Table 9 provides a NSCLE coding table as an example of how the researcher

coded the data for analysis.

Table 9

Sample Coding Process of NSCLE Student Interview Data

Overarching Research Question: How, if at all, is it possible to achieve management skills in nursing to meet the principles of managing the nursing care of a group of patients in the role of beginning staff nurse in a nursing management practicum?			
Research Sub-Question	Interview Question	Student Response data: Direct Quotes	Andragogical Alignment with Knowles (1975) Competencies of Self-Directed Learning
RSQ1B: What are the issues with simulation clinical learning experiences in achieving management skills to meet the principles of managing the nursing care of a group of patients in the role of beginning staff nurse?	IQ: Discuss events or insights, if any that occurred during or after the simulation clinical learning experience that built your self-confidence in nursing management skills?	M1S1: In one simulation, the patient was given a drug and fluid that was inappropriate for that type of patient, and I was able to call the doctor and stop the fluids and the med. Doing that on my own made me feel I can make more decisions in my future in practice. M1S2: Identifying what was going on with my patient with the information I was given. Talking with other students about the different types of rhythms we were identifying.	An understanding of the differences in assumptions about learners and the skills required for learning under teacher-directed and self-directed learning, and the ability to explain these differences to others. A concept of myself as being a non-dependent and a self-directing person. The ability to relate to peers collaboratively, to see them as resources for diagnosing needs, planning my learning, and learning; and to

I had things to prepare, but you don't realize how much you know until you begin on your own, then your brain kind of starts going all these different ways. I was told to slow down, because I was going too fast! I really impressed myself, because I thought I was going to do badly, but I think under pressure you try to do better, and I remembered a lot of things that surprised me. Identifying medications and medication errors and abnormal labs - this information guided whether or not to give the medications. I did all of these things correctly and some students did not note the errors and gave all the meds. This was our first one-on-one simulation.	give help to them and receive help from them. The ability to diagnose my own learning needs realistically, with the help from teachers and peers. The ability to translate learning needs into learning objectives in a form that makes it possible for their accomplishment to be assessed. The ability to relate to teachers as facilitators, helpers, or consultants, and to take the initiative in making use of their resources. The ability to identify human and material resources appropriate to different kinds of learning objectives.

I identified a patient having trouble breathing and knew I needed to do an assessment before giving a medication. In the first simulation, there was a COPD patient getting discharged. The patient was complaining of shortness of breath (SOB), so I had to decide if SOB was okay for her, if O2 level was okay. I did a lung assessment. I had to decide whether to discharge or not, and give education on O2, and medicates she was taking warfarin and aspirin. I noted this before the patient went home. I had to call the doc about labs and medications.	The ability to select effective strategies for making use of learning resources and to perform these strategies skillfully and with the initiative. The ability to collect and validate evidence of accomplishment of various kinds of learning objectives. A concept of myself as being a non-dependent and a self-directing person
M1S3: Conferring with classmates after the simulations, we signed	An understanding of the differences in assumptions about learners and the skills required for learning under

confidentiality statements, so we didn't talk to others to see what they did.

teacher-directed and self-directed learning, and the ability to explain the differences to others

When you make decisions on your own and you did the right things, I wasn't as overly critical of myself after. It made me more comfortable going through the experience and being able to talk. I was able to determine the most important issues in each simulation, I felt knowing the what to do during the simulation made me feel more confident

The ability to diagnose my own learning needs realistically with the help from teachers and peers

The ability to translate learning needs into learning objectives in a form that makes it possible for their accomplishment to be assessed.

M1S4: Talking out loud during the simulation to gain understanding and let the teacher know what I was thinking, built my self-confidence, also reading the cardiac monitor and deciding on treatment helped, it was more real life.

The ability to relate to peers collectively, to see

	Debriefing with faculty to go over things we did correctly helped and made me feel good about my decisions in simulation.	them as resources for diagnosing needs, planning my learning, and to give and receive help from them

List of management skills in nursing based on coding table analysis. In a final

analysis of the interview data, the researcher returned to the coding tables. The

researcher combed through the students' responses three times and counted the number of

times a student used a word or description of a situation, specifically referring to one of

the 10 management skills of nursing. Research sub-question three listed the nursing

management skills: therapeutic communication, interdisciplinary patient care, clinical

decision making, culturally competent care, ethical and values centered care, delegation,

prioritization, safety, conflict resolution, and time management. The researcher reviewed

the interview data and marked each word or phrase, referring to a nursing management

skill using a different mark to identify each management skill. A final count of the marks

revealed the number of times students referred to a nursing management skill.

In some instances, a skill was mentioned using the exact wording, in other

instances the student inferred the skill when describing a situation or activity. For

example, an African American student shared how her cultural traits made a difference in

a patient's care, due to her ability to relate to the concerns of an elderly African American

female patient. The student in the NPCLE group described her conversation with an

elderly African American female patient and stated she was able to explain the rationale

for letting a nurse insert a Foley catheter. Previously a white nurse and white neurologist

were unable to communicate effectively with the patient, leaving the patient in tears.

The student reported, the neurologist listened to the interaction with the patient

outside the patient's door and congratulated the student on her ability to communicate

with the patient. The students stated, "The patient trusted me because she identified with

me." The student relayed to the researcher she felt proud to receive a compliment from

the physician, and proud to play an important role in the patient's care. In this example

the researcher determined the student nurse displayed, therapeutic communication,

culturally competent care, and conflict resolution.

In another example, a student in the NSCLE stated, "I had to make patient care

decisions on my own based on lab values and patient symptoms in each simulation and it

was very scary, but I felt like I did very well." The researcher counted this comment as

Clinical Decision Making. Another student in the NSCLE group commented, "I

identified medications, and medication errors and abnormal labs and this guided whether

or not to give medications." The researcher counted this response under the Management

Skills, Safety and Clinical Decision Making. One final example the researcher counted

under Time Management was as a NPCLE student related, "I am taking on the nurse role,

so it might look bad saying no to certain experiences I could observe, but I have to

manage my time and get the things done that are expected of me."

The researcher reviewed the student responses and highlighted each time a skill

was mentioned, noting the specific skill next to the highlighted comment. The researcher

reviewed the students' comments three times to ensure the count as accurate as possible,

due to the objective nature of the task. The researcher interviewed a total of eight

students and asked each student 10 interview questions, resulting in a total of 88

responses. The NPCLE students totaled 63 responses, using exact wording or

descriptions of activities or situations when management skills were used. The NSCLE

totaled 86 responses, using exact wording or descriptions of situations when management

skills were mentioned or described.

Summary

Fraenkel et al. (2015) explained mixed-methods research involving quantitative

and qualitative data provided a more holistic understanding of a research problem and

helped researchers explore relationships between variables. The researcher chose a

mixed-methods study design to incorporate using qualitative and quantitative research

data to ensure credibility and validity of the research data through data triangulation.

This research study, designed to compare the NPCLE and the NSCLE, utilized

quantitative data from the nursing student participants' standardized ATI pre- and post-

test scores, quantitative data from the andragogical oriented students' MIPI instrument

scores, and qualitative data from the students' responses to interview questions. The

researcher was fortunate to find a community college nursing program challenged with

securing qualified nurse preceptors to mentor senior nursing students for the traditional

one-on-one preceptored clinical learning experience at a time when nursing schools

across the nation faced the same challenge. The faculty at one community college chose

to substitute NSCLE as an alternative to the traditional preceptored clinical learning

experience. The NCSBN and the NLN supported simulation clinical hours as a substitute

for the traditional preceptored clinical, due to national research data which determined

simulation as a valid teaching methodology. The researcher brought together three

distinct sets of data results for analysis to compare the two types of clinical practicum

learning experiences, with an understanding the results of all three sets of data would

reveal strong support for the outcome once the data were analyzed. A *t*-Test analysis,

according to Fraenkel et al. (2015), and Bluman (2013) was the best method to compare

the mean scores of two independent sample populations. The coding process used to

analyze the interview data allowed the researcher to strategically break the data into

coding units, in alignment with the research questions and interview questions, and

offered a strategic process to assessing use of andragogical principles in both the NPCLE

and the NSCLE. With cooperation of nurse educators and nursing student participants

from the two Midwest Community College campuses, the researcher conducted this study

seeking to determine if a nursing simulation clinical learning experience was as good as,

better than, or worse than a NPCLE for a nursing student to meet the principles of

managing the nursing care of a group of patients, in the role of beginning staff nurse.

The study focused on using NSCLE as an alternative to the NPCLE to address the issues

with shortage of clinical site availability, the shortage of qualified nurse preceptors, and

the gaps identified in transition to nursing practice using the traditional preceptored

clinical model. This valuable data may help nurse educators to plan future senior

semester nursing clinical practicum learning experiences.

Chapter Four: Results

In Chapter Four, the researcher related the analysis of the quantitative and qualitative research data to the Overarching Research Question. The researcher first outlined the results of the quantitative data in relation to Null Hypothesis 1 and Null Hypothesis 2, utilizing the MIPI data. Next the researcher outlined the results of the quantitative data in relation to Null Hypothesis 3, utilizing the ATI data. Finally, the researcher outlined the results of the qualitative data from the student interviews in relation to the four Research Sub-Questions.

Overarching Research Question

How, if at all, is it possible to achieve management skills in nursing to meet the principles of managing the nursing care of a group of patients in the role of beginning staff nurse in a nursing management practicum?

Null Hypotheses 1 - MIPI Results - Total Scores, Factor 3, Factor 4, Factor 6, and Factor 7

Null Hypothesis 1: There is no difference between the MIPI results of students Total scores, Factor 3-Planning and Delivery, Factor 4-Accomodating Uniqueness of Myself as a Learner, Factor 6-Experience-Based Learning/Learner Centered Learning Process, and Factor 7- Preceptor (Centered Learning Process) or Simulation (Centered Learning Process) in the preceptored clinical learning experience compared to the students in the simulation clinical learning experience. The following *t*-Test analysis provided data in response to Null Hypothesis 1.

MIPI total scores. To determine if there was a difference on the MIPI test between the NPCLE students' and the NSCLE students' Total Scores, the researcher

conducted a t-Test of two independent means. A preliminary test of variances indicated the variances were equal. The analysis revealed the average for the NPCLE students (M = 167.45, S.D. = 11.09) was not significantly different from the average of the NSCLE students (M = 169.32, S.D. = 15.83); $t(49)$ = -0.460, p = 0.6473. The results were not statistically significant; and therefore, the researcher failed to reject Null Hypothesis 1.

Factor 3 - Planning and delivery. To determine if there was a difference in the amount of gain in the category of Planning and Delivery of the preceptored clinical learning experience on the MIPI-NPCLE and the Planning and Delivery of the simulation clinical learning experience on the MIPI-NSCLE, the researcher conducted a t-Test of two independent means. A preliminary test of variances indicated the variances were equal. The analysis revealed the average gain for the NPCLE students (M = 19.9, S.D. = 3.21) was not significantly different from the average gain of the NSCLE students (M = 20.32, S.D. = 2.97); $t(49)$ = -0.481, p = 0.6330. Therefore, the researcher failed to reject Null Hypothesis 1.

Factor 4 - Accommodating uniqueness of myself as a learner. To determine if there was a difference in Factor 4 - Accommodating Uniqueness of Myself as a Learner on the MIPI test between the NPCLE students and the NSCLE students, the researcher conducted a t-Test of two independent means. A preliminary test of variances indicated the variances were equal. The analysis revealed that the NPCLE students (M = 27.15, S.D. = 3.98) was not significantly different from the NSCLE students (M = 27.32, S.D. = 3.74); $t(49)$ = -0.157, p = 0.8759. Therefore, the researcher failed to reject Null Hypothesis 1.

Factor 6 - Experienced-based learning (learner-centered learning process).
To determine if there was a difference in the category of Experienced-Based Learning
(Learner-Centered Learning Process) on the MIPI test between the NPCLE students and
the NSCLE students, the researcher conducted a *t*-Test of two independent means. A
preliminary test of variances indicated the variances were equal. The analysis revealed
that the NPCLE students (M = 16.6, S.D. = 3.80) was significantly different from the
NSCLE students (M = 20.19, S.D. = 3.12); $t(49) = -3.681$, $p = 0.0006$.

This indicated the NPCLE students in the category of Experienced-Based
Learning (Learner-Centered Learning Process) was significantly different than the
NSCLE students. The mean of NPCLE students was lower than the mean of the NSCLE
students. The results of the data revealed the NSCLE scores were higher than the NPCLE
scores. Due to the significant results of the *t*-Test data, the researcher rejected Null
Hypothesis 1.

**Factor 7- Preceptor (centered learning process)/simulation (centered
learning process).** To determine if there was a difference in the category of Preceptor
Centered or Simulation Centered Learning Process on the MIPI test between the NPCLE
students and the NSCLE students, the researcher conducted a *t*-Test of two independent
means. A preliminary test of variances indicated the variances were equal. The analysis
revealed that the NPCLE students (M = 11.2, S.D. = 4.50) was not significantly different
from the average gain of the NSCLE students (M = 10.322, S.D. = 3.42); $t(49) = 0.789$, p
$= 0.4437$. The researcher failed to reject Null Hypothesis 1.

Table 10 summarizes the results of the *t*-Test analysis of Null Hypothesis 1 data:
Factors 3, 4, 6, 7, and Total Scores.

Table 10

Null Hypothesis 1- t-Test Analysis of MIPI Factors 3, 4, 6, 7, and Total Scores

	NPCLE		NSCLE				
	n	M (SD)	n	M (S)	d.f.	t-Score	p-Value
F3 Planning and Delivery of Preceptorship/Simulation	20	19.9 (3.21)	31	20.32 (2.97)	49	-0.481	0.6330
F4 Uniqueness of Myself as a Learner	20	27.15 (3.98)	31	27.32 (3.74)	49	-0.157	0.8759
F6 Experience Based Learning Techniques (Learner-Centered Learning Process)	20	16.6 (3.80)	31	20.19 (3.12)	49	-3.681	0.0006 (R)
F7 Simulation Centered / Preceptor Centered	20	11.2 (4.50)	31	10.32 (3.42)	49	0.789	0.4437
MIPI Total Scores	20	167.45 (11.09)	31	169.32 (15.83)	49	-0.460	0.6473

NOTE: (R) = reject the Null hypothesis

The *t*-Test analysis of Null Hypothesis 1 revealed a statistically significant difference between the NPCLE students and the NSCLE students on MIPI factor, Factor 6 - Experience Based Learning Techniques/Learner-Centered Learning Process (Table 10). The *p*-value, 0.0006, for MIPI Factor 6 (Table 10) implied the result was of major clinical importance. The MIPI assessment instrument gathered data from the students' perspectives related to their beliefs, feelings, and behaviors of the clinical practicum learning experiences. From the students' perspectives the NSCLE was more learner-centered than the preceptored clinical learning experiences. The items under Factor 6 indicated learner-centered learning included students processing information in collaboration with peers, students engaging in the learning process, and students learning through real-life settings.

The researcher calculated a second comparison of the NPCLE data and the NSCLE data using the MIPI mean scores from the *t*-Test analysis of Factors 3, 4, 6, 7, and Total Score (Table 10), and using the minimum and maximum scores for each Factor from the Use of Andragogical Principles Table on the MIPI instruments (see Appendix A & Appendix B). The researcher calculated percentages based on the possible minimum and maximum points for each MIPI factor

For example, the NPLCE *t*-Test mean score for F3 - Planning and Delivery is 19.9 (Table 10). The Use of Andragogical Principles Table for Factor 3 allows a minimum of five points and a maximum of 25 points (see Appendix A or Appendix B). Therefore, a *t*-Test mean of 25 equaled 100% use of andragogical principles, so the *t*-Test mean of 19.9 equates to 79.6%. The researcher calculated the mean scores to percentages, to determine the use of andragogical principles category level. The researcher used the

calculated percentages for each factor, from both groups of students, to assess the

andragogical category levels. Table 11 revealed MIPI Factors 3, 4, 6, 7, and Total Score

in relation to MIPI t-Test mean and MIPI Andragogical category level for NPCLE and

NSCLE students.

Table 11

Null Hypothesis 1 - NPCLE and NSCLE t-Test mean and Andragogical Category Level

Factors	MIPI Min Points	MIPI Max Points	NPCLE Students			NSCLE Students		
			t-Test Mean	MIPI %	Category Level	t-Test Mean	MIPI %	Category Level
F3 Planning	5	25	19.9	79.6	62 - 81% Average	20.32	81.2	62 - 81% Average
F4 Unique-ness	7	35	27.15	77.57	62 - 81% Average	27.32	78.06	62 - 81% Average
F6 Learner-Centered	5	25	16.6	66.4	62 - 81% Average	20.9	*83.6	*82 - 88% Above Average
F7 Precep-Centered / Sim-Centered	5	25	11.2	44.8	0-51% Low Below Average	10.32	41.28	0-51% Low Below Average
MIPI Total	199	225	167.4	74.4	62-81% Average	169.32	75.25	62-81% Average

Note: * denotes a difference on Factor 6 between NPCLE students and NSCLE students

The analysis revealed both clinical practicum groups scored Average on Factor 3 -

Planning and Delivery of the Learning Experience, Factor 4 - Accommodating

Uniqueness of Myself as a Learner, and the Total Score. Both groups scored Low Below

Average on Factor 7 - Preceptor Centered/Simulation Centered Leaning Process.

However, regarding Factor 6 - Experience-Based Learning Techniques (Learner-

Centered Learning Processes), the NSCLE group scored Above Average on the

Andragogical category level and the NPCLE group scored Average. The *t*-Test analysis and the Andragogical category level, both revealed Factor 6 - Experience Based Learning Techniques (Learner-Centered Learning Process), as the only Factor from Null Hypothesis 1, where NPCLE students and NSCLE students scored statistically significantly different.

Null Hypothesis 2 - MIPI Results Factor 1, Factor 2, and Factor 5

Null Hypothesis 2: There is no difference between the MIPI-NPCLE and MIPI-NSCLE results of students in the preceptored clinical learning experience compared to students in the simulation clinical learning experience in relation to Factor 1 – Learner Empathy with Self, Factor 2 – Learner Trust of Self, and Factor 5 – Learner Insensitivity toward Self.

Factor 1 - Learner empathy with self. To determine if there was a difference in Factor 1 - Learner Empathy with Self on the MIPI test between the NPCLE students and the NSCLE students, the researcher conducted a *t*-Test of two independent means. A preliminary test of variances indicated the variances were equal. The analysis revealed the average gain for the NPCLE students (M = 21.4, S.D. = 2.68) was not significantly different from the average gain of the NSCLE students (M = 20.51, S.D. = 3.07); $t(49) = 1.052$, $p = 0.2980$. Therefore, the researcher failed to reject Null Hypothesis 2.

Factor 2 - Learner trust of self. To determine if there was a difference in Factor 2 - Learner Trust of Self on the MIPI test between the NPCLE students and the NSCLE students, the researcher conducted a *t*-Test of two independent means. A preliminary test of variances indicated the variances were equal. The analysis revealed the average gain for the NPCLE students (M = 45.2, S.D. = 5.51) was not significantly different from the

average gain of the NSCLE students (M = 44.51, S.D. = 6.96); $t(49) = 0.370$, $p = 0.7127$.

Therefore, the researcher failed to reject Null Hypothesis 2.

Factor 5 - Learner insensitivity toward self. To determine if there was a

difference in Factor 5 - Learner Insensitivity Toward Self on the MIPI test between the

NPCLE students and the NSCLE students, the researcher conducted a t-Test of two

independent means. A preliminary test of variances indicated the variances were equal.

The analysis revealed the average gain for the NPCLE students (M = 27, S.D. = 5.83)

was not significantly different from the average gain of the NSCLE students (M = 25.42,

S.D. = 5.25); $t(49) = 1.005$, $p = 0.3198$. Therefore, the researcher failed to reject Null

Hypothesis 2.

For Null Hypothesis 2, Factors 1 - Learner Empathy with Self, Factor 2 - Learner

Trust of Self, and Factor 5 - Learner Insensitivity toward Self, the t-Test analysis revealed

no statistically significant differences between the NPCLE and the NSCLE students'

results. Therefore, the researcher failed to reject Null Hypothesis 2: Factor 1, Factor 2

and Factor 5.

Table 12 summarizes t-Test results of Null Hypothesis 2: MIPI Factors, 1, 2 and

5. As with Null Hypothesis 1, the researcher calculated a second comparison of the

NPCLE data and the NSCLE data for Null Hypothesis 2, using the MIPI t-Test mean

scores of Factors 1, 2, and 5 (Table 12) and using the minimum and maximum scores for

Factors 1, 2, and 5 from the Use of Andragogical Principles Table from the MIPI

instrument (see Appendix A or Appendix B).

Table 12

Null Hypothesis 2 - t-Test Analysis of MIPI Factors 1, 2, and 5

	NPCLE		NSCLE				
	n	M (SD)	n	M (S)	d.f.	t-Score	p-Value
F1 Learner Empathy with Self	20	21.4 (2.68)	31	20.51 (3.07)	49	1.052	0.2980
F2 Learner Trust of Self	20	45.2 (5.51)	31	44.1 (6.96)	49	0.370	0.7127
F5 Learner Insensitivity toward Self	20	27 (5.83)	31	25.42 (5.25)	49	1.005	0.3198

The researcher utilized the mean scores from the *t*-test analysis of each factor and calculated percentages based on the possible minimum and maximum points for each MIPI factor on the Use of Andragogical Principles Table (see Appendix A or Appendix B) to determine the Andragogical category level for each factor.

Table 13 reveals MIPI Factors 1, 2, and 5 in relation to the MIPI *t*-Test mean and MIPI Andragogical category level for NPCLE and NSCLE students.

Table 13

Null Hypothesis 2 - NPCLE and NSCLE t-Test and Andragogical Category Level

			NPCLE Students			NSCLE Students		
Factors	MIPI Min Points	MIPI Max Points	t-Test Mean	MIPI%	Category Level	t-Test Mean	MIPI%	Category Level
F1Empathy	5	25	21.4	85.6	82 - 88 / Above Average	20.51	82.04	82 - 88 / Above Average
F2 Trust	11	55	45.2	82.18	62 -81 / Average	44.1	80.18	62 -81 / Average
F5 Insensitivity	7	35	27	77.14	62 – 81 / Average	31	88.57	62 – 81 / Average

According to the Andragogical category levels, the NPCLE students and NSCLE

perspective of Factor 1 - Learner Empathy with Self, scored Above Average. The

NPCLE and NSCLE students' perspective of Factor 2 - Learner Trust of Self, and Factor

5 - Learner Insensitivity toward Self scored Average on the Andragogical category levels.

Null Hypothesis 3 - ATI Results in Major Content Areas

Null Hypothesis 3: There is no difference between students' pre-test and post-test

scores on the ATI nursing standardized exam when comparing students' scores from the

NPCLE group and students' scores from the NSCLE group. First the researcher analyzed

the major content areas on the ATI standardized nursing exam using a series of *t*-Tests to

compare the NPCLE group of students to the NSCLE group of students. The categories

included in the major content areas were: Total gain, RN management of care, RN safety,

RN health promotion and maintenance, RN psychosocial integrity, RN basic care and

comfort, RN pharmacological and parenteral therapies, RN reduction of risk potential,

and RN physiological adaptation. The researcher included a definition of each category

with the statistical data analysis.

      Total gain. For the Total Gain of pre-test and post-test scores of all students on

Campus A in the NPCLE and Campus B in the NSCLE, the researcher conducted a *t*-

Test. The researcher excluded the data of one student in the NSCLE group, the student

identified as M28, on the *t*-Test analysis of Total Gain, due to the extreme post-test score

data identified as outliers.

      The researcher noted the data from the student, M28, showed extreme differences

on post-test scores. For example, M28 from Campus B received a 76.7% on the pre-test

and 30% on the post-test in the category Management of Care. Student M28 received a

61.1% on the pre-test and 27.8% on the post-test in the category Safety and Infection

Control. Student M28 received a 66.7% on the pre-test and a 16.7% on the post-test in the

category Reduction of Risk Potential. In all categories, Student M28 pre-test scores

aligned with other student pre-test scores. However, Student M28 data showed radical

differences on post-test scores, compared to all post-test data.

      The researcher determined the M28 post-test data as an outlier. An outlier "is an

extremely high or an extremely low data value when compared with the rest of the data

values" (Bluman, 2013, p. 159). According to Bluman (2013), "An extremely high or

extremely low data value in a data set can have a striking effect on the mean of the data

set" (p. 121). The researcher obtained the exam data on the post-test for Student M28

from secondary data. It is unknown if the post-test data for M28 resulted from technical

error, or student low exam score. Bluman (2013) concluded if an outlier resulted from an

error, the error should be corrected if possible, otherwise "the data value should be

omitted entirely" (p. 161). For that reason, the researcher conducted the analysis of the

data excluding Student M28 data.

Total gain on ATI. To determine if there was a difference in the amount of Total

gain on the ATI test between the NPCLE students and the NSCLE students, the

researcher conducted a *t*-Test of two independent means. The researcher conducted the *t*-

Test excluding Student M28. A preliminary test of variances indicated the variances

were equal. The analysis revealed the average gain for the NPCLE students (M = 38.50,

S.D. = 32.52) was significantly different from the average gain of the NSCLE students

(M = -7.88, S.D. = 43.08); $t(44) = 3.500$, $p = 0.0011$. Therefore, the researcher rejected

Null Hypothesis 3.

RN management of care. "The nurse coordinates, supervises and/or collaborates

with members of the health care team to provide an environment that is cost-effective and

safe for clients" (ATI, p. 5). To determine if there was a difference in the amount of gain

in the category of Management of Care on the ATI test between the NPCLE students and

the NSCLE students, the researcher conducted a *t*-Test of two independent means. A

preliminary test of variances indicated the variances were equal. The analysis revealed

the average gain for the NPCLE students (M = 2.56, S.D. = 8.72) was not significantly

different from the average gain of the NSCLE students (M = 4.91, S.D. = 14.53); $t(45) =$

-0.544, $p = 0.5891$. Therefore, the researcher failed to reject Null Hypothesis 3.

RN safety. "The nurse uses preventive safety measures to promote the health and

well-being of clients, significant others, and members of the health care team" (ATI, p.

5). To determine if there was a difference in the amount of gain in the category of Safety

on the ATI test between the NPCLE students and the NSCLE students, the researcher

conducted a *t*-Test of two independent means. A preliminary test of variances indicated

the variances were equal. The analysis revealed the average gain for the NPCLE students

(M = 7.26, S.D. = 9.44) was not significantly different from the average gain of the

NSCLE students (M = 0.52, S.D. = 13.13); $t(44)$ = 1.682, p = 0.0996. Therefore, the

researcher failed to reject Null Hypothesis 3.

RN health promotion and maintenance. "The nurse directs nursing care to

promote prevention and detection of illness and support optimal health" (ATI, p. 5). To

determine if there was a difference in the amount of gain in the category of Health

Promotion and Maintenance on the ATI test between the NPCLE students and the

NSCLE students, the researcher conducted a *t*-Test of two independent means. A

preliminary test of variances indicated the variances were equal. The analysis revealed

the average gain for the NPCLE students (M = 8.79, S.D. = 15.47) was significantly

different from the average gain of the NSCLE students (M = -3.04, S.D. = 13.96); $t(44)$ =

2.51, p = 0.0158. Therefore, the researcher rejected Null Hypothesis 3.

RN psychosocial integrity. "The nurse directs nursing care to promote and

support the emotional mental and social well-being of clients and significant others"

(ATI, p. 5). To determine if there was a difference in the amount of gain in the category

of Psychosocial Integrity on the ATI test between the NPCLE students and the NSCLE

students, the researcher conducted a *t*-Test of two independent means. A preliminary test

of variances indicated the variances were unequal. The analysis revealed the average

gain for the NPCLE students (M = 12.41, S.D. = 10.21) was significantly different from

the average gain of the NSCLE students (M = -13.75, S.D. = 18.40); $t(12)$ = 6.119, p =

0.0001. Therefore, the researcher rejected Null Hypothesis 3.

RN basic care and comfort. "The nurse provides nursing care to promote comfort and assist client to perform activities of daily living" (ATI, p. 5). To determine if there was a difference in the amount of gain in the category of Basic Care the ATI test between the NPCLE students and the NSCLE students, the researcher conducted a *t*-Test of two independent means. A preliminary test of variances indicated the variances were equal. The analysis revealed the average gain for the NPCLE students (M = 13, S.D. = 20.19) was significantly different from the average gain of the NSCLE students (M = -1.12, S.D. = 16.64); $t(44) = 2.439$, $p = 0.0188$. Therefore, the researcher rejected Null Hypothesis 3.

RN pharmacological and parenteral therapies. "The nurse administers, monitors and evaluates pharmacological and parenteral therapy" (ATI, p. 5). To determine if there was a difference in the amount of gain in the category of Pharmacological and Parenteral Therapies on the ATI test between the NLE students and the NSCLE students, the researcher conducted a *t*-Test of two independent means. A preliminary test of variances indicated the variances were equal. The analysis revealed the average gain for the NPCLE students (M = 6.68, S.D. = 9.66) was not significantly different from the average gain of the NSCLE students (M = -1.45, S.D. = 12.62); $t(44) = 1.346$, $p = 0.1853$. Therefore, the researcher failed to reject Null Hypothesis 3.

RN reduction of risk potential. "The nurse directs nursing care to decrease clients' risk of developing complication from existing health disorders, treatments of procedures" (ATI, p. 5). To determine if there was a difference in the amount of gain in the category of Reduction of Risk Potential on the ATI test between the NPCLE students and the NSCLE students, the researcher conducted a *t*-Test of two independent means. A

preliminary test of variances indicated the variances were equal. The analysis revealed

the average gain for the NPCLE students (M = -3.39, S.D. = 9.45) was not significantly

different from the average gain of the NSCLE students (M = -3.03, S.D. = 14.09); $t(44)$ =

0.084, p = 0.9337. Therefore, the researcher failed to reject Null Hypothesis 3.

RN physiological adaptation. "The nurse manages and provides nursing care for

the clients with an acute, chronic or life-threatening illness" (p. 5). To determine if there

was a difference in the amount of gain in the category of Physiological Adaptation on the

ATI test between the NPCLE students and the NSCLE students, the researcher conducted

a t-Test of two independent means. A preliminary test of variances indicated the

variances were equal. The analysis revealed the average gain for the NPCLE students (M

= -6.453, S.D. = 12.71) was significantly different from the average gain of the NSCLE

students (M = 5.09, S.D. = 11.74); $t(44)$ = -3.123p = 0.0032. Therefore, the researcher

rejected Null Hypothesis 3.

The researcher conducted t-Test analysis utilizing students' pre-test scores and

post-test scores of the eight major content areas and the Total Scores from each student's

ATI exam to determine the difference in the amount of gain for each category between

the NPCLE students and the NSCLE students' scores. Nursing programs used

standardized nursing exams, such as ATI and HESI test, to predict the probability of

students' passing the nursing state licensure exam on a first attempt. The ATI

standardized test provided a valid method for comparing the learning experiences of

students in a preceptored clinical experience to students in a simulation clinical

experience in this research study. Table 14 provides a summary of the t-Test analysis of

Null Hypothesis 3 -Major Content Areas.

Table 14

Null Hypothesis 3 - t-Test analysis on ATI test Major Content Areas

	NPCLE		NSCLE				
	n	M (SD)	n	M (SD)	d.f.	t-Score	p-Value
Total Content Area	13	38.50 (32.52)	33	-7.88 (43.08)	44	3.500	0.0011 (R)
Management of Care	13	2.56 (8.72)	33	4.91 (14.53)	45	-0.544	0.5891
Safety	13	7.26 (9.44)	33	0.52 (13.13)	44	1.682	0.0996
Health Promotion	13	8.79 (15.47)	33	-3.04 (13.96)	44	2.51	0.0158 (R)
Psychosocial Integrity	13	12.41 (10.21)	33	-13.74 (18.40)	12	6.119	0.0001 (R)
Basic Care & Comfort	13	13.00 (20.9)	33	-1.12 (16.64)	44	2.439	0.0188 (R)
Pharma/Parenteral	13	6.68 (9.66)	33	-1.45 (12.62)	44	1.346	0.1853
Reduction of Risk	13	-3.39 (9.45)	33	-3.03 (14.09)	44	0.084	0.9337
Physiological Adaptation	13	-6.45 (12.71)	33	5.09 (11.74)	44	3.123	0.0032 (R)

Note: (R) = Reject the Null

The results of the *t*-Test of two independent means on the ATI Major Content

Areas between the NPCLE students and the NSCLE students displayed in Table 14 show

the average gain of the NPCLE students was significantly different from the average gain

of the NSCLE students, with the average gain of the NPCLE students higher in three of

the eight total content areas; health promotion, psychosocial integrity, and basic care and

comfort, as well as on the total score. The NSCLE students showed a statistically higher

average gain in one of eight area of the major content areas; physiological adaptation.

Null Hypothesis 3 - ATI Results in Clinical Content areas; Subset of the Major

Content

Next, after analyzing the major content areas on the ATI test, the researcher

analyzed the clinical content areas, a subset of the major content areas, on the ATI

standardized nursing exam, using a series of *t*-Tests to compare the NPCLE students' to

the NSCLE students' test scores. The clinical content areas included the total gain and

the nursing topics: fundamentals, leadership, pharmacology, safety, evidence-based

practice, teamwork and collaboration, nursing judgment, interprofessional

communication, and generalist nursing practice.

Total gain: clinical content areas. To determine if there was a difference in the

amount of Total Gain on the ATI test between the NPCLE students and the NSCLE

students in the Clinical areas: Fundamentals, Leadership, Pharmacology, Safety,

Evidence-Based Practice, Teamwork and Collaboration, Nursing Judgment,

Interprofessional Communication and Collaboration, and Baccalaureate Generalist

Nursing Practice, the researcher conducted a *t*-Test of two independent means. The

analysis revealed the average gain for the NPCLE students (M = 63.87, S.D. = 36.43)

was not significantly different from the average gain of the NSCLE students (M = 85.94,

S.D. = 75.06); $t(44) = -1.009$, $p = 0.3185$. The researcher failed to reject the null as the *p*-

value indicated the gain of the NPCLE students in the category of total gain in specific

Clinical areas was not significantly different than the gain the NSCLE students.

Fundamentals.

Ability to apply nursing principles and skills to basic needs of clients. Topics

include foundational client care concepts (i.e.: medical and surgical asepsis,

infection control, physical assessment, therapeutic communication, medication

administration, pain management, integral to the delivery of safe, ethical, and

legal nursing practice (ATI, p. 6).

To determine if there was a difference in the amount of gain in the category of

Fundamentals on the ATI test between the NPCLE students and the NSCLE students, the

researcher conducted a *t*-Test of two independent means. A preliminary test of variances

indicated the variances were equal. The analysis revealed the average gain for the

NPCLE students (M = 15.95, S.D. = 10.58) was significantly different from the average

gain of the NSCLE students (M = -7.47, S.D. = 12.19); $t(44) = 6.075$, $p = 0.0000$. The

researcher rejected the Null Hypothesis as the *p*-value indicated the gain of the NPCLE

students in the category of Fundamentals was significantly different than the gain the

NSCLE students.

Leadership.

Ability to manage the care of a caseload of clients and nursing care team while

using principles of management and supervision. Topics include leadership skills,

interdisciplinary collaboration, advocacy, prioritization, delegation, performance

improvement, continuity of client care, and principles of case management while

ensuring safe client care and efficient utilization of human and material resources

(ATI, p. 6).

To determine if there was a difference in the amount of gain in the category of

Leadership on the ATI test between the NPCLE students and the NSCLE students, the

researcher conducted a *t*-Test of two independent means. A preliminary test of variances

indicated the variances were equal. The analysis revealed moderate evidence the average

gain for the NPCLE students (M = 2.1, S.D. = 12.58) different from the average gain of

the NSCLE students (M = 11.82 S.D. = 12.58); $t(44) = -2.013$, $p = 0.0502$. This

indicated the gain of the NPCLE students in the category of Leadership was significantly

different than the gain the NSCLE students, and therefore, the researcher rejected the null

hypothesis.

Pharmacology.

Ability to apply concepts related to the pharmacodynamics and

pharmacotherapeutics of commonly prescribed medications for clients with

physical and mental health disorders. Topics include principles of medication

administration and dosage calculation, side/adverse effects, drug/food

interactions, contraindications, and nursing implications integral to the safe

administration of medications to clients across the lifespan. (ATI, p. 6)

To determine if there was a difference in the amount of gain in the category of

Pharmacology on the ATI test between the NPCLE students and the NSCLE students, the

researcher conducted a *t*-Test of two independent means. A preliminary test of variances

indicated the variances were equal. The analysis revealed the average gain for the

NPCLE students (M = 7.67, S.D. = 16.38) was not significantly different from the

average gain of the NSCLE students (M = -0.333, S.D. = 18.18); $t(44) = 1.380$, $p =$

0.1745. This indicated the gain of the NPCLE students in the category of Pharmacology

was not significantly different than the gain the NSCLE students; therefore, the

researcher failed to reject the null.

Safety. "The minimization of risk factors that could cause injury or harm while

promoting quality of care and maintaining a secure environment for clients, self, and

others" (p. 7). To determine if there was a difference in the amount of gain in the

category of Safety on the ATI test between the NPCLE students and the NSCLE students,

the researcher conducted a t-Test of two independent means. A preliminary test of

variances indicated the variances were equal. The analysis revealed the average gain for

the NPCLE students (M = -0.9, S.D. = 8.82) was not significantly different from the

average gain of the NSCLE students (M = -0.43, S.D. = 9.92); $t(44) = 1.951$, $p = 0.0573$.

This indicated the gain of the NPCLE students in the category of Safety was not

significantly different than the gain the NSCLE students; therefore, the researcher failed

to reject the null.

Evidence-Based Practice. "The use of current knowledge from the research and

other credible sources to make clinical judgments and provide client-centered care" (ATI,

p. 7). To determine if there was a difference in the amount of gain in the category of

Evidence-Based Practice on the ATI test between the NPCLE students and the NSCLE

students, the researcher conducted a t-Test of two independent means. A preliminary test

of variances indicated the variances were equal. The analysis revealed the average gain

for the NPCLE students (M = 3.33, S.D. = 10.81) was not significantly different from the

average gain of the NSCLE students (M = 0.96, S.D. = 10.99); $t(44) = 0.662$, $p = 0.5112$.

This indicated the gain of the NPCLE students in the category of Evidence-Based

Practice was not significantly different than the gain the NSCLE students; therefore, the

researcher failed to reject the null hypothesis.

Teamwork and Collaboration. "The delivery of client care in partnership with

multidisciplinary members of the health care team, to achieve continuity of care and

positive client outcomes" (ATI, p. 7). To determine if there was a difference in the

amount of gain in the category of Teamwork and Collaboration: on the ATI test between

the NPCLE students and the NSCLE students, the researcher conducted a t-Test of two

independent means. A preliminary test of variances indicated the variances were equal.

The analysis revealed the average gain for the NPCLE students (M = 14.47, S.D. =

17.23) was significantly different from the average gain of the NSCLE students (M = -

1.282, S.D. = 23.08); $t(44) = 2.2229$, $p = 0.0309$. This indicated the gain of the NPCLE

students in the category of Teamwork and Collaboration was significantly different than

the gain the NSCLE students; therefore, the researcher rejected the null hypothesis.

Nursing Judgment. "Nursing judgment involves the use of critical thinking and

decision-making skills when making clinical judgments that promote safe, quality patient

care" (ATI, p. 7). To determine if there was a difference in the amount of gain in the

category of Nursing Judgment on the ATI test between the NPCLE students and the

NSCLE students, the researcher conducted a t-Test of two independent means. A

preliminary test of variances indicated the variances were equal. The analysis revealed

the average gain for the NPCLE students (M = 5.861, S.D. 4.666) was significantly

different from the average gain of the NSCLE students (M = -0.983, S.D. = 7.377); $t(44)$

= 3.098, $p = 0.0034$. This indicated the gain of the NPCLE students in the category of

Nursing Judgment was significantly different than the gain the NSCLE students;

therefore, the researcher rejected the null hypothesis.

Interprofessional Communication and Collaboration. "The need for nurses to

be able to function as a member of the healthcare team while promoting an environment

that supports interprofessional communication and collaboration with the goal of

providing patient-centered care" (p. 8). To determine if there was a difference in the

amount of gain in the category of Interprofessional Communication and Collaboration on

the ATI test between the NPCLE students and the NSCLE students, the researcher

conducted a t-Test of two independent means. A preliminary test of variances indicated

the variances were equal. The analysis revealed the average gain for the NPCLE students

(M = 7.760, S.D. = 17.38) was not significantly different from the average gain of the

NSCLE students (M = 7.71, S.D. = 20.05); $t(44) = -0.009$, $p = 0.9932$. This indicated the

gain of the NPCLE students in the category of Interprofessional Communication and

Collaboration was not significantly different than the gain the NSCLE students; therefore,

the researcher failed to reject the null hypothesis.

Baccalaureate Generalist Nursing Practice. The need for nurses to be able to

practice as a generalist using clinical reasoning to provide care to patients across the

lifespan and healthcare continuum and to individuals, families, groups, communities, and

populations" (p. 8). To determine if there was a difference in the amount of gain in the

category of Baccalaureate Generalist Nursing Practice on the ATI test between the

NPCLE students and the NSCLE students, the researcher conducted a t-Test of two

independent means. A preliminary test of variances indicated the variances were equal.

The analysis revealed the average gain for the NPCLE students (M = 0.954, S.D. = 6.72) was not significantly different from the average gain of the NSCLE students (M = 0.3, S.D. = 7.17); $t(44) = 0.283$, $p = 0.7783$. This indicated the gain of the NPCLE students in the category of Baccalaureate Generalist Nursing Practice was not significantly different than the gain the NSCLE students; therefore, the researcher failed to reject the null hypothesis.

The ATI standardized nursing exam provided clinical content area topics, a subset of the major content area topics. The researcher conducted a series of t-Test for each clinical content topic to determine if there was a difference in the amount of gain between the NPCLE students' scores and the NSCLE students' scores. Since nursing standardized test are used to predict a student's success for passing nursing state licensure exams on the first attempt, the researcher determined the ATI standardized test scores provided a valid method for comparing the learning experiences of students in the preceptored clinical group to the learning experiences of students in the simulation clinical group. Table 16 reveals the results of the t-Test analysis for Null Hypothesis 3 - Clinical Content Areas.

Table 15

Null Hypothesis 3 - t-Test analysis on ATI Clinical Content Areas

	NPCLE		NSCLE				
	n	M (SD)	n	M (SD)	df	t-Score	p-Value
Total Gain	13	63.87 (36.43)	33	85.94 (75.06)	44	-1.009	0.3185
Fundamentals	13	15.95 (10.58)	33	-7.47 (12.19)	44	6.075	0.0000 (R)
Leadership	13	2.1 (12.58)	33	1.82 (12.58)	44	-2.013	0.0502 (R)
Pharmacology	13	7.67 (16.38)	33	-0.333 (18.18)	44	1.380	0.1745
Safety	13	-0.9 (8.82)	33	-0.43 (9.92)	44	1.951	0.0573
Evidence-Based Practice	13	3.33 (10.81)	33	0.96 (10.99)	44	0.662	0.5112
Teamwork/Collaboration	13	14.47 (17.23)	33	-1.282 (23.08)	44	2.2229	0.0309 (R)
Nursing Judgment	13	5.861 (4.666)	33	-0.983 (7.377)	44	3.098	0.0034 (R)
Interprofessional Comm	13	7.760 (17.38)	33	7.71 (20.05)	44	-0.009	0.9932
Generalist Practice	13	0.954 (6.72)	33	0.3 (7.17)	44	0.283	0.7783

Note: (R) = reject the Null hypothesis

The results for Null Hypothesis 3 in regard to clinical content areas showed an average gain for the NPCLE students was significantly different from the average gain of the NSCLE students in four of the nine areas; fundamentals, leadership, teamwork/ collaboration, and nursing judgment. The NPCLE students had a significantly higher mean score than the NSCLE students in these areas. Six clinical content areas and the total showed no statistical difference.

Interview Data Analysis

The Overarching Research Question laid the foundation for the four Research Sub-Questions in this research study. The 10 Interview Questions (see Appendix Q) stemmed from the four Research Sub-Questions. The researcher conducted individual in-depth interviews with eight nursing students, four from each nursing clinical practicum group. The students chose a time and place for the interview, upon completion of their clinical practicum hours. The researcher typed the recorded interviews and then coded the data using a table to align the research sub-questions, interview questions, students' responses, and alignment with andragogical principles (see Table 8). Faculty from the community college designed the clinical practicum experiences with no direct intention of applying andragogical principles to the learning experiences. The researcher analyzed the data noting any relationships to andragogical principles and the learning experiences retrospective to the students' learning experiences.

Research Sub-question 1A - issues with NPCLE experience. What are the issues with nursing preceptored clinical learning experiences in achieving management skills to meet the principles of managing the nursing care of a group of patients in the role of beginning staff nurse?

NPCLE positive issues. The researcher reviewed the coded interview data and noted the top four positive issues related to students achieving management skills in nursing in the NPCLE included; (a) improved self-confidence, (b) clinical decision making, (c) communication, and (d) opportunities to practice nursing skills with preceptor. The researcher gathered extensive interview data which, when coded, included 36 pages of data. Some examples of students' comments supported the top four positive issues.

First, regarding, (a) improved self-confidence: a student reported, "My self-confidence improved as I did more planning on my own and got to make decisions and then talk about them with my preceptor." Another student reported, "My teacher stopped to visit, and I was scanning meds, I asked her if she could wait to speak to me, as I needed to focus when giving meds . . . the teacher stated she was proud to see me make a safe decision and was happy to wait to talk."

Second, regarding (b) clinical decision making: one student stated, "I called the pharmacist on my own because I needed clarification on a medication." Another student commented, "I followed the neurologist into a patient's room and explained I was a student nurse, and he went over an in-depth neurological assessment with me while he was assessing the patient."

Third regarding (c) communication: a student related, "I let the nurses know I wanted to learn the nurse's role when caring for patients on vents, and I wanted to learn to care for the post-op cardiac patients." The student continued, "The nurses knew I was really interested so they took time to help me learn to care for this type of patient." Another student reported, "Every shift I work with my preceptor, we discuss things all day long . .

. I feel like I can ask any question to the nurses and they actually go out of their way to explain things to me." A third student related, "I find it very difficult to give shift report, so my preceptor lets me practice report with her before the next shift comes on." The student continued, "Most of the nurses I give report to are patient with me, and they help point out the important things to include in report."

Fourth, regarding (d) prioritization: a student reported, "I had lots of opportunities on this unit, with my preceptor, I got to pull a sheath, I got to hang Amiodarone for the first time." The student continued, "My preceptor and I talked about the things I needed to think about before following an order." Another student reported, "this is real-life, I see things in action, not reading questions in a textbook . . . I have learned really small things make a difference in prioritizing patients."

NPCLE negative issues. Next, in regard to negative issues, two main issues stood out from the interview data, (a) inexperienced preceptor and (b) feelings of uncertainty. In regard to (a) inexperienced preceptor: one of the four students interviewed reported her NPCLE as a poor experience. The student reported, "My preceptor has only been a nurse for a year, she treated me like a student, I felt like she didn't have the experience to be a good preceptor." Another nurse mentioned, "I know one of the students is not happy with her preceptor, but she doesn't feel comfortable talking to the faculty about it."

In regard to (b) feelings of uncertainty: A student shared, "I am unsure sometimes, which patient to see first, especially when the patients are doing okay, but my preceptor is always there, so it is nice to be able to ask her questions."

Research sub-question 1B - issues with NSCLE. What are the issues with nursing simulation clinical learning experiences in achieving management skills to meet

the principles of managing the nursing care of a group of patients in the role of beginning staff nurse?

NSCLE positive issues. The researcher reviewed the coded interview data and noted the top four positive issues related to students achieving management skills in nursing in the NSCLE included; (a) independent clinical decision making, (b) increased self-confidence, (c) prioritization, and (d) safety.

First, regarding (a) independent clinical decision making, one student noted, "The [human patient simulator] patient was given a drug and fluid that was inappropriate for that type of patient and I called the doctor and stopped the fluids and the med . . . doing that on my own made me feel I can make more decisions in the future in practice." Another student relayed, "I identified medications and errors, abnormal labs, and used the information to decide whether or not to give meds . . . I did all of these things correctly, on my own."

Second, regarding (b) increased self-confidence, a student stated, "I think in doing prep work, each person can decide how far they want to go with their own learning. I spent a lot of time prepping, because I wanted to dig as deep as I could." The student continued, "I had to make decisions on my own in each simulation, it was really scary, but in the end I did really well." Another student noted, "Identifying medications and medication errors and abnormal labs guided whether or not to give the medications, I did all of these things correctly . . . some students did not note the errors and gave all the meds, but this was our first one-on-one simulation, so we were nervous."

Third regarding (c) prioritization, a student reported, "I was able to determine the most important issues in each simulation, I felt knowing what to do during the simulation made me feel more confident." This same student stated,

> For example, the COPD patient was getting discharged, but the patient started complaining of shortness of breath, so I had to decide if her oxygen level was okay, I did a lung assessment, I had to decide whether to discharge the patient home or not, so first I called the physician with the lab results, medication list, and oxygen level and reported my lung assessment.

Fourth regarding (d) safety, a student stated, "Catching all the medication errors – I was on cloud 9, I couldn't believe I caught all the errors!" Another student reported a safety issue with a medication, "My patient had atrial fibrillation and I identified the rhythm, I talked to the doctor and received an order to start Amiodarone IV. The student continued, "I identified the medication dose on the bag of Amiodarone was not correct, and I then learned something new about Amiodarone from the instructor that I was not familiar with." A notable, interesting comment by a student included,

> The simulations are planned by faculty, so they can focus on things we need to learn, I think being in a hospital is helpful, but a lot of times students aren't with patients who are really sick, so in simulation I see things I may not see in clinical.

NSCLE negative issues. The negative issues, reported in the interviews included; (a) difficulty communicating with a human patient simulator, (b) a need for more one-on-one simulations throughout the program, and (c) too much time allotted for research project.

In regard to, (a) difficulty communicating with a human patient simulator, a student commented, "It is hard to talk to the simulator, you do not see real emotions like with a real person." Another student made a similar comment, stating, "It is hard to look at a mannequin and assess what is going on, they have a kind of blank stare, so it really depends on the faculty running the simulation to make the problem the patient is having seem real."

A couple of students noted (b) a need for more one-on-one simulations throughout the program. While this comment could be viewed as a positive comment in relation to future NSCLE, in this particular clinical the students felt a need for more simulation learning experiences. A student pointed out,

> I would like to have more simulations in earlier semesters where we have to do things on our own, learn how to make decisions, so by the time we get to this semester we are more prepared to be in simulations on our own and more responsible for making decisions.

> Another student stated something similar,

> I don't feel like we do enough simulation in our program, I think if we did it three times each semester, we would build more confidence, and after we get further along in the program, we could do more things on our own even though it is really scary, it helps us to make decisions on our own.

> One final comment included, "My highest recommendation is grade it, make it high-stakes, more serious, and more difficult!"

Finally, students commented about, (c) too much time allotted for the research project. A student reported,

I thought the research was a good part of the experience, but that was for my

group . . . I felt some groups picked topics that were really dry . . . it was a lot to

listen to, we did it for 2 days, there was a Q&A period, but doing the research for

my topic was a help because I will certainly remember it.

Another reported, "I think we should do more one-on-one simulation in place of

the research project."

Research sub-questions 1A NPCLE and 1B NSCLE - similarities related to

issues in achieving management skills in nursing. To determine if there were

similarities between the NPCLE student responses and the NSCLE student responses, the

researcher compared the responses of both groups. Both the NPCLE and NSCLE student

groups expressed the experience increased their self-confidence and both groups of

students provided examples of critical thinking and decisions making. Both groups

reported hands-on learning experiences. Three students from both groups stated the

learning experience was very positive. One student from the NPCLE group reported a

negative learning experience related to working with an experienced preceptor. One

student from the NSCLE reported working with one faculty who told students, she was

not a fan of simulation. The student stated the faculty's comments had a negative impact.

Research sub-question 1A NPCLE and 1B NSCLE differences related to issues

in achieving management skills in nursing. To determine if there were differences

between the NPCLE and NSCLE students' responses, the researcher compared the

responses of both groups. The NPCLE students frequently relied on the preceptor when

making clinical decisions, and although able to make decisions on their own, they often

reported collaboration with the preceptor or other nurses when making clinical decisions.

The NPCLE students reported on real-life experiences, and from the researcher's observations during the interview conversations, the students were excited to talk about their experiences. The NSCLE students clearly remarked on the responsibility they felt making clinical decisions on their own, without the safety-net of a preceptor or teacher. The NSLCE students discussed simulated real-life experiences and how they made decisions knowing they could not kill the simulated patient, which led them to making decisions they might hesitate to make in real-life but had to make as the nurse in the simulation. Students commented on feeling proud of themselves making decisions on their own during the simulations.

Research sub-question 2 - NPCLE and the process of andragogy. In what way, if any, is the process of the Theory of Adult Learning – Andragogy, integrated into a nursing students' educational experience in a nursing practicum? The researcher developed interview questions reflecting on Henschke's (1989) definition of andragogy used in this study:

> A scientific discipline for the study of the theory, processes, technology, and anything else of value and benefit including learning, teaching, instructing, guiding, leading, and modeling/exemplifying a way of life, which would bring adults to their full degree of humaneness. Thus, andragogy's primary principle being the desire, potential and ability for self-directedness on the part of the learner. (p. 8)

Interview questions focused on nursing students' opportunities during the learning experience to (a) solve problems independently, (b) collaborate with peers, teachers, or preceptors to learn from one another, and (c) identify learning needs, or discuss situations

where they identified a personal learning need, took action(s) to meet the need, and assess their action(s).

In response to (a) solving problems independently, one student in the NPCLE reported, "Anytime something would come up I would try to solve it myself, but then run it by my preceptor." Another student commented, "I found nurses have their own way of doing things, and as long as you follow procedures, you can find your own way of doing things." Another student replied, "It gave me the opportunity to rely on my instincts, for example, I called the pharmacist because I needed clarification on a medication."

Next, students discussed (b) collaborating with peers, teachers, or preceptors to learn from one another. One student stated, "My preceptor and I collaborated all day long, but I haven't talked to other students much or my faculty because I didn't have any problems." Another reported, "I can ask questions to the nurses and they go out of their way to explain things to me; the nurses on the unit will find me if they have something interesting for me to experience." A student reported, "I talk to the techs, the physicians and I am learning how a unit works." Another student reported,

I talk to one of my peers after work and she told me she gave a patient Lasix IV push over two minutes, like we learned in school, and was surprised her preceptor didn't remember the protocol for giving IV Lasix.

Another student related, "I was able to work with a wound care nurse and do a dressing change, I was able to do it, she walked me through it, but let me do it."

Regarding (c) identify learning needs, or discuss situations where they identified a personal learning need, took action(s) to meet the need, and assess their action(s), a student commented, "I need to learn more about charting, I need a lot of time to do that.,

there was never enough time in clinical" A student reported, "If it is my first time doing something with a patient, I learned I need to stay calm and be reassuring, I have to carry myself with confidence and not show nervousness in front of the patient." A student noted,

> My preceptor showed me how to use Micromedix to see if IV meds are compatible before hanging them, we gave a lot of oral meds in nursing school and prepped for that, but not much about compatibility, so now I know I have to be concerned about that.

Research sub-question 2 - NSCLE and the process of andragogy. In what way, if any, is the process of the Theory of Adult Learning – Andragogy, integrated into a nursing students' educational experience in a nursing practicum? Interview questions focused on specific instances where nursing students were given the opportunity to (a) solve problems independently, (b) collaborate with peers, teachers, or preceptors to learn from one another, and (c) identify learning needs, or discuss situations where they identified a personal learning need, took action(s) to meet the need, and assess their action(s).

Regarding (a) given the opportunity to solve problems independently, a student summarized, "We had to think on our own feet, it was more realistic with no mentor to think for you or tell you what to do, you had to base decisions on your own knowledge." Another student commented, "Each person can decide how far they want to go with their own learning; I spent a lot of time prepping [for simulations] because I wanted to dig as deep as I could." In a final comment, a student related, "It was up to me to interpret lab values and to interpret rhythms and to know one PVC [premature ventricular contraction]

is not normal, but one is not as worrisome as multiple PVCs." She further stated, "I

related abnormal lab values to abnormal rhythms."

Next, in discussion of (b) collaborate with peers, teachers, or preceptors to learn

from one another, one student noted, "My instructor was key because she helped me

focus on what was occurring and think about how I would respond in real-life." Another

student commented, "We collaborated by listening to what other students would do

differently during debriefing sessions, I learned about something I missed, or things we

all did the same." A student noted, "We were able to sit with faculty and talk things over,

we had one-on-one debriefing sessions with faculty, we had a lot of resources including

books, videos and each other." Students shared multiple instances of collaboration with

others, with one student noting, "You could call the physician, like in the real-world you

learn there is a team to work with, especially important for a new nurse."

And finally, (c) identify learning needs, or discuss situations where they

identified a personal learning need, took action(s) to meet the need, and assess their

action(s). A student shared, "I realized I would benefit doing more one-on-one

simulations during nursing school to have more opportunities to make decisions on my

own." Another explained, "I realized during the simulations, I don't know the side

effects of medications as well as I want to, I am going to focus heavy on pharmacology

when I study for NCLEX, and on synthesizing the information about the patient." A

student shared, "There is a lot of content to cover in nursing, and there are a lot of things

we didn't cover, so I need to learn things on my own and use resources to prepare for

practice."

Research sub-question 2 - similarities in NPCLE and NSCLE related to the process of andragogy. To determine if there were similarities between students from the NPCLE and the NSCLE groups, the researcher compared students' responses to interview questions seeking similarities. The researcher found andragogical principles notable in students' responses including; learners participate actively in the learning process, learners feel a need to learn, the learning environment is characterized by physical comfort, and respect, mutual helpfulness, and acceptance of differences.

Students from both clinical groups relayed instances when they used their instincts and their own knowledge to make decisions on their own. The NPCLE group mentioned collaboration with nurses, nursing assistants, peers, physicians, and pharmacists. The NSCLE group discussed collaborating with teachers and peers and the option to make phone calls to the nurse educator who played the role of nursing assistants, pharmacists, lab techs, and the physician. Both groups of students provided examples of identifying a learning need and the action needed to meet the need.

Research sub-question 2 - differences in NPCLE and NSCLE related to the process of andragogy. To determine if there were differences between students from the NPCLE and the NSCLE groups, the researcher compared students' responses to interview questions in relation to the process of the adult learning theory - andragogy. The andragogical principles most notable in NPCLE student responses included; learners participate actively in the learning process, learners feel a need to learn, the learning environment is characterized by physical comfort, respect, mutual helpfulness, and acceptance of difference.

The researcher found andragogical principles of mutual trust and freedom of expression apparent in some student responses, but the opposite reported in a couple of instances. At least one NPCLE student reported a lack of mutual trust between her and the preceptor, due to the preceptor's inexperience in the role. The student reported feelings of discomfort in relaying this information to the nurse faculty, so she did not report it. Another student reported one of her peers as having a negative experience with a preceptor, where the peer felt she was being treated like an inexperienced student and not as a student entering the role of the professional nurse.

Again, the main difference students reflected upon when discussing their learning experiences included the NPCLE students' close relationship with their nurse preceptors. Although students reported instances when they made decisions on their own, they included running the decision by the preceptor, or discussing a clinical decision with another nurse. It was not surprising considering, the role of the preceptor is "supervising a student in the clinical setting" (Hayden et al., 2014, p. S42). Next, the NPCLE students had 'real-life' experiences with nurses and health care professionals in real-life patient situations, with the safety-net of a nurse preceptor to rely upon. In order to perform certain clinical skills, students needed directed supervision with a preceptor, due to hospital safety policies.

In contrast, the NSCLE students reported entering each simulated 'real-life' experience on their own and reported making clinical decisions that led to performing nursing skills based on their individual synthesis of nursing knowledge without the safety net of a preceptor or instructor. The researcher found andragogical principles notable in student responses including; learners participate actively in the learning process, concept

of self as non-dependent, self-directed person, the learning environment is characterized

by mutual trust and respect, mutual helpfulness, freedom of expression, and acceptance

of differences. Other notable andragogical principles included; the learners perceived the

goals of a learning experience to be their goals, the ability to diagnose my own learning

needs realistically, the ability to relate to peers collectively, to see them as resources for

diagnosing needs, planning my learning, and learning to give help to them and receive

help from them. These principles stood out as students discussed the prep work and

debriefing sessions related to simulation and the group work activities revolving around

the research project.

Research sub-question 3 - NPCLE and NSCLE design of the practicum.

How, if at all, does the design of the practicum meet the goal of helping the nurse

develop the following nursing management skills; therapeutic communication,

interdisciplinary patient care, clinical decision making, culturally competent care, ethical

and values centered care, delegation, prioritization, safety, conflict resolution, and time

management?

The researcher developed two interview questions related to the design of the

clinical practicum learning experiences. The first interview question asked students to

relate specific instances in their practicum experiences that provided them the

opportunity to demonstrate each nursing management skill. The researcher provided a list

of the management skills for students to review during the interviews.

In Chapter Three, the researcher discussed the process undertook to determine

the number of times students from the NPCLE group and students from the NSCLE

group referred to each one of the 10 management skills of nursing during individual

interviews. The researcher marked the number of times students from each group

mentioned a particular management skill when discussing specific clinical learning

experiences. The researcher then tallied the total for each skill for each group.

Table 16 provides a list of the number of times each group used words or descriptions of

a nursing management skills.

Table 16

Management Skills List Matched to Student Interview Data

Management Skills in Nursing	NPCLE Interview Responses	NSCLE Interview Responses
Therapeutic Communication	13	10
Interdisciplinary Patient Care	4	10
Clinical Decision Making	14	27
Culturally Competent Care	1	0
Ethics and Value Centered Care	0	5
Delegation	1	4
Prioritization	11	14
Safety	8	9
Conflict Resolution	5	3
Time Management	6	4
Total	63	86

Interestingly, the top skills listed under each clinical practicum experience in

Table 16, reflected congruence with student interview data under Research Question 1A

and Research Question1B, in regard to the top four issues students discussed in achieving

the management skills of nursing.

Next, again in reference to Table 16, the number of responses in which the

management skills were mentioned revealed a clear relationship between the student

clinical experiences and the goals of the clinical practicum learning experiences. Four

student interviews from the NSCLE students totaled 86 responses to specific skills, while

the four student interviews from NPCLE students totaled 63 responses to specific skills.

The most notable data determined from the interview responses showed the NSCLE

students reported instances of Clinical Decision Making twice as many times as the

NPCLE students (see Table 16). A student's ability to make clinical decisions revealed

the student's ability to use critical thinking skills to make clinical judgments. All other

skills were notably dependent on the skill of clinical decision making.

The NSCLE reflected the influence of the andragogical approach of self-directed

learning in the design of the learning experience. The simulation learning experience

provided a learner-centered andragogical process design in comparison to the teacher-

directed learning design of the preceptored clinical experience. The simulation design for

the practicum clinical provided students the ability to learn on their own, and diagnose

their learning needs, which according to Knowles (1975) was "a basic human

competence" (p. 17) needed for survival in this world.

Research sub-question 3 - NPCLE student recommendations. The second

interview question under research sub-question 3 asked students, based on your

experience in the preceptored clinical learning experience or the simulation learning

experience list 3-4 guidelines you would recommend to community college nursing

programs, partnering with nurse educators to design a nursing management practicum

experience? The NPCLE students' recommended guidelines included:

- if possible, choose a nurse the student knows and wants to work with; there is a level
  of trust that can be built upon to move from the student role to the nursing role faster,

- include more hours in the nursing program to work one-on-one with a preceptor,

- if possible, let the student choose a facility where the student already works, or where

   the students is applying to work, to learn more about the particular organization

   during clinical experience, and

- remind teachers to reinforce open communication, so students can report a preceptor

   who is not working out, without the student feeling intimidated to work with their

   assigned preceptor.

Research sub-question 3 - NSCLE student recommendations.

The NSCLE students' collective recommendations included the following:

- all nursing students should participate in one-on-one simulations, since faculty can

   create simulations based on the most important things we need to practice before

   graduation,

- provide more one-on-one simulations in preparation for clinical practice,

- make simulations high-stakes so students will take them more seriously and study and

   prepare,

- grade the simulations, the grades should count toward the course grade, and

- provide students a combination of preceptored clinical and simulation clinical

   learning experiences

Summary

The data from the mixed-methods study provided three methods of comparing the

NPCLE and the nursing simulation clinical learning experience (NSCLE). The results of

the MIPI data revealed the NSCLE as a more experienced-based learning technique -

learning-centered learning process, than the NPCLE. The results of the percentage

calculations corroborated the survey instrument data and revealed, the NSCLE scored

Above Average on use of andragogical principles while the NPCLE group scored

Average in one area, Experienced-Based Learning Technique/Learner-Centered Learning

Process.

Next, the findings from the ATI standardized pre-test and post-test data revealed

the NPCLE students scored a higher average gain than the NSCLE students, overall, in

the Major Content areas and Clinical Content areas. However, as mentioned in this

research study, a bias in the data results occurred, due to miscommunication or

misunderstanding of the ATI standardized test policy among Campus A and Campus B

faculty that affected the data collection; thereby, affecting the statistical analysis of the

ATI data.

To clarify, all Campus A NPCLE students and all Campus B NSCLE students

took the ATI pre-test. Campus A faculty required only the students who scored below a

determined acceptable level on the ATI pre-test needed to take the ATI post-test.

Conversely, Campus B faculty required all NSCLE students to take the ATI post-test.

The Campus A NPCLE students needed to remediate to obtain higher scores on the ATI

post-test and results indicated all NPCLE students scored higher on their post-test. The

Campus B NSCLE students each scored an acceptable ATI pre-test score, and therefore

the ATI post-test score did not affect their final grade. The NSCLE students' post-test

scores revealed lower overall post-test scores, and as one Campus B faculty summarized

"The students had no skin in the game." According to Fraenkel et al. (2015) bias "occurs

when the design of the study systematically favors certain outcomes" (p. G-1). In this

research study, the decision made on Campus A caused disruption to the original sample

population and resulted in a misrepresentation of the data analysis.

Lastly, the findings from the individual students' interview data revealed commonalities among the NPCLE students and the NSCLE students. Similarities included both groups of students reported increased self-confidence, and improved abilities to make clinical decisions. However, a major difference included the NPCLE students relied on preceptors for support in making clinical decisions and performing nursing skills. The NSCLE students relied upon themselves to make clinical decisions and to perform nursing skills. The NSCLE students expressed pride in being able to make decisions about nursing care and noted the experience made them feel they were performing in the role of the nurse.

The students in both clinical groups discussed challenges they encountered during their experiences; however, the NPCLE students related they asked their preceptors and other nurses for assistance when faced with challenges to ensure patient safety. The NSCLE expressed feeling anxious and nervous and discussed being challenged beyond their comfort level in the simulations; however students also noted the satisfaction they felt making correct critical decisions about patient care on their own, that could easily be real-life situations.

The most notable findings from the list of management skills derived from the interview data revealed the NSCLE students made clinical decisions during the simulation learning experiences twice as many times as the NPCLE students in the traditional preceptored clinical experience. The design of the simulation clinical learning experience provided an andragogical process design, which allowed students to make decisions on their own, to self-assess their performance abilities, to determine their learning needs, and to plan for future learning. The design of the preceptored-clinical

learning experience provided a more teacher-directed learning experience, although students made decisions, they were able to discuss their decisions with the preceptor prior to acting on their own.

Finally, the NPCLE and NSCLE students provided recommendations for future final semester clinical practicum learning experiences. Both groups recommended adding additional hours to the clinical practicum. Other recommendations differed, due to the differences in the nature of clinical practicum learning experiences. The NPCLE group suggested, first, faculty allow students to choose a nurse familiar to them as a preceptor noting a relationship that already existed and could advance quicker during the practicum. Second, allow students to choose a facility where they work or plan to work to become more familiar with the facility in preparation for employment. Third, the NPCLE students suggested the nursing faculty reinforce open communication with students, so students feel they can report a preceptor who is not working out without feeling intimidated.

The NSCLE students recommended, first, require all nursing students to participate in one-one-one simulation learning experiences with debriefing sessions, second, involve students in more high-stakes simulations so students will take simulation more serious and come more prepared, third grade the students' performance in simulations and count the grade toward the course grade, and fourth, provide a combination of one-on-one preceptored and one-one-one simulation clinical learning experiences in the final semester clinical. Chapter Five will further discuss the research findings, research implications, and recommendations for future research.

Chapter Five: Discussion

In Chapter Five, the researcher relates an overview and purpose of the study, the interpretation of results, implications, recommendations for future research, and study limitations.

Overview

A lack of clinical site availability, competition for clinical sites among nursing schools and other health care professions, and a lack of qualified nurse preceptors were among the top reasons schools of nursing turned away thousands of qualified applicants (AACN, 2017). The issues limiting the number of students admitted to nursing schools noticeably contributed to the nationwide nursing shortage. As far back as 2005, the AACN, suggested increasing the use of simulation in nursing clinical education as an alternative to the traditional hospital clinical experience (AACN, 2005). Experts in nursing simulation education and technology supported clinical simulation and recognized simulation as a student-centered learning experience allowing students to develop clinical decision-making skills when exposed to 'real-life' patient situations (IOM, 2010).

Not only was simulation seen as an alternative for the traditional hospital clinical experience, the literature supported simulation as a better choice for a clinical learning experience. The literature described simulation as a research-based teaching methodology for faculty to create real-life simulated scenarios focused on learning objectives key to nursing students' successful transition to practice. The INACSL "Standards of Best Practice: Simulation" provided guidelines for simulation design to meet program goals (INACSL Standards Committee, 2016b). A crucial part of a simulation learning

experience included debriefing, which occurred pre- and post-simulation, supported in

the literature as the part of simulation where the most learning occurs. The literature

pointed to some schools of nursing, where the substitution of nursing simulation clinical

in place of specialty nursing clinical, led to increased enrollment.

One type of specialty clinical, the nursing preceptored clinical, occurred in the

final semester of a nursing program where faculty paired senior students with an

experienced nurse preceptor for training and orientation to practice (Schaubhut, 2014).

Although the nursing preceptored clinical had been in place for over 50 years in nursing

education, the literature suggested it needed revision for various reasons. Some concerns

with the preceptored clinical experience included: the ability of the preceptor to

objectively assess student learning, lack of valid or reliable assessment instruments,

added workload on preceptor in an already stressful environment, and concerns about

some students' unsafe practices. Numerous research studies revealed the nursing

preceptored clinical experience left new nurses unprepared for transition to practice, and

revealed new nurses experienced fear and lack of confidence in themselves and their

ability to display skills proficiency. The literature also revealed, hospital nurse managers

reported new nurses lacked the ability to provide safe, quality, competent patient care.

Study Purpose

The researcher conducted this mixed-methods study to compare the NPCLE and

the NSCLE of senior nursing students in a final semester clinical practicum. The

objective of the study was to determine; how, if at all, is it possible to achieve

management skills in nursing to meet the principles of managing the nursing care of a

group of patients in the role of beginning staff nurse in a nursing management practicum?

Within the main purpose of the study results were two issues: first, to determine if the

NSCLE was at least as good as, if not better than, the NPCLE to meet the goals of the

clinical practicum learning experience; and second, to compare how andragogical

principles, if any, were incorporated into the clinical practicum learning experiences.

Interpretation of Results

The researcher used a mixed-methods study and gathered data from: (a) students'

results from a pencil and paper andragogical assessment instrument - the Modified

Instructional Perspectives Inventory (MIPI); (b) secondary data obtained from students'

standardized pre-test and post-test results on the Assessment Technology Institute (ATI)

exams; and, (c) students' responses from in-depth individual interviews. The researcher

used purposive sampling, which initially included 69 senior nursing students from two

campuses of a Midwest community college. However, due to some students failing the

course, the total number of student participants included 57 senior nursing students, 23 on

Campus A and 34 on Campus B. Of the 23 students on Campus A, 20 students

completed the MIPI, 23 completed the ATI pre-test, only 13 completed the ATI post-test,

and four participated in individual interviews. On Campus B, 31 students completed the

MIPI, 34 completed the ATI pre-test, 34 completed the ATI post-test, and four

participated in individual interviews.

Hypothesis 1. There is a difference between the MIPI results of students Total

Scores, Factor 3-Planning and Delivery, Factor 4-Accomodating Uniqueness of Myself as

a Learner, Factor 6-Experience-Based Learning/Learner Centered Learning Process, and

Factor 7- Preceptor (Centered Learning Process)/Simulation (Centered Learning Process)

in the preceptored clinical learning experience compared to the students in the simulation clinical learning experience.

The *t*-Test analysis showed a statistically significant difference in Factor 6 - Experienced-Based Learning/Learner-Centered Learning Process with the average gain for the NSCLE students higher than the average gain for the NPCLE students. Additionally, the NSCLE students scored the NSCLE in the Above Average category on the Use of Andragogical Principles, while the NPCLE students scored the NPCLE in the Average category on the Use of Andragogical Principles on Factor 6. Regarding Factor 3, Factor 4, Factor 7 and Total Scores, the data analysis revealed no statistically significant differences.

   Factor 6 - experienced-based learning techniques/learner-centered learning process. The results of Factor 6 showed a significant relationship to the literature between Factor 6 and NSCLE. Jeffries, a simulation expert stated simulation supported a student-centered approach to learning (as cited in IOM, 2010). The INACSL members agreed a benefit of simulation included simulation as an andragogical model for patient care management (Kardong-Edgren et al., 2011).

Henschke (1989) designed the MIPI for use as an andragogical assessment instrument. The items Henschke placed under Factor 6 reflected Knowles' (1975) competencies of self-directed learning in support of the process of adult learning. Further insight into the relation between Factor 6 and simulation can be found in the literature when looking at the specific items under Factor 6 on the MIPI, listed here: (2) Use buzz groups (learners grouped together to process information from peers), (10) Learn through real-life settings, (21) Engage in group discussion, (24), Participate in listening

teams (learners grouped together to listen for a specific purpose), and (35) Engage

in role play

For example, post-simulation debriefing sessions helped students process the

experience and the learning that came out of it, through self-reflection and conversations

with peers. According to Fey et al. (2014) students viewed debriefing as a positive

learning strategy and felt the learning experience was enhanced through group

discussions with faculty and peers. Several studies (Dreifuerst, 2015; Fey, Scrandis,

Daniels, and Haut, 2014; Shinnick, Woo, Horwich, and Steadman, 2011) pointed out

debriefing as key to clinical teaching and learning. According to Au, So, Cheong, Wang

and Van (2016), nursing students reported high-fidelity simulation experiences prepared

them for caring for a real patient, decreased stress in a critical situation, and prepared

them for future emergency situations. A multiple-patient-simulation supported students'

perceptions of engaging in a real-life experience, and according to Chunta and Edwards

(2013), provided "a realistic experience that mimicked expectations and responsibilities

of new graduates" (p, e496). Comer (2005) recognized role play in simulation can be

developed with increasing difficulty to meet the student level of experience and found

role-play helped to develop their critical thinking skills.

Factor 7 - preceptor-centered learning process/simulation-centered learning

process. The NSCLE students and the NPCLE students scored Low Below Average on

the Use of Andragogical Principles on Factor 7. Upon reviewing the items under Factor

7, the researcher found the wording adapted for the MIPI instruments in this study on

Item 3 did not correctly state the researcher's intention of the questions. To clarify, Item

3 on the MIPI-NPCLE and MIPI-NSCLE stated: Believe that the primary goal of the

information presented in the clinical is to provide me with as much information as possible. In hindsight, the researcher felt Item 3 should state; Believe that the primary goal of the clinical is to provide me with as much information as possible. The wording that should have come out of Item 3 on both MIPIs is: 'the information presented in' - because of the wording used in this study on Factor 7, Item 3 changed the meaning of Factor 7; and thereby, changed the results.

Hypothesis 2. There is a difference between the MIPI results of Factor 1- Learner Empathy with Self, Factor 2- Leaner Trust of Self and Factor 5- Learner Insensitivity toward Self, comparing the preceptored clinical learning group to the simulation clinical learning group.

The *t*-Test data revealed the average gain for the NPCLE students was not significantly different than the average gain of the NSCLE students. Students in both groups scored the same on the Use of Andragogical Principles categories. The researcher's interest in examining the three Factors stemmed from the outcomes of other studies using the MIPI that revealed a relationship between Factors, 1, 2, & 5, and the outcomes of the study. To be more specific, Vatcharasirisook (2011) studied employees' perception of their employers and Kheang (2018) researched students' perceptions of their teachers using the MIPI. In both studies, when MIPI participants perceived a high level of trust and empathy from people in positions of authority over them, the results were positive; however, at the same time, when MIPI participants perceived a high level of insensitivity from people in positions of authority over them, the results negatively impacted the participants. In this research study the MIPI participants responded to perceptions about themselves and their beliefs, feelings, and behaviors when engaging in

a clinical activity. However, in the Vatcharasirisook's (2011) and Kheang's (2018) studies, participants responded to their perceptions about what someone in a position of authority over them was doing in relationship to them. Therefore, the differences in the use of the MIPI showed a difference in participants' responses. The results of this study in relation to Hypothesis 2 and the MIPI results provided valuable data for future researchers planning to use the MIPI instrument. For future studies, the researcher should note who is using the instrument, and whether the participants in the study are looking at perceptions about themselves or someone else's behavior.

Hypothesis 3. There is a difference between student's scores on a pre- and post-ATI nursing management standardized test when comparing students in nursing preceptored clinical learning experiences to students in nursing simulation clinical learning experiences.

Nursing schools commonly used standardized test, such as the ATI, as part of the nursing curriculum to predict NCLEX success and to guide remediation (Barton et al., 2014). The ATI test was commonly used in high-stakes testing in nursing education (Phelan, n.d.). The researcher planned to use the secondary data from the ATI test to compare the NPCLE to the NSCLE using numerical quantitative data. Fraenkel et al. (2015) noted test scores and grade point averages provided useful ways to simplify data information. The researcher hoped to use the quantitative data, along with the qualitative interview data, to gain a more holistic understanding of the comparison of the NPCLE and the NSCLE.

However, in this study, an unforeseen event occurred and only half the students in the NPCLE on Campus A took the ATI post-test, while all the students in the NSCLE on

Campus A took the ATI post-test. The Campus A students who took the post-test had an

incentive to improve their test scores to pass the course, while the Campus B students had

no incentive to improve their scores, as their final grade would not be affected by the

post-test. The ATI test results revealed a biased interpretation of the data, due to the

difference in test policies on the two campuses.

Although the ATI pre- and post-test data could not be used to compare the two

clinical groups, the NPCLE students to the NSCLE students, the researcher found the

pre-and post-test scores were valuable for looking at each student's scores individually.

The test data provided valuable information to predict an individual student's abilities in

each major content and clinical content areas. The ATI results helped faculty gain

increased understanding of using ATI data to interpret student success and the need for

remediation in specific areas. Additionally, the ATI research outcome alerted the

community college faculty and program directors of the need for consistency throughout

the nursing program regarding standardized testing policy on both campuses of the

community college.

Research sub-question 1A. What are the issues with nursing preceptored

clinical learning experiences in achieving management skills to meet the principles of

managing the nursing care of a group of patients in the role of beginning staff nurse?

The student interview data revealed students worked closely with their preceptors

when making clinical decisions and providing patient care. The NPCLE students viewed

the preceptors as mentors and depended upon the preceptors during the clinical

experience. McClure and Black (2013) noted numerous studies showed students felt a

good preceptor relationship was key to a good learning experience. And the opposite

held true, also; the literature showed a poor relationship with a preceptor or being paired

with an inexperienced preceptor resulted in a negative learning experience.

The interview data revealed students showed dependence upon their preceptor and

worked under the guidance of the preceptor to make clinical decisions. Students reported

instances of increased self-confidence after performing a high-level skill under the

supervision of the preceptor to gain hands-on experience. Students reported receiving

guidance from other nurses and health care professionals during their NPCLE. Patton et

al. (2013) noted nursing students learn through clinical opportunities for decision making

on real-life practice issues.

The student interview data also revealed issues of concern to students, such as

working with an inexperienced preceptor and lack of trust between inexperienced

preceptors and students. Numerous studies reported concerns about the ability of newly

graduated nurses, undergoing the traditional preceptored clinical experience to display

confidence, skills proficiency, and the ability to provide safe, quality, competent patient

care (Fink et al., 2008; Kramer, 1974; Standiford, & Covington, 2017). Studies also

showed a need for more communication between nursing faculty and preceptors, as well

as a need for better instruments for preceptors to assess students.

Research sub-question 1B. What are the issues with nursing simulation clinical

learning experiences in achieving management skills to meet the principles of managing

the nursing care of a group of patients in the role of beginning staff nurse?

The analysis of the interview data revealed students reported the NSCLE,

decreased anxiety, improved decision-making skills, increased self-esteem, increased

self-confidence, increased critical thinking skills, and increased faculty respect. The

literature supported these findings; Cooper et al. (2015) and IOM (2010) stated

simulation provided the technology and tools to develop complex patient scenarios to

meet specific learning outcomes to match the level of learner competencies. Students

reported feeling proud when making correct clinical decisions on their own,

understanding they would accept the consequences of their decisions. Overall the

interview data showed students reported feeling prepared to make real-life nursing

decisions based on their performance in simulation. The literature pointed to studies

showing simulation clinical experiences improved patient safety outcomes in critical

nursing skills, such as medication administration (Sears, Goldsworthy & Goodman, 2010;

and Harris et al., 2014).

　　　　Research sub-question 2. In what way, if any, is the process of the Theory of

Adult Learning – Andragogy, integrated into a nursing students' educational experience

in a nursing practicum?

　　　　Although the nursing faculty on Campus A and Campus B did not intentionally

integrate andragogical principles or process design into the nursing students' practicum

learning experiences, it is not surprising andragogy appeared in the nursing practicum

experiences. The literature showed nurse researchers found the Theory of Adult

Learning – Andragogy, fit well with nursing as a theoretical framework for research and

educational experiences. For example, Idczak (2007) related andragogy to nursing

stating, nursing like andragogy, is described as an art and a science. Nursing theory and

evidence-based practice encompassed the science of nursing, while the interaction

between the nurse as a caregiver for the patient encompassed the art of nursing (Idczak,

2007). According to Knowles (1970), andragogy also provided a technological direction

to adult education practice. Faculty needed to integrate teaching students about use of technology in nursing practice throughout the curriculum, and according to Porterfield (2004), a nurse researcher and educator, faculty best equipped to facilitate teaching and learning experiences for adult students understood how to make learning meaningful for adult learners who were ready to learn.

The researcher reviewed the student interview data seeking alignment with the andragogical competencies of self-directed learning in each clinical learning experience. First, a review of the NPCLE interview data again showed a focus on students' reliance upon the nurse preceptor or other health care professionals to make clinical decisions. The students' reliance on the preceptor was not surprising, as the role of the preceptor is that of a mentor, and so it is expected in the NPCLE. Schaubhut (2014) described the preceptor as an experienced nurse who trained and oriented nursing students in the clinical environment. Some students discussed positive relationships with their preceptor and perceived the learning experience as a positive experience. Other students discussed a negative experience, due to a lack of trust between the preceptor and the student in instances where the student was matched with an inexperienced preceptor. NPCLE data showed students may have several nurse preceptors, due to preceptor's schedule changes. Students' data revealed a need for improved communication between the student and the faculty member in instances where the student-preceptor match needed an intervention. The researcher noted students made no mention of formal assessment or evaluation methods used to assess their daily performance in the NPCLE. Student data did reveal students had conversations with preceptors throughout their day to discuss the activities of the day. Overall, the NPCLE revealed a more preceptor-centered learning experience

than a student-centered learning experience, mainly due to the students' strong reliance

upon their preceptors when making clinical decisions and performing nursing skills.

As mentioned throughout this research study, nursing accepted the NPCLE as a

tradition in nursing education and a clinical experience that assisted students in transition

to professional practice. However, the USDHHS (Levinson, 2010) and the IOM (2010)

suggested the current traditional NPCLE did not adequately prepare students for

transition to nursing practice as evidenced by nurse managers' concerns about safety

issues and quality of patient care issues regarding new nurses in clinical practice.

Next, the interview data results of the NSCLE students showed the students

related numerous instances of making clinical decisions on their own. Students discussed

working without the safety net of a nurse preceptor and discussed accepting responsibility

for the consequences of their actions. Student data showed the NSCLE students prepped

for simulation learning experiences and entered the simulated real-life scenario on their

own, made clinical decisions on their own during the simulation. Students learned

through debriefing sessions and self- evaluation sessions using assessment tools designed

for each specific simulation learning experience. The NSCLE students chose a clinical

topic of interest and worked in groups to research their topics.

Simulation included pre-briefing and debriefing sessions, which enhanced the

simulation learning experience and, according to numerous studies, increased knowledge

gains. According to Dreifuerst (2015), debriefing played a key part in simulation which

allowed students time to reflect and collaborate with peers. The International Nursing

Association for Clinical Simulation and Learning (INACSL, 2016a) defined debriefing as

"an activity that follows a simulation experience led by a facilitator wherein feedback is

provided on the simulation participants' performance while positive aspects of the

completed simulation are discussed, and reflective thinking encouraged" (p. S41). A

study by Fey et al. (2014) concluded students learned during debriefing and saw it as a

positive aspect of simulation. The student data revealed students took part in debriefing

sessions after each simulation in groups with peers. Students shared debriefing

individually with faculty to review their performance based on scores from faculty on the

assessment tools used in each simulation.

> Knowles (1975) referred to simulation as a performance assessment and stated;
>
> performance assessment in the area of *understanding* and *insight* requires that a
>
> participant demonstrate his ability to size up situations, see patterns, develop
>
> categories, figure out cause and effect relationships, and in general apply
>
> knowledge and thought processes to the analysis and solutions of problems …
>
> adults are likely to find simulation exercises in which they act out their
>
> understanding and insight of handling "live" problems to be more realistic and
>
> relevant (p. 87).

The NSCLE student data showed students appreciated the opportunity to do a

group research project and collaborate with peers on a clinical topic chosen by the group.

Students stated learning about evidence-based practice enhanced their understanding of

clinical decision making. Clearly from the interview data, the NSCLE revealed a more

self-directed, student-centered learning process design than the NPCLE. Knowles (1975)

competencies of self-directed supported the process of adult learning throughout the

NSCLE student learning experiences. The NSCLE data revealed a student-centered

approach to teaching and learning.

Research sub-question 3. How, if at all, does the design of the practicum meet the goal of helping the nurse develop the following nursing management skills: therapeutic communication, interdisciplinary patient care, clinical decision making, culturally competent care, ethical and values centered care, delegation, prioritization, safety, conflict resolution, and time management?

The researcher drilled down the coded interview data into coding units to display the number of times students reported an opportunity to meet a management skill during their practicum experience. It is important to note, the researcher recorded the number of times students from both groups discussed a management skill; however, the faculty assessed the NSCLE students' skills using assessment instruments for each simulation experience, while preceptors assessed NPCLE students' skills using one assessment tool upon completion of students' learning experience.

Faculty aligned students with a nurse preceptor in the NPCLE, with the preceptor in the role of mentor with professional expertise. The literature pointed to several concerns with the nurse preceptor design related to student learning. The literature showed although nurse preceptors were viewed as competent clinicians, they were not experienced educators trained and equipped to assess student learning. Wu et al. (2016) added the lack of valid and reliable instruments hindered the preceptors' ability to objectively assess students' clinical skills. Other studies noted preceptors reported added stress and concerns about patient safety when working with unskilled students (Hill & Melender, 2015; Standiford & Covington, 2017), which contributed to students' inabilities to meet the goals of the practicum learning experience.

The literature referred to the benefits of simulation, which included Standards of

Best Practice in Simulation[SM] to guide meeting measurable objectives (INACSL

Standards Committee, 2016b). According to Willhaus (2014) the design of simulation

provided a safe learning environment for students to practice. Faculty could plan and

design complex single or multi-patient scenarios with learning goals targeted to the level

of the learner to ensure students are capable of observing crucial yet subtle changes in

patients (Cooper et al., 2015). The literature discussed how simulation provided a way

for faculty to observe and assess nursing students' performance during simulation.

Finally, simulation provided a way to design high-stakes real-life scenarios for students

to perform and reflect on the experience and their learning through post-simulation

guided debriefing sessions.

In Table 17 the researcher outlined the coded interview data related to the

management skills in nursing of the NPCLE group and the NSCLE group.

Table 17

Nursing Management Skills Matched to Student Interview Data

Management Skills in Nursing	NPCLE Interview Responses	NSCLE Interview Responses
Therapeutic Communication	13	10
Interdisciplinary Patient Care	4	10
Clinical Decision Making	14	27
Culturally Competent Care	1	0
Ethical and Values Centered Care	0	5
Delegation	1	4
Prioritization	11	14
Safety	8	9
Conflict Resolution	5	3
Time Management	6	4
Total Responses	63	86

The most significant result displayed the NSCLE students discussed clinical

decision-making twice as often as the NPCLE students (see Table 17). The significance

in all other management skills in nursing are dependent on a student's ability to make

clinical decisions. The NPCLE students mentioned nursing management skills in 63

responses, and the NSCLE students mentioned the nursing management skills in 86

responses, overall 23 more times. The data suggested the NSCLE as a more interactive

experience, which stimulated students to make clinical decisions and perform nursing

skills based on those decisions. Students' ability to make clinical decisions about

providing patient care showed a strong sense of responsibility.

Table 17 results provided nurse educators insight into areas of strengths and

weaknesses related to skills development in both clinical practicum learning experiences.

The researcher spoke with nurse educators at the community college who showed great

interest in the results of data related to the management skills. The educators stated the

data provided a basis for creating learning experiences to ensure meeting the goals that

were not met looking at the data from this study.

Implications for Practice

This research study provided quantitative and qualitative data to be used as

evidence to support replacing final semester one-on-one NPCLE with one-on-one

NSCLE. The evidence showed NSCLE allowed students to achieve management skills in

nursing to meet the principles of managing nursing care for a group of patients in the role

of a beginning staff nurse to a greater extent than the preceptored clinical learning

experience. The results of the research study generated new information about the

comparison of NPCLE and NSCLE with the results revealing, the nursing simulation

clinical learning experience provided a student-centered, self-directed learning

experience utilizing andragogical principles of self-directed learning. The results

showed, the NPCLE provided a teacher-centered learning experience, with students

relying on the preceptor for direction and for patient safety concerns. The mixed

methods design of the study allowed the researcher to gather data using three methods to

ensure credibility and validity through data triangulation. A lesson learned from this

study to consider for future projects is one source of data could result in biased data;

however, if more than one method of data collection is used, the researcher has valid

results to make conclusions.

The researcher found several implications for practice stemmed from the results

of this study. The NSCLE provided a better practicum learning experience to meet the

objectives of the clinical course than the NPCLE based on the outcomes of this study.

Implications for practice included, first, nursing faculty need to provide nurse managers

with data showing simulation learning experiences prepared senior student nurses for

transition to practice; thereby, making these students excellent candidates for entry level

nursing positions. The traditional clinical learning experience had been accepted as the

gold-standard in nursing education for 50 years, so it will take time to educate nurse

managers and prepare them for changes taking place in nursing education. The data

supporting simulation as a strong and valid teaching methodology is important for nurse

managers to know and understand especially when interviewing new graduate nurses for

a clinical position.

Second, in this study, during an interview, one student reported to the researcher, she had gone on a job interview and the manager conducting the interview expressed concern that the student did not participate in a preceptored clinical learning experience. The researcher realized students need to be prepared to speak about the benefits of NSCLE and research studies showing simulation enhanced students' decision-making capabilities; thereby, improving their performance of management skills in nursing overall.

Third, professional organizations used simulation for decades as a valid and reliable training method for transition to practice. Link invented the first flight simulator trainer in 1929 with the belief, simulation provided an "easier, safer, and less expensive way to learn how to fly" (as cited in Rosen, 2008, p. 158). The Federal Aviation Administration (FAA) requires airline pilots to undergo simulation training and testing for "more accurate and realistic scenarios involving stalls, upset recognition and recovery techniques, maneuvers in icing conditions, takeoffs and landings in gusting crosswinds, and bounced landing recovery" (FAA, para 2, 2016). The military first used Link trainers during World War II to decrease the number of catastrophic accidents and the military continued to use advanced simulation training today (Rosen, 2008). Pilots, healthcare professionals, firefighters, the military, NASA, and others used simulation for decades to provide training in a safe environment (O'Connell et al., 2014).

According to the literature, schools of nursing are using simulation for high-stakes testing and moving toward implementing simulation testing for professional licensure. Hospitals are now building new simulation labs for continued education and training of healthcare professionals. Therefore, it is important nursing faculty and nursing students

are educated in simulation training and technology in preparation for transition to practice, future involvement with simulation, advancement of nursing research, and nursing practice.

Fourth, faculty who want to consider moving in the direction of an andragogical model for simulation learning experiences can plan to go step by step moving forward, using simulation guidelines for best practice in simulation and the Adult Learning Theory - Andragogy as a framework.

Recommendations for Future Research

One specialty type of clinical learning experience, the NPCLE needs updates for nursing students to successfully transition to nursing practice. This study provided a template for future research studies comparing the NPCLE and the nursing simulation clinical learning experience. Future studies could incorporate student participants from the same Midwest community college with the addition of student participants from other community college nursing programs. One important recommendation when using this template is to ensure a policy is in place for standardized nursing pre-test and post-test, and to ensure all test results are required.

A second recommendation is to continue a study for several semesters to gather more data to strengthen the study results to support or reject the research topic. A third recommendation is for faculty to receive training on use of ATI data for use in assessing individual students' areas of strengths and weaknesses in each content area, to provide appropriate remediation to support student success on licensure exams. A fourth recommendation is for faculty to intentionally incorporate andragogical principles and an

andragogical process design into the nursing clinical practicum learning experiences to

enable a stricter comparison of the use of andragogical principles.

During the course of the study the researcher learned through a nursing faculty on

Campus B the NCLEX pass rates for students on Campus B improved during the

semesters simulation replaced the preceptored clinical experience. The improved

NCLEX pass rates cannot be directly tied to the use of simulation; however, it is

important to note the NCLEX pass rates did not decrease during the time simulation was

implemented. In light of this information, a fifth and final recommendation for future

research is for researchers to consider the impact on NCLEX pass-rates in relation to

nursing programs utilizing NSCLE, compared to nursing programs using little or no

simulation.

Summary

This research study used the MIPI, an andragogical assessment instrument, ATI

standardized test data, and individual student interviews to compare the NPCLE and the

NSCLE to show outcomes in relation to data from each data gathering method. The MIPI

data revealed the NSCLE scored statistically significantly higher on one factor, Factor 6 -

Experienced-Based Learning Techniques/Learner-Centered Learning Process. The coded

interview data showed NSCLE students used the skill clinical decision making twice as

often as the NPCLE students. The design of the clinical practicum learning experiences

revealed the NSCLE students made decisions on their own, while the NPCLE made

decisions with reliance upon a nurse preceptor. The analysis of the data affirmed the

NSCLE provided students with a self-directed, learner-centered learning process that

utilized andragogical principles in the design of the learning process. In the end, the data

showed there is a difference in the NSCLE compared to the NPCLE, with results

indicating the NSCLE provided a superior clinical learning experience to a greater extent

than the NPCLE for nursing students to achieve nursing management skills to meet the

principles of managing the nursing care of a group of patients in the role of beginning

staff nurse. In light of the fact that this is an experimental study, in which it was found

the NSCLE group was better prepared to enter the workforce, consequently, it is highly

recommended other experimental studies of the same kind be conducted to see if the

results repeat themselves.

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Appendix A: Modified Instructional Perspectives Inventory – Nursing Preceptored

Clinical Learning Experience (MIPI-NPCLE)

MODIFIED INSTRUCTIONAL PERSPECTIVES INVENTORY – NPCLE

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Listed below are 45 statements reflecting beliefs, feelings, and behaviors beginning or seasoned learners may or may not possess at a given moment during the Nursing Preceptored Clinical Experience. Please indicate how frequently each statement typically applies to you as you actively engage yourself during the Nursing Preceptored Clinical Learning Experience

Circle one letter (A, B, C, D, or E) opposite each item that best describes you.

During the Preceptored Clinical Learning Experience, how frequently do I:

Number	45 Items Under the Modified Instructional Perspectives Inventory - NPCE	Almost Never	Not Often	Sometimes	Usually	Almost Always
1	Feel the Clinical provided me with a variety of learning techniques?	A	B	C	D	E
2	Use buzz groups (learners grouped together to process information from peers)?	A	B	C	D	E
3	Believe that the primary goal of the information presented in the clinical is to provide me with as much information as possible?	A	B	C	D	E
4	Feel responsible for my own learning and feel fully prepared to learn?	A	B	C	D	E
5	Have difficulty understanding my own point of view?	A	B	C	D	E
6	Expect and accept my own frustration as I grapple with problems?	A	B	C	D	E
7	Purposefully communicate to myself that I am uniquely important?	A	B	C	D	E
8	Express confidence that I am developing the skills and knowledge I need?	A	B	C	D	E
9	Search for and create new learning techniques?	A	B	C	D	E

10	Learn through real-life settings?	A	B	C	D	E
11	Learn exactly what and how the Preceptor has planned?	A	B	C	D	E
12	Notice and acknowledge to myself positive changes in me?	A	B	C	D	E
13	Have difficulty getting the point across to myself?	A	B	C	D	E
14	Believe that I vary in the way I acquire, process, and apply subject matter knowledge?	A	B	C	D	E
15	Really listen to what I have to say?	A	B	C	D	E
16	Trust myself to know what my own goals, dreams and realities are like?	A	B	C	D	E
17	Encourage myself to solicit assistance from other learners?	A	B	C	D	E
18	Feel impatient with my progress?	A	B	C	D	E
19	Balance my efforts between my content acquisition and motivation?	A	B	C	D	E
20	Perceive the Preceptored Clinical Experience is clear enough to forestall all my questions?	A	B	C	D	E
21	Engage in group discussion?	A	B	C	D	E
22	Incorporate the course objectives provided?	A	B	C	D	E
23	Use a variety of instructional media?	A	B	C	D	E
24	Participate in listening teams (learners grouped together to listen for a specific purpose) during the Preceptored Clinical Experience?	A	B	C	D	E
25	Believe that my learning skills are as refined as they can be?	A	B	C	D	E
26	Express appreciation to myself for actively participating?	A	B	C	D	E
27	Experience frustration with my apathy?	A	B	C	D	E
28	Prize my ability to learn what is needed?	A	B	C	D	E
29	Feel I need to be aware of and communicate my	A	B	C	D	E

	thoughts and feelings?					
30	Ably evaluate my own progress in learning?	A	B	C	D	E
31	Hear what I indicate my learning needs are?	A	B	C	D	E
32	Have difficulty with the amount of time I need to grasp various concepts?	A	B	C	D	E
33	Promote positive self-esteem in myself?	A	B	C	D	E
34	Require myself to follow the precise learning experiences provided in the Preceptored Clinical Experience?	A	B	C	D	E
35	Engage in role play?	A	B	C	D	E
36	Get bored with the many questions I ask?	A	B	C	D	E
37	Individualize the pace of learning for myself as a learner?	A	B	C	D	E
38	Help myself explore my own abilities?	A	B	C	D	E
39	Engage myself in clarifying my own aspirations?	A	B	C	D	E
40	Ask myself how I would approach a learning task?	A	B	C	D	E
41	Feel irritation at my inattentiveness in the learning setting?	A	B	C	D	E
42	Integrate learning techniques with subject matter content?	A	B	C	D	E
43	Develop a supportive relationship with myself?	A	B	C	D	E
44	Experience unconditional positive regard for myself as a learner?	A	B	C	D	E
45	Respect my dignity and integrity as a learner?	A	B	C	D	E

STUDENTS' PERSPECTIVE INVENTORY FACTORS

(1)	(2)	(3)	(4)	(5)	(6)	(7)
4 ____	7 ____	1 ____	6 ____	5 ____	2 ____	3 ____
12 ____	8 ____	9 ____	14 ____	13 ____	10 ____	11 ____
19 ____	16 ____	22 ____	15 ____	18 ____	21 ____	20 ____
26 ____	28 ____	23 ____	17 ____	27 ____	24 ____	25 ____
33 ____	29 ____	42 ____	37 ____	32 ____	35 ____	34 ____
	30 ____		38 ____	36 ____		
	31 ____		40 ____	41 ____		
	39 ____					
	43 ____					
	44 ____					
	45 ____					
TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL
_____	_____	_____	_____	_____	_____	_____

Scoring process
A=1, B=2, C=3, D=4, and E=5

Reversed scored items are 3,5,11,13,18,20,25,27,32,34,36,and 41.
These reversed items are scored as follows: A=5, B=4, C=3, D=2 and E=1

FACTORS	TOTAL	POSSIBLE MINIMUM	POSSIBLE MAXIMUM
1. Learner Empathy with Self		5	25
2. Learner Trust of Self		11	55
3. Planning and Delivery of the Preceptorship		5	25
4. Accommodating Uniqueness of Myself as a Learner		7	35

		7	35
5. Learner Insensitivity Toward Self			
6. Experience Based Learning Techniques (Learner-Centered Learning Processes)		5	25
7. Preceptor - Centered Learning Processes		5	25
Grand Total			

USE OF ANDRAGOGICAL PRINCIPLES CATEGORY LEVELS		
Category Levels	**Percentage**	**MIPI Score**
High Above Average	89%-100%	225-199
Above Average	88% - 82%	195-185
Average	81% - 62%	184-149
Below Average	65% -55%	148-124
Low Below Average	51%	<123

MIPI Categories

Items Constituting the Seven Factors of the Instructional Perspectives Inventory

Seven factors under MIPI	MIPI Items
1. Learner Empathy with Self	4, 12, 19, 26, 33
2. Learner Trust of Self	7, 8, 16, 28, 29, 30, 31, 39, 43, 44, 45
3. Planning and Delivery of Preceptorship	1, 9, 22, 23, 42
4. Accommodating Uniqueness of Myself as a Learner	6, 14, 15, 17, 37, 38, 40
5. Learner Insensitivity Toward Self	5, 13, 18, 27, 32, 36, 41
6. Experience Based Learning Techniques (Learner-Centered Learning)	2, 10, 21, 24, 35
7. Preceptor - Centered Learning Processes	3, 11, 20, 25, 34

FACTORS WITH ITEMS

Factor #1 Learner Empathy with Self

4. Feel responsible for my own learning and feel fully prepared to learn?

12. Notice and acknowledge to myself positive changes in me?

19. Balance my efforts between content acquisition and motivation?

26. Express appreciation to myself for actively participating?

33. Promote positive self-esteem in myself?

Factor #2 Leaner Trust of Self

7. Purposefully communicate to myself that I am uniquely important?

8. Express confidence that I am developing the skills and knowledge I need?

16. Trust myself to know what my own goals, dreams and realities are like?

28. Prize my ability to learn what is needed?

29. Feel I am aware of and able to communicate my thoughts and feelings?

30. Ably evaluate my own progress in learning?

31. Feel the preceptor heard me when I indicated my learning needs?

39. Engage myself in clarifying my own aspirations?

43. Develop supportive relationships with myself?

44. Experience unconditional positive regard for myself as a learner?

45. Respect my dignity and integrity as a learner

Factor #3 Planning and Delivery of the Preceptorship

1. Feel the Clinical provided me with a variety of learning techniques?

9. Search for and create new learning techniques?

22. Incorporate the course objectives provided?

23. Use a variety of instructional media?

42. Integrate learning techniques with subject matter content?

Factor #4 Accommodating Uniqueness of Myself as a Learner

6. Expect and accept my own frustration as I grapple with problems?

14. Believe that I vary in the way I acquire, process, and apply subject matter knowledge?

15. Really listen to what I have to say?

17. Encourage myself to solicit assistance from other learners?

37. Individualize the pace of learning for myself as a learner?

38. Help myself explore my own abilities?

40. Ask myself how I would approach a learning task?

Factor #5 Learner Insensitivity toward Self

5. Have difficulty understanding my own point of view?

13. Have difficulty getting the point across to myself?

18. Feel impatience with my progress?

27. Experience frustration with my apathy?

32. Have difficulty with the amount of time I need to grasp various concepts?

36. Get bored with the many questions I ask?

41. Feel irritation at my inattentiveness in the learning setting?

Factor #6 Experienced-Based Learning Techniques (Learner-Centered Learning Processes)

2. Use buzz groups (learners grouped together to process information from peers)?

10. Learn through real-life settings?

21. Engage in group discussion?

24. Participate in listening teams (learners grouped together to listen for a specific purpose)

during the Preceptored Clinical Experience?

35. Engage in role play?

Factor #7 Preceptored - Centered Learning Process

3. Believe that a primary goal of the information presented in the clinical is to provide me with as much information as possible?

11. Learn exactly what and how the Preceptor has planned?

20. Perceive the Preceptored Clinical Experience is clear enough to forestall all my questions?

25. Believe that my learning skills are as refined as they can be?

34. Require myself to follow the precise learning experiences provided in the Clinical Experience?

Appendix B: Modified Instructional Perspectives Inventory –Nursing Simulation Clinical Learning Experience (MIPI-NSLE)

MODIFIED INSTRUCTIONAL PERSPECTIVES INVENTORY –NSCLE

©John A. Henschkc

Listed below are 45 statements reflecting beliefs, feelings, and behaviors beginning or seasoned learners may or may not possess at a given moment during the Simulation Learning Experience. Please indicate how frequently each statement typically applies to you as you actively engage yourself during the Simulation Learning Experience

Circle one letter (A, B, C, D, or E) opposite each item that best describes you.

During the Simulation Learning Experience, how frequently do I:

Number	45 Items Under the Modified Instructional Perspectives Inventory	Almost Never	Not Often	Sometimes	Usually	Almost Always
1	Feel the Simulation provided me with a variety of learning techniques?	A	B	C	D	E
2	Use buzz groups (learners grouped together to process information from peers)?	A	B	C	D	E
3	Believe that the primary goal of the information presented in the simulation is to provide me with as much information as possible?	A	B	C	D	E
4	Feel responsible for my own learning and feel fully prepared to learn?	A	B	C	D	E
5	Have difficulty understanding my own point of view?	A	B	C	D	E
6	Expect and accept my own frustration as I grapple with problems?	A	B	C	D	E
7	Purposefully communicate to myself that I am uniquely important?	A	B	C	D	E
8	Express confidence that I am developing the skills and knowledge I need?	A	B	C	D	E
9	Search for and create new learning techniques?	A	B	C	D	E
10	Learn through simulations of real life settings?	A	B	C	D	E

11	Learn exactly what and how the Simulation has been planned?	A	B	C	D	E
12	Notice and acknowledge to myself positive changes in me?	A	B	C	D	E
13	Have difficulty getting the point across to myself?	A	B	C	D	E
14	Believe that I vary in the way I acquire, process, and apply subject matter knowledge?	A	B	C	D	E
15	Really listen to what I have to say?	A	B	C	D	E
16	Trust myself to know what my own goals, dreams and realities are like?	A	B	C	D	E
17	Encourage myself to solicit assistance from other learners?	A	B	C	D	E
18	Feel impatient with my progress?	A	B	C	D	E
19	Balance my efforts between my content acquisition and motivation?	A	B	C	D	E
20	Perceive the Simulation is clear enough to forestall all my questions?	A	B	C	D	E
21	Engage in group discussion?	A	B	C	D	E
22	Incorporate the course objectives provided?	A	B	C	D	E
23	Use a variety of instructional media?	A	B	C	D	E
24	Participate in listening teams (learners grouped together to listen for a specific purpose) during the Simulation?	A	B	C	D	E
25	Believe that my learning skills are as refined as they can be?	A	B	C	D	E
26	Express appreciation to myself for actively participating?	A	B	C	D	E
27	Experience frustration with my apathy?	A	B	C	D	E
28	Prize my ability to learn what is needed?	A	B	C	D	E
29	Feel I need to be aware of and communicate my thoughts and feelings?	A	B	C	D	E

30	Ably evaluate my own progress in learning?	A	B	C	D	E
31	Hear what I indicate my learning needs are?	A	B	C	D	E
32	Have difficulty with the amount of time I need to grasp various concepts?	A	B	C	D	E
33	Promote positive self-esteem in myself?	A	B	C	D	E
34	Require myself to follow the precise learning experiences provided by the Simulation?	A	B	C	D	E
35	Engage in role play?	A	B	C	D	E
36	Get bored with the many questions I ask?	A	B	C	D	E
37	Individualize the pace of learning for myself as a learner?	A	B	C	D	E
38	Help myself explore my own abilities?	A	B	C	D	E
39	Engage myself in clarifying my own aspirations?	A	B	C	D	E
40	Ask myself how I would approach a learning task?	A	B	C	D	E
41	Feel irritation at my inattentiveness in the learning setting?	A	B	C	D	E
42	Integrate learning techniques with subject matter content?	A	B	C	D	E
43	Develop a supportive relationship with myself?	A	B	C	D	E
44	Experience unconditional positive regard for myself as a learner?	A	B	C	D	E
45	Respect my dignity and integrity as a learner?	A	B	C	D	E

STUDENTS' PERSPECTIVE INVENTORY FACTORS

(1)	(2)	(3)	(4)	(5)	(6)	(7)
4 ____	7 ____	1 ____	6 ____	5 ____	2 ____	3 ____
12 ____	8 ____	9 ____	14 ____	13 ____	10 ____	11 ____
19 ____	16 ____	22 ____	15 ____	18 ____	21 ____	20 ____
26 ____	28 ____	23 ____	17 ____	27 ____	24 ____	25 ____
33 ____	29 ____	42 ____	37 ____	32 ____	35 ____	34 ____
	30 ____		38 ____	36 ____		
	31 ____		40 ____	41 ____		
	39 ____					
	43 ____					
	44 ____					
	45 ____					
TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL
_____	_____	_____	_____	_____	_____	_____

Scoring process
A=1, B=2, C=3, D=4, and E=5

Reversed scored items are 3,5,11,13,18,20,25,27,32,34,36,and 41.
These reversed items are scored as follows: A=5, B=4, C=3, D=w and E=1

FACTORS	TOTAL	POSSIBLE MINIMUM	POSSIBLE MAXIMUM
1. Learner Empathy with Self		5	25
2. Learner Trust of Self		11	55
3. Planning and Delivery of the Simulation		5	25
4. Accommodating Uniqueness of Myself as a Learner		7	35
5. Learner Insensitivity Toward Self		7	35

6. Experience Based Learning Techniques (Learner-Centered Learning Processes)		**5**	**25**
7. Simulation Centered Learning Processes		**5**	**25**
Grand Total			

USE OF ANDRAGOGICAL PRINCIPLES CATEGORY LEVELS		
Category Levels	**Percentage**	**MIPI Score**
High Above Average	89%-100%	225-199
Above Average	88% - 82%	195-185
Average	81% - 62%	184-149
Below Average	65% -55%	148-124
Low Below Average	51%	<123

MIPI Categories

Category	Value
Low below average <123	~2
Below average 124-143	~31
Average 149-184	~169
Above average 185-198	~31
High avove average 199-225	~5

FACTORS WITH ITEMS

Factor #1 Learner Empathy with Self

4. Feel responsible for my own learning and feel fully prepared to learn?

12. Notice and acknowledge to myself positive changes in me?

19. Balance my efforts between content acquisition and motivation?

26. Express appreciation to myself for actively participating?

33. Promote positive self-esteem in myself?

Factor #2 Leaner Trust of Self

7. Purposefully communicate to myself that I am uniquely important?

8. Express confidence that I am developing the skills and knowledge I need?

16. Trust myself to know what my own goals, dreams and realities are like?

28. Prize my ability to learn what is needed?

29. Feel I am aware of and able to communicate my thoughts and feelings?

30. Ably evaluate my own progress in learning?

31. Feel the preceptor heard me when I indicated my learning needs?

39. Engage myself in clarifying my own aspirations?

43. Develop supportive relationships with myself?

44. Experience unconditional positive regard for myself as a learner?

45. Respect my dignity and integrity as a learner

Factor #3 Planning and Delivery of the Simulation

 1. Feel the simulation provided me with a variety of learning techniques?

 9. Search for and create new learning techniques?

22. Incorporate the course objectives provided?

23. Use a variety of instructional media?

42. Integrate learning techniques with subject matter content?

Factor #4 Accommodating Uniqueness of Myself as a Learner

 6. Expect and accept my own frustration as I grapple with problems?

14. Believe that I vary in the way I acquire, process, and apply subject matter knowledge?
15. Really listen to what I have to say?

17. Encourage myself to solicit assistance from other learners?

37. Individualize the pace of learning for myself as a learner?

38. Help myself explore my own abilities?

40. Ask myself how I would approach a learning task?

Factor #5 Learner Insensitivity toward Self

 5. Have difficulty understanding my own point of view?

13. Have difficulty getting the point across to myself?

18. Feel impatience with my progress?

27. Experience frustration with my apathy?

32. Have difficulty with the amount of time I need to grasp various concepts?

36. Get bored with the many questions I ask?

41. Feel irritation at my inattentiveness in the learning setting?

Factor #6 Experienced-Based Learning Techniques (Learner-Centered Learning Processes)

2. Use buzz groups (learners grouped together to process information from peers)?

10. Learn through simulations of real-life settings?

21. Engage in group discussion?

24. Participate in listening teams (learners grouped together to listen for a specific purpose)

during the Simulation?

35. Engage in role play?

Factor #7 Simulation Centered Learning Process

3. Believe that a primary goal of the information presented in the simulation is to provide me with as much information as possible?

11. Learn exactly what and how the Simulation has been planned?

20. Perceive the Simulation is clear enough to forestall all my questions?

25. Believe that my learning skills are as refined as they can be?

34. Require myself to follow the precise learning experiences provided by the Simulation?

Appendix C: Letter – Permission to Use MIPI-NPCLE and MIPI-NSCLE

6/26/17

Ms. Teresa R. Hamra:

     I am pleased that you wish to use the Modified Instructional Perspectives Inventory Adapted for Nursing Simulation Clinical Learning Experience (MIPI_NSCLE); and, the Modified Instructional Perspectives Inventory Adapted for Nursing Preceptored Clinical Learning Experience (MIPI-NPCLE) in your doctoral dissertation research study regarding "A Mixed Methods Study Comparing Preceptored Clinical Learning Experiences and Simulation Learning Experiences of Nursing Students in a Midwest Community College." I hereby give you permission to use these copyrighted instruments. I would expect appropriate citations for these tools in your dissertation or any publications that result from using it.

     If there is any other way I may help you in this process, please let me know. My best wishes to you in your research.

Most Sincerely,

John A. Henschke

John A. Henschke, Ed. D.

Emeritus Professor of Education and Former Chair of Andragogy Doctoral Emphasis Specialty,

School of Education, Lindenwood University

Appendix D : John A. Henschke's Vita

Due to the length of John A. Henschke's Vita (99 pages), the weblink to the vita is

provided here in Appendix D. The vita is provided courtesy of The University of

Tennessee, Knoxville, Tennessee Research and Creative Exchange website

trace.tennessee.edu

The researcher will provide a paper copy of the Vita upon request.

Link to J.A. Henschke's Vita.

http://trace.tennessee.edu/cgi/viewcontent.cgi?article=1551&context=utk_IACE-

browseall

Appendix E: List of Doctoral Dissertations Using the Modified Instructional

Perspectives Inventory (MIPI)

Doctoral Dissertations Completed Using Henschke's Modified Instructional Perspectives

Inventory (MIPI)

Dissertations validating MIPI noted. MIPI validated three times for reliability. TRUST – strongest factor

throughout.

NAME of UNIVERSITY   (Acronym) [# of dissertations]

Kansas State University	(KSU) [2]
University of Missouri-St. Louis	(UMSL) [13]
Lindenwood University	(LU) [7]
St. Louis University	(SLU) [1]
Virginia Polytechnic State University-National Capital Region	(VPSU-NCR) [1]

1995	Thomas, E.	An identification of the instructional perspectives of parent educators. [KSU]
1997	Seward, S.	An identification of the instructional perspectives of Kansas parents as teachers educators [KSU]
1997	Dawson, S.	Instructional perspectives of nurse educators [UMSL]
2003	Drinkard, G.	Instructional perspectives of nurse educators in distance education [UMSL]
2005	Stanton, C. *(Modified instrument and first validation study)*	A construct validity assessment of the Instructional Perspectives Inventory (IPI) [UMSL]
2006	Stricker, A.	Learning leadership: An investigation of principals' attitudes toward teachers in creating the conditions conducive for learning in school-based staff development [UMSL]

2007	Reinsch, E.	The relationship among lifelong learning, emotional intelligence and life satisfaction for adults 55 years of age or older UMSL]

2007	McManus, L.	The instructional perspectives of community college mathematics faculty [UMSL]
2007	Rowbotham, M.	Teacher perspectives and the psychosocial climate of the classroom in a traditional BSN program [UMSL]
2009	Ryan, L.	Adult learning satisfaction and instructional perspective in the foreign language classroom [UMSL
2010	Manjounes, C.	An adult accelerated degree program: Student and instructor perspectives and factors that affect retention [LU]
2011	Vatcharasirisook, V. *(Second validation study of instrument)*	Organizational learning and employee retention: A focused study examining the role of relationships between supervisors and subordinates [UMSL]
2011	Jones-Clinton, T.	Principals as facilitators of professional development with teachers as adult learners [UMSL]
2011	Moehl, P. (Third validation study of instrument)	Exploring the relationship between Myers-Briggs Type and Instructional Perspectives among college faculty across academic disciplines [UMSL]
2012	Risley, L.	Exploring Congruency between John A. Henschke's Practice and Scholarship [LU]
2013	Lubin, M.	Coaching the Adult Learner: A Framework for Engaging the Principles and Processes of Andragogy for Best Practices in Coaching [VPSU-NCR]
2014	Gillespie, L.	Trust in Leadership: Investigation of Andragogical Learning and Implications for Student Placement Outcomes [LU]

2014	Lu, Y.	An Exploration of Merit Pay, Teacher and Student Satisfaction, and Teacher Performance Evaluation from an Instructional Perspective [UMSL]
2014	Queen, V.	Practical Andragogy: Considering Instructional Perspectives of Hospitality Educators [SLU]
2015	Lundry, S.	Transformational Learning: An Investigation of the Emotional Maturation Advancement in Learners Aged 50 and Older [UMSL

2016	Hantak, K.	An Initial Examination of Relationships Between Early Intervention Services and Andragogical Factors. [LU]
2017	Najjar, H.	A Case Study: An Andragogical Exploration of a Collegiate Swimming and Diving Coach's Principles and Practices at Lindenwood University. [LU]
2017	Klepper, E.	Andragogy and WRokplace Relationships: A Mixed Methods Study Exploring the Employees Perception of their Relationships with their Supervisors [LU]
2017	Morgan, R.	Inclusive Education for Preschool Learners with Autism: A Program Evaluation

| 2018 | Kheang, S. | Guidelines for USA Teacher Leadership in Adult Classrooms to Enhance International Undergraduate Satisfaction |
| 2018 | Grant, P. | A Mixed Methods Study on Faculty Caring and Trust as Perceived by Undergraduate Students in Classrooms at a Mid-Western University. |

Appendix F: Permission to Conduct Study – St. Louis Community College HSRB

07/26/2017

Human Subjects Review
Board St. Louis Community
College 300 S. Broadway

St. Louis, MO 63102

Teresa R. Hamra

Assistant Professor of
Nursing Doctoral Student
Lindenwood University

Ms. Hamra,

This is to inform you that your research proposal titled "A Mixed Methods Study Comparing Preceptored Clinical Experiences and Simulation Experiences of Nursing Students in a Midwest Community College" that was submitted to the HSRB at St. Louis Community College on 07/10/2017 has been determined fall into the Exempt category of research. No further correspondence or updates from you are necessary unless the scope of the project changes.

Sincerely,

Greg Works

HSRB Co-chair

Gworks5@stlcc.edu

314-539-5384

Appendix G: Letter: Introduction/Invitation to Participate in Research Project

Date:
Nursing Course: NUR 253 Management Skills in Nursing

RE: Introduction/Invitation to Participate in a Dissertation Research Project, A Mixed Methods Study Comparing Preceptored Clinical Experiences and Simulation Experiences of Nursing Students in a Midwest Community College, for Doctoral Candidate Teresa R. Hamra, MSN, RN.

Dear Student,

You are invited to participate in my research study, *A mixed methods study comparing preceptored clinical experiences to simulation experiences of nursing students in a Midwest community college.* As a nursing instructor with interest in learner experiences, I am excited to investigate the final semester practicum experiences from the perspective of the senior students. It is my hope and belief participation in the research will be enjoyable and enhance the learning process.

The research project has received the approval of the Institutional Review Board (IRB) at St. Louis Community College and the approval of the IRB at Lindenwood University. Your participation is completely volunteer oriented, and all correspondence and activities are completely confidential. The researcher will enforce participant anonymity. In addition, you are welcome to discontinue the project at any time if it becomes necessary or inconvenient to participate.

Research design; all students participating in the research study will fill out a questionnaire assessment survey; the Modified Instructional Perspectives Inventory-Nursing Preceptored Clinical Experience (MIPI-NPCE) or the Modified Instructional Perspectives Inventory-Simulation Learning Experience (MIPI-NSLE), taking approximately 15-25 minutes. Some students participating in the research study, four students from the Forest Park campus and four students from the Meramec campus, will participate in an individual interview with the researcher.

The researcher will statistically analyze survey data and pre and post ATI test scores for similarities and differences. The researcher will code the interview data seeking common themes from each of the research questions. This research is important as the data from the research study may guide future final semester practicum experiences.

Please fill out the consent form(s) attached to this letter if you are interested in participating in the research study. If you have questions, please do not hesitate to contact me, as it would be my pleasure to discuss or explain any procedure of the study to you. Thank you for your time and consideration to participate in the study.

Kindly,

Teresa Hamra
Doctoral Candidate, Lindenwood University
Nursing Instructor, School of Health Sciences
thamra@lindenwood.edu
Cell: 636-399-2516
Office 636-627-6691

Appendix H: Consent Form: MIPI

LINDENWOOD

<u>INFORMED CONSENT FOR PARTICIPATION IN RESEARCH ACTIVITIES</u>

A Mixed Methods Study Comparing Preceptored Clinical Experiences and Simulation
Experiences of Senior Nursing Students in a Midwest Community College.

Principal Investigator ____Teresa R. Hamra_____

    Telephone: 636-399-2516 E-mail: thamra@lindenwood.edu

Participant   _____   Contact   info

_____

_____

1. You are invited to participate in a research study conducted by Teresa R. Hamra
   under the guidance of Dr. John Henschke. The purpose of this research is to compare
   the one on one preceptored clinical experiences and one on one simulation
   experiences of senior nursing students in a Midwest junior college nursing program.
2. a) Your participation will involve
   - Completing a 45-question survey by circling one letter for each question, (A, B, C,
     D, or E) opposite each item that best describes you, based on a Likert scale of
     choices ranging from - Almost Never to Almost Always. The student will complete
     the survey questionnaire after completing the Clinical experience.
   - There are two versions of the questionnaire with the only difference being a
     substitution of a phrase; where one version uses the phrase 'preceptored clinical

   - experience', the other version substitutes the phrase 'simulation learning
     experience'. Students will take the version that matches their Clinical experience.
   - Allowing the researcher to view the ATI exam scores, with no identifying student
     data attached. The researcher will only have access to the numbers.

   b) The amount of time involved in your participation will be 15 – 25 minutes to complete the
   survey questionnaire
   Approximately 75 -80 individuals will be involved in this research. The research
   project involves two research sites.
3. There are no anticipated risks associated with this research.

4. There are no direct benefits for you participating in this study other than the opportunity to participate. Your participation, however, will contribute to the knowledge about the use of simulation learn experiences in comparison to precpetored clinical learning experiences and may help to make future decisions about final semester practicum experiences in a management clinical.

5. Your participation is voluntary, and you may choose not to participate in this research study or to withdraw your consent at any time. You may choose not to answer any questions that you do not want to answer. You will NOT be penalized in any way should you choose not to participate or to withdraw.

6. We will do everything we can to protect your privacy. As part of this effort, your identity will not be revealed in any publication or presentation that may result from this study and the information collected will remain in the possession of the investigator in a safe locked location.

7. If you have any questions or concerns regarding this study, or if any problems arise, you may call the Investigator, Teresa R. Hamra at 636-399-2516 or the Supervising Faculty, Dr. John Henschke at JHenschke1@lindenwood.edu. You may also ask questions of, or state concerns regarding your participation to the Lindenwood Institutional Review Board (IRB) through contacting Dr. Marilyn Abbott, Interim Provost at mabbott@lindenwood.edu or 636-949-4912.

   I have read this consent form and have been given the opportunity to ask questions. I will also be given a copy of this consent form for my records. I consent to my participation in the research described above.

_____   _____
Participant's Signature   Date   Participant's Printed Name

_____   _____
Signature of Principal Investigator   Date   Investigator Printed Name

Appendix I: Consent Form: Individual Interview

LINDENWOOD

INFORMED CONSENT FOR PARTICIPATION IN RESEARCH ACTIVITIES

A Mixed Methods Study Comparing Preceptored Clinical Experiences and Simulation Experiences of Nursing Students in a Midwest Community College.

Principal Investigator ____Teresa R. Hamra_____

Telephone: 636-399-2516   E-mail: thamra@lindenwood.edu

Participant_____

Contact Information

_____

1. You are invited to participate in a research study conducted by Teresa R. Hamra under the guidance of Dr. John Henschke. The purpose of this research is to compare the one on one preceptored clinical experiences and simulation experiences of senior nursing students in a Midwest junior college nursing program.

2. a) Your participation will involve:
    ➢ participating in an individual interview with the researcher answering questions about your practicum experience.
    b) The amount of time involved in your participation will be approximately 30 minutes.

3. There are no anticipated risks associated with this research.

4. There are no direct benefits for you participating in this study. However, your participation will contribute to the knowledge about the use of simulation in comparison to precpetored clinical experiences and may help to make future decisions about final semester practicum experiences

5. Your participation is voluntary, and you may choose not to participate in this research study or to withdraw your consent at any time. You may choose not to answer any questions that you do not want to answer. You will NOT be penalized in any way should you choose not to participate or to withdraw.

6. We will do everything we can to protect your privacy. As part of this effort, your identity will not be revealed in any publication or presentation that may result from this study and the information collected will remain in the possession of the investigator in a safe location.

7. If you have any questions or concerns regarding this study, or if any problems arise, you may call the Investigator, Teresa R. Hamra at 636-399-2516 or the Supervising Faculty, Dr. John Henschke at JHenschke1@lindenwood.edu.   You may also ask questions of or state concerns regarding your participation to the Lindenwood Institutional Review Board (IRB) through contacting Dr. Marilyn Abbott, Interim Provost at mabbott@lindenwood.edu or 636-949-4912.

I have read this consent form and have been given the opportunity to ask questions. I will also be given a copy of this consent form for my records. I consent to my participation in the research described above.

_____   _____
Participant's Signature   Date   Participant's Printed Name

_____   _____
Signature of Principal Investigator   Date   Investigator Printed Name
Revised 8-8-20

Appendix J: NPCLE Student and Preceptor Evaluation Tool

ST. LOUIS COMMUNITY COLLEGE
NUR 253 Management Skills in
Nursing CLINICAL
EVALUATION

Each student's clinical performance will be evaluated at the end of the semester. The student will complete a self-evaluation by completing this form at the end of the semester. The instructor will then evaluate the student and discuss the student's clinical performance. The student must obtain a "Satisfactory" in all areas evaluated at the end of the semester in order to achieve a clinical satisfactory for the course. A clinical failure will result in course failure.

Directions for the Student: Using the scale below, evaluate yourself in each of the following areas. Once you have done this, complete the last page of the clinical evaluation form identifying your strengths and limitations. When completed, return the evaluation form to your clinical instructor.

KEY: S = Satisfactory U = Unsatisfactory

Upon completion of this course, the student will:	FINAL	
	Student	Preceptor
Ethics and the Professional Role of the Nurse		
1. Performs within the guidelines of the American Nurses Association Code of Ethics.		
2. Demonstrates accountability and responsibility by practicing nursing care for multiple patients in an ethical manner.		
Communication		
1. Uses therapeutic communication in all interactions with patients, families, instructors, peers, and health team members.		
2. Demonstrates effective communication when leading health care team members in caring for patients.		
Roles of the Nurse		

1. Identifies the value of life-long learning by incorporating research-based nursing references in the consideration of nursing care.		
2. Analyzes areas of strengths and weaknesses in clinical performance to improve nursing practice.		
3. Uses instructor/preceptor feedback to improve nursing practice.		
	FINAL	
	Student	Preceptor
Prioritizing, Organizing, and Managing the Delivery of Safe Nursing Care		
1 . Develops nursing care plans for multiple and or complex patients.		
Utilizes the steps of the nursing process when providing and delegating care to multiple and or complex patients		
3. Ensures the delivery of safe nursing care by health care team members.		
4. Identifies the patient's cultural, ethnic, and social diversity when leading a team and delegating care for multiple patients.		
5. Identifies the patient's cultural, ethnic, and social diversity when planning and providing care to multiple and or complex patients.		
6. Analyzes and manages multiple data sources (physical assessment findings, SBAR report, lab values and diagnostic studies) to prioritize and implement clinical decision making for a group of patients.		
Makes Safe Clinical Nursing Decisions Using the Nursing Process and Evidence-Based Practice		
1. Implements safe clinical decisions utilizing the nursing process and evidence-based practice when managing care for multiple and or complex patients.		
2. Evaluates and reports patient outcomes and responses to therapeutic interventions using the SBAR format.		
Key Concepts related to Teaching/Learning Process for the Client Across the Life Span		
1. Formulates and implements a teaching plan to meet patient needs.		
2. Evaluates teaching/learning plans for multiple and/or complex medical/surgical patients and their families.		

3. Recognizes role of discharge planning nurses to observe coordination of human, information, and material resources for multiple and or complex patients.		
Clinical Paperwork and Documentation		
1. Accurately documents in written and or electronic health		

Clinical Grading Rubric	
A grade of "S" means the student:	• Functions satisfactorily with minimal guidance in the clinical setting. • Demonstrates accurate and appropriate knowledge and integrates knowledge with skills and attitudes. • Engages consistently in self-direction in approach to learning. • Provides evidence of preparation for all clinical learning experiences. • Follows directions and performs safely.
A grade of "NI" means the student:	• Functions safely with moderate amount of guidance in the clinical situation. • Demonstrates adequate knowledge and requires moderate assistance in integrating knowledge with skills. • Requires some direction in recognizing and utilizing learning opportunities.
A grade of "U" means the student:	• Requires intense guidance for the performance of activities at a safe level. • Clinical performance reflects difficulty in the provision of nursing care. • Demonstrates gaps in necessary knowledge and requires frequent or almost constant assistance to integrate knowledge and skills. • Requires frequent and detailed instructions regarding learning opportunities and is often unable to utilize them. • Is often unprepared and has limited insight into own behavior.

	• Is unable to identify own learning needs and neglects to seek appropriate assistance. • Is not dependable. • Demonstrates behavior that is unprofessional or unethical conduct such as falsification of records and failure to maintain confidentiality.

ADDITIONAL INSTRUCTOR COMMENTS FINAL MEDICAL-SURGICAL EVALUATION
Days late _____

TO BE COMPLETED BY THE STUDENT Days absent_____

FINAL EVALUATION
Strengths
1 .
2.
3.
Limitations
1 .
2.
3.

FINAL EVALUATION
Student Signature:
(My signature indicates that I have read the evaluation.) **Preceptor's Signature:**
Instructor Signature:
(Date)

Appendix K: NSCLE Evaluation Tool for Students and Faculty

ST. LOUIS COMMUNITY COLLEGE
NUR 253 Management Skills in Nursing
CLINICAL EVALUATION

Each student's clinical performance will be evaluated at the end of the semester. The student will complete a self-evaluation by completing this form at the end of the semester. The instructor will then evaluate the student and discuss the student's clinical performance. The student must obtain a "Satisfactory" in all areas evaluated at the end of the semester to achieve a clinical satisfactory for the course. A clinical failure will result in course failure.

Directions for the Student: Using the scale below, evaluate yourself in each of the following areas. Once you have done this, complete the last page of the clinical evaluation form identifying your strengths and limitations. When completed, return the evaluation form to your clinical instructor.

KEY: S = Satisfactory
         NI= Needs Improvement (may only be used at the Midterm date)
         U = Unsatisfactory

Upon completion of this course, the student will:	FINAL		
	Student	Faculty	Comments
Ethics and the Professional Role of the Nurse			
1. Performs within the guidelines of the American Nurses Association Code of Ethics.			HPS 1 , Clinical project
2. Demonstrates accountability and responsibility by implementing nursing care for multiple patients in an ethical manner.			HPS 1 , 2, 3
Communication			
1. Uses therapeutic communication in all interactions with patients, families, instructors, peers, and health team members.			HPS 1 , Clinical project
2. Demonstrates effective communication when leading health care team members in caring for patients.			HPS 1 , Clinical project
Roles of the Nurse			
1 . Identifies the value of life-long learning by incorporating research-based nursing references in the consideration of nursing care.			Clinical project Professional Nursing conference

2. Analyzes areas of strengths and weaknesses in clinical performance to improve nursing practice.			HPS 1 , Clinical project
3. Uses instructor/preceptor feedback to improve nursing practice.			HPS 1 , 2, 3 Clinical project

	FINAL		
	Student	Faculty	Comments
Prioritizing, Organizing, and Managing the Delivery of Safe Nursing Care			
1 . Develops nursing care plans for multiple and or complex patients.			HPS 2, 3
Utilizes the steps of the nursing process when providing and delegating care to multiple and or complex patients			HPS 2, 3
3. Ensures the delivery of safe nursing care by health care team members.			HPS 2, 3
4. Identifies the patient's cultural, ethnic, and social diversity when leading a team and delegating care for multiple patients.			HPS 1 , 2, 3
5. Identifies the patient's cultural, ethnic, and social diversity when planning and providing care to multiple and or complex patients			HPS 1 , 2, 3
6. Analyzes and manages multiple data sources (physical assessment findings, SBAR report, lab values and diagnostic studies) to prioritize and implement clinical decision making for a group of patients.			HPS 1,
Makes Safe Clinical Nursing Decisions Using the Nursing Process and Evidence-Based Practice			
1 . Implements safe clinical decisions utilizing the nursing process and evidence-based practice when managing care for multiple and or complex patients.			
2. Evaluates and reports patient outcomes and responses to therapeutic interventions using the SBAR format.			HPS 1 , 2
Key Concepts related to Teaching/Learning Process for the Client Across the Life Span			
1 . Formulates and implements a teaching plan to meet patient needs.			HPS I
2 Evaluates teaching/learning plans for multiple and/or complex medical/surgical patients and their families.			HPS

3. Observes role of discharge planning nurses to observe coordination of human, information, and material resources for multiple and or complex patients.			
Clinical Paperwork and Documentation			
1. Accurately documents in written and or electronic health record.			HPS 1 , 2, 3

Clinical Grading Rubric

A grade of "S" means the student:	Functions satisfactorily with minimal guidance in the clinical setting. Demonstrates accurate and appropriate knowledge and integrates knowledge with skills and attitudes. Engages consistently in self-direction in approach to learning. Provides evidence of preparation for all clinical learning experiences. Follows directions and performs safely. Identifies own learning needs and seeks appropriate assistance. Demonstrates continued improvement during the semester. Uses the nursing process and a complies scientific rationale.
A grade of "NI" means the student:	Functions safely with moderate amount of guidance in the clinical situation. Demonstrates adequate knowledge and requires moderate assistance in integrating knowledge with skills. Requires some direction in recognizing and utilizing learning opportunities.
A grade of "U" means the student:	Requires intense guidance for the performance of activities at a safe level. Clinical performance reflects difficulty in the provision of nursing care. Demonstrates gaps in necessary knowledge and requires frequent or almost constant assistance to integrate knowledge and skills. Requires frequent and detailed instructions regarding learning opportunities and is often unable to utilize them. Is often unprepared and has limited insight into own behavior. Is unable to identify own learning needs and neglects to seek appropriate assistance. Is not dependable. Demonstrates behavior that is unprofessional or unethical conduct such as falsification of records and failure to maintain confidentiality

ADDITIONAL INSTRUCTOR COMMENTS FINAL Evaluation

Days Late _____ Days Absent _____

TO BE COMPLETED BY THE STUDENT

FINAL EVALUATION
Strengths
1.

2.	
3.	
Limitations	
1.	
2.	
3.	

FINAL EVALUATION
Student Signature
_____   My signature indicates I have read and understood the evaluation
Faculty signature   Date   _____   _____

Appendix L: Cardiac Dysrhythmias HPS Grading Rubric

Grading Rubric for HUMAN PATENT SIMULATION — Cardiac Dysrhythmias

Pathway 1 nurse - SVT	
Pathway 2 nurse — Atrial Fibrillation	
Pathway 3 nurse — Sinus Tachycardia	
Pathway 4 nurse — Sinus Bradycardia	

Grading Criteria	Performance	Instructor Comments	Total pts
Preparation	Group brings necessary supplies for assigned lab. *This includes lab supplies and reference texts. Completes lab prep (2-points)		
Assessment	Nurse performs appropriate assessment in a timely manner using proper technique. (2-points)		
Teamwork	Nurse directs others to effectively meet shared goal. Team members use direction to meet shared goal. (2-points)		

| Intervention | Nurse performs appropriate skills as indicated by scenario. Demonstrates the necessary patient teaching for the client. (2-points) | | |
| Documentation | Nurse correctly documents assessment, and medications as indicated by scenario. (2-points) | | |

CARDIAC RHYTHMS	SVT		A fib		Sin Tachy cardia		Sinus Brady-cardia	
S = Satisfactory U = Unsatisfactory	S	U	S	U	S	U	S	U
Initial patient contact: wash hands, introduce self, identify patient								
Reviews physician orders								
Obtains vital signs								
Performs a focused assessment								
Administers priority medications as ordered								
Performs required nursing skills according established standards of care								
Documents administration of medications								
Re-assesses patient								
Communicates therapeutically with patient and family								

Appendix M: HPS Multiple Patient Simulation

St. Louis Community College at Meramec
NUR253 Management in Nursing
Human Patient Simulation

Student Prep: Multiple Patient Simulation

Human Patient Simulation Learning Objective: Correctly prioritize the assessments and interventions needed for two patients on a Medical-Surgical unit.

Patient 1: The patient is a young adult male with a history generalized idiopathic epilepsy and generalized tonic-clonic seizures. He is admitted after experiencing a tonic-clonic seizure at work today that lasted for about three minutes.

Patient's Admitting Diagnosis/Surgical Procedure	Definition	Implications for Nursing?
1. Generalized idiopathic epilepsy		
2. Tonic-Clonic Seizure		

Medication List:

Brand Name/ Generic Name	Classification	Nursing implications for this patient
Carbamazepine/ Tegretol PO		
Divalproex / Depakote PO		
Lorazepam / Ativan IV		
Phosphenytoin / Cerebrex IV		
Pertinent lab results	**Normal values**	**Nursing implications for this patient**
LDH		
AST		

ALT		
Bilirubin		
Serum valproate level		
Serum carbamazepine level		
BUN		
Creatinine		
Calcium		

1. What are the primary concerns (what are you on alert for) when caring for someone who has epilepsy and explain why they are concerns. List at least 4-5.

2. Prioritize nursing actions for witnessed event of patient having a tonic-clonic seizure. Please list.

Student Prep: MPS Pt 2:

Patient 2: The patient is a 63-year-old male with Type 1 diabetes since the age of 15. He was admitted three days ago for stabilization and treatment of an episode of DKA, with a blood sugar level of 510. He refuses to self-administer insulin and states that he does fine at home. He has no evidence of peripheral neuropathy but does have a vascular wound on the Right great toe. The dressing is dry and intact. Historically, the patient frequently missed clinic appointments.   Discharge Needs: Home Health Nursing. Concerns for Discharge: Insurance to meet needs of patient.

Lab Values	Result	Normal values	Nursing implications for this patient
Hemoglobin A1C	8		
Blood Glucose accu-check	190		
BUN 40	40		
Creatinine	2.1		
WBC with Differential	14000/		
LDL	240		
HDL/34	34		
Urine Ketones	Positive		
Fasting Blood Glucose	200		

Patient 2 Continued:

PMH includes the death of his wife, two years ago, diagnosis: ovarian cancer. - Patient's spouse was his primary care giver. The patient lives alone. He has no children. He was diagnosed 5 years ago with hypertension. Occasionally his one sister will visit.

Patient's Admitting Diagnosis/Surgical Procedure	Definition	Nursing Implications?
Type 1 Diabetes Mellitus		

Medication List			
Brand Name/Dose	**Generic Name**	**Classification**	**Nursing Implications**
Captopril 25mg 1 tab PO two times daily			
Lispro insulin via sliding scale am and pm			❖ See sliding scale on MAR
Tylenol #3, 1-2 tabs q 4 hours/pain			
Silver Cream Sulphadiazine cream Apply to site once daily			
ASA 75 mg. po daily			

SIMULATION HPS - MULTI-PATIENT SCENARIO

Monitor Settings	Patient Actions	Student Actions / Expectations	Faculty Notes
Pt 1 & 2: Initial VS - Stable HR (80) Patients awake and alert and in stable condition	Pt 1 calm and quiet. Pt 2 initially calm and quiet.	Washes hands Introduces self, Initial assessment Pt 1 including pt identification verification VS, including SPO2, Pain Assesses Pt. 2 Initial assessment including VS and SPO2. Pain	Pt 1 Assessment including complete neuro exam. Pt 2 Assessment including dressing on patient's foot (Pt 1 Priority - room is NOT set up for seizure precautions)

			(Pt 2 Priority - elevated blood sugar) pt is diabetic and needs FSBS prior to eating this am.
	Pt. 2: Initial assessment, pt states he is hungry. Voice of SIM - ANGRY! "I'm hungry and I need to eat, what are you trying to do? Starve me?	Provides Education: Explain need to obtain FSBS prior to eating. Empathize - recognize pts feelings. Obtains Blood sugar, prepares insulin and admin. Explains meal is coming. Explains return / gives call light to pt. Leaves to assess Pt. 1	(Failure to meet emotional needs of patient - no credit given)
Pt 1: Stable	Pt is upset. He just started a new job, wants to return to work, worried he will get driving privileges taken away if he stays in hospital Pt upset, but not attempting to leave.	Neuro assessment completed including pupil check. Student notes room is not set up per seizure policy and procedure. Prioritize need for Oxygen delivery system. Utilizes seizure precaution list. Student explains pt will be listed as AMA if he leaves on his own without medical advice - Education. Documents - important to record facts only!	Neuro assess (yes / no) Points for seizure set up: (See List for Seizure Precautions) Prioritization Empathy Education Notifies physician of possible AMA
Pt 2: Increase in heartrate to 100 bpm, (manually increase)	Pt 2 "Yells out" Not using Call light. " I need someone to cut up my food!"	Student assesses pt ability to feed self, Uses therapeutic communication, touch if appropriate to calm pt. Positions pt upright for eating. Pt begins to cut up his own food. Observes ability to eat, swallow and drink water. Assess medication list - give meds if time appropriate Document Returns to Pt. 1	Encourages self-care Does not delegate assistant to assist with feeding, but to observe pt actions to feed self.
Pt. 1	Stable	If student did not set up Seizure precautions, student notices with this visit Explains need for seizure precautions, labs and	Success or failure - set up for Seizure precautions

		diagnostic test to assess cause of seizures Re-assess frustration- provides empathy, and education. Medication admin. Document	
Pt 2 VSS		Student completes Pt. 1 assessment and med admin, ensures Pt1 safety measures in place, and proceeds to Pt 2	Student can leave pt 1 to visit pt 2 and assess pain, or finish assess and medications with pt 1, then return to assess pain on Pt 2.
	Uses call light. Complains of Severe pain in Right great toe. States pain 6/10	Assess pain level. Compare to prior pain level Check pain meds and last time pain med given. Gives pain med if appropriate.	Pain Assessment Inspection of toe - removes dressing for assessment. Does not elevate foot.
	Charge nurse to see patient if student unable Charge nurse calls student nurse to inform of PT 2 c/o pain.	Explains to patient - return in 30 minutes to remove dressing and assess toe once pain med begins to work. On return Assesses toe by removing dressing. Provides education re: diabetic foot care and wound care. Documents care	Gives pain med, notifies physician of pt condition. Changes dressing, proper wound assessment completed and documented.
Pt 1 - abrupt onset of seizure. VS monitor alarming	Student hears noise from patents room. Tech yells for help	Leaves Pt 1 - returns to pt 2. If all seizure equip has been put in place - student proceeds with care of seizure pt. (See List) Calls physician for orders Gives meds if prescribed. Notifies family members if appropriate. Empathy and Pt education.	Student appropriately proceeds with care of seizure pt (See list) Immediately notifies physician. Remans with pt and explains seizure activity to patient Safety, timing of seizure, Education re: post seizure symptoms

Appendix N: Group Research Project Instructions

St. Louis Community College Meramec NURS 253 Management Skills in Nursing
Clinical Project

Clinical Project Objectives:
Upon completion of this project the student will be able to:

I. Identify the goal of the Quality and Safety Education for Nurses) (QSEN) competencies as a means for future nurses to develop the knowledge skills, and attitudes necessary to improve the quality and safety of the healthcare systems within which they will work.

2. Identify a clinical practice issue relevant to nursing, research, current practice, and hospital policies and procedures.

3. Develop a clinical question using the PICO (Population, Intervention, Comparison, and Outcome) model.

4. Develop a plan to improve patient care in the clinical setting emphasizing how the integration of evidence-based practice promotes a safer more patient centered environment.

5. Demonstrate the impact on nursing practice when principles of evidence-based practice, patient safety, leadership, delegation, collaboration, professionalism, and communication are applied to the delivery of nursing care.

QSEN Competencies addressed in the project are:

Evidence Base Practice
Students will have experiential clinical learning that will require them to collaborate and work together as a team to identify an evidence-base practice issue in the clinical setting. They will then assess the literature to further identify the evidence to support best clinical nursing practice. (Knowledge, Skills, Attitudes)

Quality Improvement
Students will identify a clinical practice issue. They will formulate interventions to improve the quality of care based on evidence-based practice. The students will prepare a presentation on this topic. (Knowledge, Skills, Attitudes).

Safety
Students will identify how current evidence improves the delivery of care to patients and results in increased patient safety. (Knowledge, Attitudes).

Patient Centered Care
Students will discuss in their presentation how the integration of evidence-based practice promotes a more patient-centered environment. (Knowledge, Attitudes)

Project Requirements:

1. Students will work in groups of 2-3.

2. Students will be assigned a faculty mentor.

3. Each group will identify a clinical practice issue relevant to nursing and collaborate with the faculty mentor regarding their topic.

4. Students will develop a presentation based on current information. Presentation is to be approximately 20 minutes.

5. Presentation will include:

   a. A fully developed PICO (Population, Intervention, Comparison, and Outcome) question

      b. A discussion on how this problem impacts safety of their patients, the quality of care delivered, and nursing practice

      c. Strategies to improve nursing practice/patient outcomes

      d. Proposed revisions to policies and procedures to improve patient safety, the quality of care delivered, and nursing practice.

6. Students will submit a bibliography in APA format to include all references used to develop the presentation. (Must include a minimum of five to six peer reviewed American journal articles that pertains to project topic.

Journal articles should be relevant and current (generally newer than seven to ten years).

7. Send an email to all course faculty (Dorsey, Chanasue, Clark) identifying group members and a tentative topic by Monday April 10, 2017.

8. Student groups of 4 will be permitted - if you elect a group of 4 - group presentation time must be 30 minutes and the required number of references will be eight to nine.

9. All group members must participate in the presentation to the class.

10. Each group will submit one copy of presentation (power point, notes articles, etc.) along with a typed bibliography in APA format is to be submitted to the faculty mentor by Monday May 1, 2017.

11. Presentation must include the use of AV aids (power point, poster, etc.)

Examples of Topics

1. Infection from indwelling urinary catheters
2. Risk for patient falls
3. Risk for infection from intravenous therapy
4. Risk for inadequate pain management
5. Hand hygiene use of antimicrobial soap versus alcohol-based hand rubs —best evidence-based practice
6. Risk for inadequate communication

      a. Nursing report — SBAR

      b. Patient teaching

      c. Discharge planning

      d. Respect for diversity

7. Medication Errors and Reconciliation
8. Medication compliance
9. Readmissions sooner than 30 days
10. Prevention of hospital acquired pneumonia in the med-surg patient vs intubated patient
11. Vaccination compliance in the hospitalized patient

DC, SC, MKD 11/16

Appendix O: Group Research Project Grading Rubric

Date:

Group Members:

Management in Nursing Clinical Project- Spring 2017

PROJECT PROPOSAL	Score	Comments
Attends all scheduled class meetings with faculty to assist in development of proposal. **(2)**		
FORMAL PRESENTATION OF PROJECT TO CLASS		
Presentation will include:		
A fully developed PICO (Population, Intervention, Comparison, and Outcome) question **(5)**		
Identification of which QSEN competencies are addressed in the presentation — Evidence-Based Practice, Quality Improvement, Safety, Patient Centered Care **(3)**		
A discussion on how this problem impacts safety of patients, the quality of care delivered, and nursing practice **(7)**		
Proposed revisions to policies and procedures to improve patient safety, the quality of care delivered, and nursing practice. **(5)**		
A conclusion based on research. Identification of strategies to improve nursing practice/patient outcomes.**(5)**		
Research argument is clearly stated, supported and easy to follow. **(5)**		
Nursing literature is integrated throughout the presentation**(5)**		
Presents current standards and research based on the topic **(5)**		
Use of audiovisuals, handouts, power point, posters enhanced presentation and kept participants engaged **(10)**		
Each group member contributes meaningfully to presentation These points will be given as an individual point assignment. **(10)**		
Presentation attire, attitude, eye contact professional in manner. **(5)**		
BIBLIOGRAPHY		

Bibliography in APA format. Include all references used to develop the presentation. Journal articles meet requirements in presentation guidelines. Provide a copy of five to six research articles used in presentation. **(7)**		
Provides a copy of presentation to faculty **(3)**		
CLASS PARTICIPATION AND COMMUNICATION		
Student allows for and encourages meaningful discussion among peers and contributes discussion on other student presentations. Is respectful of peers during presentations **(3)**		
Total Points = 80		

DC, SC, MKD -11/2016

Appendix P: Post Simulation Reflection Assignment

Name_____   Date_____

What is Reflection?

Reflection means the process of thinking about what we do and processing it to draw meaning from our experiences. Reflection is an intentional endeavor to discover specific connections between something we do and the consequences which result. Reflection should be an active part of nursing practice and assist you as you transition into the practice of the professional registered nurse.

Guidelines:
- You are to complete this reflection assignment at the completion of the HPS on 11/29 or 11/30.
- Submit the write-up to your clinical instructor for NUR253 by email by 9 am the morning following your HPS.

- The completed write-up is to be approximately 2 typed pages

Reflection in Action

1. What potential safety issues (all aspects including medications) did you notice today? What did you do about them?

2. What was it like when you were trying to get organized for the shift and you had the other patient's call light go off?

3. How did you prioritize your interventions and   _____. If you had it to do over, what would you do differently and why?

4. When you went to see how comfortable were you doing teaching about?

5. What did you think was going on when the patient deteriorated?
6. If you could repeat this scenario and had an unlicensed assistive person available, what would you have delegated?

Reflection on Action
1. What are you most proud of that you did today?

2. Describe how this experience will impact your transition into practice and as a newly licensed RN.

Appendix Q : Syllabus: NUR 253 Management Skills in Nursing

ST. LOUIS COMMUNITY COLLEGE NURSING PROGRAM
_____

COURSE TITLE: Management Skills in Nursing

COURSE NUMBER: NUR: 253

CREDIT HOURS: 3

PLACEMENT: Fourth Semester of the Nursing Program

PREREQUISITES: NUR: 251 with a minimum grade of C

CO-REQUISITE: NUR: 252
                    Reading proficiency

COURSE DESCRIPTION: This course includes theory and practicum in principles managing the care of a group of patients. The student will participate actively in the role of a beginning staff nurse under the guidance of agency staff and instructor.

CREDIT HOURS/CLASSROOM AND CLINICAL:

Total credit hours for the course = 3 credit hours (1-credit hours for lecture and 2-credit hours for clinical at a 3:1 ratio of clinical clock hours to credit hours)

Total number of hours = 2 lecture hour per week x 8 weeks = 16 lecture hours per semester.

Total number of hours in clinical lab = 6 clinical lab hours per week x 15 weeks = 90 clinical lab hours per semester.

Upon successful completion of the course, the student will know or understand:

1. The importance of practicing the American Nurses Association Code of Ethics.
2. Effective communication when leading health care team members in caring for patients.
3. The importance of evaluating teaching/learning plans for multiple and complex medical/surgical patients, and families.
4. The management and delivery of care utilizing all members of the health care team.
5. The need to utilize clinical decisions when managing care of multiple patients with complex health needs.
6. The importance of providing culturally competent care to medical/surgical patients with complex needs.

Upon successful completion of the course, the student will demonstrate the ability to:

1. Perform within the guidelines of the American Nurses Association Code of Ethics.
2. Perform nursing care for multiple patients in an ethical manner.
3. Discuss ethical issues with other members of the healthcare team.
4. Consult with members of the Hospital Ethics Committee as needed.
5. Develop nursing care plans for multiple and complex patients.
6. Use therapeutic communication in all interactions with patients, families, instructors, peers, and health team members.
7. Utilize the steps of the nursing process when providing and delegating care to multiple complex patients.
8. Ensure the delivery of safe nursing care by health care team members.
9. Implement safe clinical decisions utilizing the nursing process when leading a team and delegating care of multiple patients.
10. Implement safe clinical decisions utilizing the nursing process and evidence-based practice when managing care for multiple patients.
11. Identify the patient's cultural, ethnic, and social diversity when leading a team and delegating care for multiple patients.
12. Identify the patient's cultural, ethnic, and social diversity when planning and providing care to multiple patients with complex needs.

COURSE OUTLINE:

Unit I: Roles of the nurse working within an organization
>Delegation
>Resources
>Organizational Structure
>Communication
>Evidence-based practice

Unit II: Roles of the nurse in developing management skills
>Delegation
>Priorities
>Critical Thinking
>Leadership/Roles
>Conflict
>Reports/Order Transcription/Time Management
>Communication
>Change

Unit III: Roles of the nurse in professional development
>Professionalism
>Self- Development
>Professional member of Nursing/Manager of Care/Competencies
>Political/Licensure
>Ethical/Legal/Values and Practice
>Support systems/Working with Others/Advocacy/Humor

Meramec Campus Addendum
Spring 2018
In addition to the policies in the St. Louis Community College Nursing Program Handbook the following policies and procedures apply to this course.
<u>**Faculty Information**</u>
Course Coordinator: Mary Dorsey (SW-117, 314-984-7755)
Deb Chanasue (SW-114, 984-7758)
Cindy Hartwig (SW-116. 984-7285)
Faculty office hours are posted outside each faculty member's office door or by appointment.
CLASSROOM INFORMATION: SEE COURSE CALENDAR

1. **ACADEMIC & STUDENT SUPPORT SERVICES HAVE MOVED!**
   Academic Support Services – Now centralized in the Library, Second Floor
   Meramec Academic Center, Writing Center, Supplemental Instruction, Math & other content area tutoring.
   Fall Hours: Monday through Thursday, 8 am - 8 pm; Friday, 8 am - 4 pm.
   Assessment/Out-Of-Class Testing – Relocated to Communications North, Room 122
   Fall Hours: Monday through Thursday, 8 am – 7 pm; Friday, 8 am - 4:30 pm.
   This may change during the semester, please call the Assessment Center for up to date information.

2. **SAFETY DRILLS SCHEDULED**
   To minimize disruption to the teaching and learning environment, we have worked closely with College Police to establish dates and times for upcoming mandatory drills and share them in advance. Please plan to make this exercise part of the learning process for our students! Your participation and leadership are essential to the successful implementation of compliance-related drills.
   All students are responsible for making themselves familiar with the emergency evacuation materials and maps found in their classrooms. Students who need materials in   an accessible format due to a disability should let their instructors know.

3. **FACT FINDER CHANGES**
   The 2017-2018 Fact Finder is still free to students but will be distributed **ONLY** through the Bookstore.
   All "Need to Know" information, including the Student Code of Conduct, has been moved to: www.stlcc.edu/need2know.

Unit I

<div align="center">

Roles of the Nurse Working within an Organization
Communication, Collaboration and Conflict Management
Leadership and Management in the Nursing Environment

</div>

Learning Activities:

LaCharity, L. et al. (2014). *Prioritization, delegation, and assignment*. (3rd edition). Elsevier: St. Louis.

Internet Activities, Selected Articles

Lecture/Discussion

Learning Outcomes:

1. Describe the basic components of communication.
2. Identify effective ways of communication with other healthcare workers.
3. Describe an assertive communication style.
4. Apply effective communication skills in common nursing settings.
5. Identify different types of groups and group processes.
6. Analyze management styles and leadership styles.
7. Discuss leadership characteristics.
8. Identify common factors that lead to conflict.
9. Discuss methods to resolve conflict.
10. Discuss techniques to use in dealing with difficult people.
11. Discuss solutions and alternatives in dealing with anger.
12. Define terminology used to differentiate leadership and management.

Unit II

<div align="center">

Ethical and Legal Issues in Nursing
Cultural Awareness
Roles of the Nurse in Professional Development

</div>

Learning Activities:

LaCharity, L. et al. (2014). *Prioritization, delegation, and assignment*. (3rd edition). Elsevier: St. Louis.

Internet Activities, Selected Readings

Lecture/Discussion

Learning Outcomes:

1. Define terminology commonly used in discussion of ethical issues.
2. Analyze personal values that influence approaches to ethical issues and decision making.
3. Distinguish among ethics, spirituality and law.
4. Discuss the moral implications of the American Nurses Association and International Council of Nurses codes.
5. Explain the use of the ANA Standards of practice in legal proceedings.
6. Discuss the role of the nurse in ethical health care issues.
7. Understand the functions of a state board of nursing.
8. Relate the Nurse Practice Act to the governance of your profession.
9. Be able to identify the elements of nursing malpractice and how they are involved in a malpractice claim.
10. Incorporate an understanding of legal risks into your nursing practice.
11. Recognize how to minimize risks.
12. Identify legal issues involved in the medical record and nursing.
13. Define cultural competence.
14. List practice issues related to cultural competence.

Unit III

<div align="center">

Roles of the Nurse in Developing Management Skills
Nursing Management and Leadership
Time Management and Prioritization
Delegation

</div>

Learning Activities:

LaCharity, L. et al. (2014). *Prioritization, delegation, and assignment*. (3rd edition). Elsevier: St. Louis.

Internet Activities and Selected Readings

Lecture/Discussion

Learning Outcomes:

1. Differentiate between management and leadership.
2. Describe various types of management and leadership styles.
3. Distinguish between power and authority.
4. Discuss strategies that increase organizational skills.
5. Discuss the use of principles of work organization in management of time.
6. Describe time management strategies.
7. Discuss the principles of priority setting strategies.
8. Define the operational terms delegation, supervision and accountability.
9. Delegate tasks successfully based on outcomes.
10. Select the correct role and person for selected tasks.
11. Explain the use of knowledge, positional power, and personal power in nursing leadership.
12. Provide reciprocal feedback for the effective evaluation of the delegate's expectations.
13. Discus the organizational response to bioterrorism to include nursing roles.

GENERAL POLICIES: See Nursing Student Handbook regarding all policies.

CLINICAL AND FIELD WORK

Some degree and certificate programs offered by the College require students to obtain clinical or other field experience as part of their course work. Students with criminal convictions or drug use may have difficulty progressing in these programs.

Hospitals and facilities may mandate that a criminal background check and/or drug screening check (at the student's expense) be conducted prior to placement in a clinical or field setting. Students not passing these checks may be prohibited from participating in the clinical or field experience thus rendering the student ineligible to satisfactorily meet the course/program requirements. Students should contact an academic advisor or the program coordinator for further details.

ASSESSMENT STATEMENT:

St Louis Community College is committed to the continuous improvement of student academic achievement. The college undertakes assessment of its academic programs and courses to assure that student learning is not only occurring but improving. Further, classroom assessment by individual instructors discovers what is working in the particular classroom to facilitate learning. At each of these levels of academic achievement—classroom, course, and program—you, the student will be asked to participate to enable the College to improve its product, which is your learning. Assessment is a means to evaluate the learning process and is separate from the grading process. Your participation will be solicited and appreciated.

STUDENTS WITH SPECIAL NEEDS:

The Access Office – Disability Support Services – has been designated by you the College as the primary office to guide, counsel and assist students with disabilities. If you receive services
through the Access office and require accommodations for class, please make an appointment with your instructor as soon as possible to discuss your approved accommodation needs. Bring your, "Instructor Notification Memo" provided by the Access Office to the appointment. Your instructor will hold any information you share in strictest confidence.

If you have not contacted the Access Office and have reasonable accommodation needs (e.g. volunteer note-taker, extended time for tests, seating arrangements), an instructor will be happy to refer you. The Access Office will require appropriate documentation of disability.

If you wish to receive accommodations for this course, you must register with the Access Office. Registration with the Access Office is voluntary for people with disabilities, but it is a requirement of receiving accommodation.

 All students are responsible for making themselves familiar with the emergency evacuation materials and maps found in their classrooms. Students who need materials in an accessible format due to a disability should let their instructors know.

Revised 01/18mkd

ST. LOUIS COMMUNITY COLLEGE – MERAMEC NURSING 253 ADDENDUM

In addition to the policies in the St. Louis Community College Nursing Program Handbook, the following policies and procedures apply to this course.

Classroom Activities

Classroom activities are planned to supplement reading assignments and will be meaningful only if the student has come to class prepared. Planned activities may include lecture, discussions, group work, critical thinking exercises and case studies.

Faculty reserve the option to require students who miss a class to complete an assignment equivalent to the time missed. If this requirement is not met the student may receive a failing grade for NUR 253.

Punctuality to class is extremely important. Cell phones and pagers must be turned off during class time. Students should leave the college office phone number for emergency calls during class time. This number is: 984-7759.

Evaluation of Course

Grading Scale

        A – 100 - 92

        B – 91 - 84

C – 83 - 76
D – 75 - 70
F – 69 – and below

Grade Calculation

Theory Tests	80 points
ATI Predictor	20 points
ATI Review Course	Failure to complete will result in clinical unsatisfactory which will result in failure of the course
ATTENDANCE: NURSING STUDENT CONFERENCE	Journal Assignment (S/U) Only if available

The course theory grade will be evaluated on a point system. The total number of points will be converted into a letter grade at the completion of the semester. The clinical grade will be given as Satisfactory/Unsatisfactory. Students must receive a minimum theory grade of 76% and complete 90 hours of clinical experience with a "satisfactory" clinical evaluation before a grade for Nursing 253 is given.

ATI Testing and Remediation Requirements

Purpose: The purpose ATI Testing Predictor testing and remediation is to improve student's critical thinking, reasoning skills, and test taking strategies to achieve NCLEX-RN success.

Following the ATI Predictor Testing, students are required to remediate, and the remediation requirements are dependent on each individual student's ATI score.   ATI Predictor Scores can be indicative of the student's level of risk for success on NCLEX-RN. Students with lower ATI scores require more intense remediation.

ATI Predictor Testing: The ATI Predictor examination is administered during the final semester the nursing program. Following completion of the exam an online remediation plan is developed for each question missed.

Clinical Laboratory Experiences

The clinical component for NUR. 253 occurs during the last four weeks of the semester.

Students must complete NUR. 252 with a grade of "C" or better before they may participate in the clinical component of NUR. 253.

The student must complete 90 hours of clinical during this four-week time period.

Any clinical time which is missed will need to be rescheduled by the student in order that 90 hours are completed for a satisfactory clinical performance. All clinical hours must be completed by the last day of the course.

Students will be assigned a preceptor to work with for 66 hours during the four-week period.   Students must accommodate the preceptor's schedule. This may be day, evening, night or weekend shifts.

Students are **NOT permitted to photocopy any portion of a patient's chart** for personal and clinical work.

Photocopying a chart is in violation of the HIPAA regulations and is strictly forbidden. A clinical unsatisfactory will be given to any student violating the policy. No exceptions will be made.

Nursing Student Dress Code for Clinical Laboratory

The dress code for NUR. 253 follows the Professional Appearance (Dress Code) requirements as found in the Nursing Program Handbook and in the NURS 252 syllabus

Health Information

Health information must be up to date in order to begin clinical. The nursing lab supervisor must have documentation of a current PPD or chest x-ray. Incomplete health records will result in the student being unable to attend clinical and will be withdrawn from the course.

CPR Certification

The clinical facilities require that all students be CPR certified. Current CPR certification is required through the last day of the course.

Textbook

LaCharity, L. et al. (2014). *Prioritization, delegation, and assignment*. (3rd edition). Elsevier: St. Louis.

Computer Instruction and Blackboard Instruction

Computerized learning aids may be used in this course. This includes CD ROM programs/independent study, Blackboard, and Internet activities. Computers are available on campus in the nursing laboratory and the computer laboratory (both located in the Science West building). Additional computers are located in the Instructional Resources building (library), however, these computers will only allow access to Blackboard.

Withdrawal Deadline

The last day to withdraw from the course can be found in the calendar for the course. Students are responsible to obtain the information needed to withdraw from the course prior to the last day

to withdraw. Students who withdraw by the deadline will receive a grade of "W." Students who withdraw after the deadline will receive a failing grade for the course.
MKD/DC/ 2018

Nursing Program Handbook Addendum

B. ATI
ATI POLICY (Original 07-2017)
What is ATI?

- Assessment Technologies Institute® (ATI) offers an assessment driven review program designed to enhance student learning and NCLEX-RN success.
- The comprehensive program offers multiple assessment and remediation activities. These include assessment indicator for academic success, critical thinking, and learning styles, online tutorials, online practice testing, and proctored testing over the major content areas in nursing. These ATI tools, in combination with the nursing program content, assist students to prepare more efficiently, as well as increase confidence and familiarity with nursing content.
- Data from student testing and remediation can be used for program's quality improvement and outcome evaluation.
- ATI information and orientation resources can be accessed from your student home page. **To be successful, it is essential that you spend time navigating through these orientation materials.**

Modular Study: ATI provides online review modules that include written and video materials in all content areas. Students are encouraged to use these modules to supplement course work. Faculty may assign these to supplement and enhance your learning

Tutorials:
ATI offers unique Tutorials that teach nursing students how to think like a nurse; how to take a nursing assessment and how to make sound clinical decisions. **Nurse Logic** is an excellent way to learn the basics of how nurses think and make decisions. **Learning System** offers practice tests that approach NCLEX style questions in specific nursing content areas that allow students to apply the valuable learning tools from Nurse Logic. Features are embedded in the Tutorials that help students gain an understanding of the content, such as a Hint Button, a Talking Glossary, and a Critical Thinking Guide. You are encouraged to take advantage of these resources even if they are not specifically assigned in your course(s).

Assessments:
Standardized Assessments will help the student to identify what they know as well as areas requiring active learning/remediation. There are practice assessments available to the student and required standardized proctored assessments that will be scheduled each semester. **ATI testing is a course requirement in each theory course at STLCC. Proctored testing will likely occur outside of your normal classroom time.** Your independent learning through the ATI resources and the assessments (practice and proctored) will not always directly parallel your classroom instruction, but the combined processes will enhance your critical thinking and support your overall success in mastering nursing concepts and content and will effectively support your learning and integration of theory and clinical nursing.

Active Learning/Remediation:
Active Learning/Remediation is a process of reviewing content in areas that were not learned or not fully understood as demonstrated on an assessment. It is intended to help the student review important information to be successful in courses and on the NCLEX. The student's individual performance profile will contain a listing of the topics to review. The student will be expected to remediate, using the Focused Review which contains links to ATI books, media clips and active learning templates.
Faculty have online access to detailed information about the timing and duration of time spent in the assessment, focused reviews, and tutorials by each student. Students may be required to provide documentation that ATI work was completed using the "My Transcript" feature under "My Results" of the ATI Student Home Page or by submitting written Remediation Templates. Faculty will inform you of when and how ATI work will be validated.
10% of your course grade in NUR 151, 153, 160, 251, and 252 will be determined by the level of proficiency achieved on ATI Proctored exams.   90% of your course grade in these courses will be determined by the course final (25%) and classroom testing
 (65%). **In NUR 253 20% of your course grade will be determined by the ATI Proctored exams.**

Two practice tests will be made available prior to each proctored exam. Specific directions regarding practice tests, remediation, and proctored exams will occur in individual courses.

The first practice tests will be given with rationales enabled. This allows you to review the rationales for each question. For you to achieve maximum benefit from the first practice test, you should answer questions carefully, review all the rationales, and take notes over areas that you missed for further review. A focused review is not generated when rationales are provided.

The second practice tests will occur within 4-7 days of the first. This practice test will not have rationales enabled.   A focused review will be generated based on topics that you missed. You must prepare for the second practice test and take it seriously so that the focused review that is generated is based on what you still need to learn and not on random topics because you did not take the practice test seriously.

It is highly advised that the second practice test is taken without "looking up answer" so that the focused review that is generated provides the appropriate guidance to your learning. The second practice test and the associated remediation is the preparation for the First Proctored Tests. Proctored tests become part of your course grade as described in the Table A and B. Only the first attempt at Proctored Tests generate your "Pulse" status, the best indicator of your overall performance in achieving course and program outcomes that result in successful completion of the NCLEX. Remediation is critical. Consistent remediation throughout the program will improve your "Pulse." To that end, remediation is rewarded as described in the tables below.

Table A: Proctored Exam table for First and Second Semesters % awarded is = 10% of course grade			
Proficiency on Proctored Exams	**% score awarded for first attempt**	Remediation	% score awarded after 2nd attempt
Level 3	100%	Not required	**2nd test is optional, but recommended**
Level 2	84%	Optional, but highly recommended	**2nd test is required** 92% if at level 3 87% with completed remediation and level 2 84% with completed remediation and level 1 80% if at level 1
Level 1	70%	Remediation is required; ticket to test	**2nd test is required** 85% if at level 3 80% if at level 2 70% if at level 1 60% if < level 1
< Level 1	0%	Remediation is required; ticket to test	**2nd test is required** 85% if at level 3 80% if at level 2 70% if at level 1 60% if < Level 1

Table B: Proctored Exam table for Third and Forth Semesters % awarded is = 10% of course grade			
Proficiency on Proctored Exams	**% score awarded for first attempt**	Remediation	% score awarded after 2nd attempt
Level 3	100%	Not required	**2nd test is optional, but recommended**
Level 2	84%	Optional, but highly recommended	**2nd test is optional, but recommended** 92% if at level 3 87% with completed remediation and level 2 84% with completed remediation and level 1 80% if at level 1

Level 1	70%	Remediation is required; ticket to test	**2ⁿᵈ test is required** 85% if at level 3 80% if at level 2 70% if at level 1 60% if < level 1
< Level 1	0%	Remediation is required; ticket to test	**2ⁿᵈ test is required** 85% if at level 3 80% if at level 2 70% if at level 1 60% if < Level 1

Table C: REQUIRED PROCTORED EXAMS		
NUR 151 Fundamentals	Critical Thinking Assessment: Entrance (40-item test) – Fundamental custom exam	
NUR 152 Skills Lab 1		
NUR 153 Adult/Child 1	RN Maternal Newborn 2016 (70-item test) RN Fundamentals 2016 (70-item test)	
NUR 154 Skills Lab 2		
NUR 160 LPN Bridge	RN Maternal Newborn 2016 (70-item test) RN Fundamentals 2016 (70-item test)	
NUR 251 Adult/Child 2	RN Mental Health 2016 (70-item test) RN Nutrition 2016 (70-item test) RN Pharmacology 2016 (70-item test)	
NUR 252 Adult/Child 3	RN Adult Medical Surgical (90-item test) RN Nursing Care of Children (70-item test)	
NUR 253 Management	RN Leadership (70-item test) RN Comprehensive Predictor (180-item test)	

Appendix R: Interview Questions

RQ: How, if at all, is it possible to achieve management skills in nursing to meet the principles of managing the nursing care of a group of patients in the role of beginning staff nurse in a nursing management practicum?

RQ$_{1A}$: What are the issues with preceptored clinical learning experiences in achieving management skills to meet the principles of managing the nursing care of a group of patients in the role of beginning staff nurse?

1. In what ways, if any, did the preceptored clinical learning experience lead to a stronger sense of leadership within yourself?
2.   Discuss events or insights, if any that occurred during or after the preceptored clinical learning experience that built your self-confidence in nursing management skills?
3. Give an example of when you felt challenged to reach beyond your comfort level and use your critical thinking skills to make decisions to perform independently?
4. How would you feel about changing from a preceptored clinical learning experience to a simulation learning experience?
5. Compared to other clinical learning experiences in which you have been involved, how would you rate the value of this experience on a scale of 1-5 with 1 representing least value and 5 most value. Explain your answer.

RQ$_{1B}$: What are the issues with simulation clinical learning experiences in achieving management skills to meet the principles of managing the nursing care of a group of patients in the role of beginning staff nurse?
1. In what ways, if any, did the simulation learning experience lead to a stronger sense of leadership within yourself?
2. Discuss events or insights, if any that occurred during or after the simulation learning experience that built your self-confidence in your nursing management skills.
3. Give an example of when you felt challenged to reach beyond your comfort level and use your critical thinking skills to make decisions to perform independently?
4. How do you feel about having a simulation learning experience in place of a preceptored clinical experience?
5. Compared to other simulation learning experiences in which you have been involved, how would you rate the value of this experience on a scale of 1-5 with 1 representing least value and 5 most value. Explain your answer.

RQ$_2$: In what way is the process of the Adult Learning Theory– Andragogy, integrated into a nursing student's educational experience in a nursing practicum?

1. How, if at all, did the clinical experience (either preceptored or simulated learning) give you the opportunity to solve problems independently?
2.   Discuss your collaborations with peers, teachers, or preceptors during the clinical, when you learned from one another.
3. Discuss a situation where you identified a personal learning need, and the action you took to meet the need, and your assessment of your action.

RQ$_3$: How, if at all, does the design of the preceptored clinical learning experience or the simulation learning experience meet the goal of helping the student nurse develop the following management skills: therapeutic communication, interdisciplinary patient care, clinical decision making, culturally competent care, ethical, and values centered care, delegation, prioritization, safety, conflict resolution, and time management?

1. Describe a specific instance where the design of the preceptored clinical learning experience or the simulation learning experience provided you the opportunity to demonstrate the skills associated with managing a team of patients.

2. Based on your experience in the preceptored clinical learning experience or the simulation learning experience list 3-4 guidelines you would recommend to junior college nursing programs, partnering with nurse educators to design a nursing management practicum experience

Vitae
TERESA R. HAMRA

CURRICULUM VITAE
Teresa Hamra MSN, RN
thamra@lindenwood.edu
636-399-2516

EDUCATIONAL DATA

Date	Degree	Institution
2019 (plan)	EdD	Lindenwood University
2014	N/A	Rush College of Nursing (1 semester)
2009	MSN / Educator	University of Missouri St. Louis
2002	BSN	University of Missouri St. Louis
1997	ASN	St. Charles Community College
1995	AA	St. Charles Community College

ACADEMIC APPOINTMENTS

June 2018- current	Program Director – Nursing Lindenwood University St. Charles, Missouri
January 2015 – May 2018	Assistant Professor of Nursing Lindenwood University St. Charles, Missouri
January 2010 -December 2014	Instructor Goldfarb School of Nursing St. Louis, Missouri
January 2009-December 2012	Program Coordinator (LPN-RN Bridge) Pike - Lincoln Technical Center Eolia, Missouri
May 2009 – May 2013	Adjunct Faculty University of Missouri St. Louis St. Louis, Missouri
September 2008- May 2009	Adjunct Faculty / Clinical St. Louis Community College at Meramec St. Louis, Missouri

CLINICAL APPOINTMENTS

February 2007 – January 2010	Registered Nurse/ ICU St. Joseph Hospital West Lake St. Louis, Missouri
August 2003 – January 2007 Registered Nurse	Office Manager / Nurse Recruiter / RNtensive Nursing Agency Clayton, Missouri
January 2004 – January 2006	Cardiology Practice / Registered Nurse Cardiology Diagnostics St. Peters, Missouri
August 1999 – December 2003	Registered Nurse / ICU StarMed Nursing Agency Clayton, Missouri
December 1999 – 2003	Registered Nurse / ICU DePaul Health Center Bridgeton, Missouri
May 1997 – December 1999	Registered Nurse/ ICU Christian Northeast Medical Center St. Louis, Missouri

COURSES TAUGHT

Lindenwood University *(Hybrid and Online)*	<u>RN to BSN Program</u> NUR 35000 Healthcare Policy & Finance NUR 37500 Health Informatics NUR 45000 Community Health NUR 38000 Nursing in Emergent Situations NUR 43000 Leadership and Management NUR 41000 Holistic Health Assessment <u>MSN Educator program</u> *NUR 51100 Advanced Health Promotion and Assessment across the Lifespan *NUR 51600 Instructional Design *NUR 51900 Practicum in Nursing Education

* developed courses

Administrative Duties / Lindenwood

New Student Orientation
Student Advising
Student Recruiting
Retention Reports
Student Database Updates
Clinical Contracts
Castle Branch – Student Medical data
Advisor / Mentor for Adjunct Faculty
Accreditation – assist Program Director

Goldfarb School of Nursing

N 3180: Health Assessment (theory and lab) Upper Division, Accelerated & Online
N 4250: Adult Health II (theory, lab, clinical, simulation) Upper Division & Accelerated
Mentor / Nurse Educator Students

University of Missouri St. Louis

N3106: Assessment of Clients in Health and Illness (lab)
N2101 Introduction to Nursing (lab, clinical)
N4425 Health Assessment

St. Louis Community College - Meramec

N205: Nursing of Adults and Children (clinical, simulation)

PROFESSIONAL AWARDS AND HONORS
Nominee – Lindenwood Teacher of the Year Award 2017
Academic Achievement Award / UMSL 2002
Sigma Theta Tau International Honor Society / UMSL 2009
Golden Key International Honor Society / Undergraduate nursing

COMMITTEEs

Lindenwood University
General Education Committee (member / secretary) 2015 – 2018
General Education Committee – special task force 2018
Faculty Scholarship Support Group 2017
Educational Policy Committee (secretary) 2015-2016

Faculty Promotion Task Force 2017
Program Director Administrative Meetings

Goldfarb School of Nursing
Faculty: Treasurer: May 2012 – June 2014
Student Services Faculty Support: 2011
Special task force: Workload Committee 2013
Rewards and Recognition Committee 2013-2014
Undergraduate Subcommittee (non-voting member) 2014
Curriculum Committee 2013-2014

COMMUNITY VOLUNTEER SERVICES
Harvester Christian Church member since 1997 – committee service varies
Haiti Medical Mission Trip – 2015
Fiji International Mission – Supporter 2016 - 2017
Children's Services Harvester Christian Church 2007-2018
Pack-A-Pack Troy M. Volunteer Back to School Project 2016-2018
Channel 9 Supporter
Community Health Fair – Organizer in 2009 for Troy Mo. Residents, Planning
Committee 2018
Adopt – A – Family volunteer 2007 & 2014 -2016
Asthma and Allergy Foundation of America –St. Louis Chapter 2014 / Internship
Student Nurse Organization NCLEX Trivia night - Host 2013 & 2014
Certified Smoking Cessation Instructor for American Lung Association
Lincoln County Bright Futures Troy, MO – Supporter & Volunteer
Pregnancy Resource Center Volunteer 2005-2006

PROFESSIONAL ORGANIZATIONS
American Nurses Association (ANA)
Missouri Nurses Association (MONA)
American Association of Colleges of Nursing (AACN)
International Nursing Association Clinical Simulation Learning (INACSL)
American Association for Adult and Continuing Education (AAACE)

PROFESSIONAL DEVELOPMENT
Doctoral Dissertation in Progress / Lindenwood University
Lindenwood Online Peer Reviewed Journal Lifelong Learning Article published– 2018
Internship with Program Director at Goldfarb School on Nursing– Educational
Leadership – 120 hours 2017-2018
Best Practice Boot Camp for Distance Education (x 2) – Lindenwood University 2017
Office 365 Workshop – Academic Technology 2017
Accreditation assistant for nursing CCNE site visit 2017
Planning and Assessment Summit Lindenwood University 2017
Canvas Early Adopter – 2016

REVIEWER

American Association of Adult and Continuing Education (AAACE) reviewer for Best
Online Courses 2017 & 2018
Health Assessment online course development / Pearson Learning Solutions 2013
Nursing Consultant – Sandberg Phoenix & Von Gontard P.C. Law Firm

<u>PRESENTER</u>
Faculty Workshop Classroom Assessment Techniques 2016
AAACE Conference / Simulation Comparisons in Community College Nursing Programs
2017
Submitted Proposal for INACSL Annual Conference July 2019