An Exploration of Clinical Nursing Education: The Nurse Educator's Perspective

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Lack of undergraduate registered nurse (RN) student preparedness has placed nursing education under the microscope. Two primary concerns regarding nursing education include delivery and the learning environment. National nursing organizations recommend development of strategies that enhance the undergraduate RN student’s ability to transition to practice upon program completion. Even though there is no miraculous teaching strategy that must be used by all educators, nurse educators should implement learner-centered strategies because these meet the diverse needs of the learner, promote social interaction, and enhance learning. Given that nursing is delivered in a clinical context, and the clinical experience is critical for the undergraduate RN student, this study focuses on educational delivery in the clinical learning environment. Exploring clinical facilitation in undergraduate RN student education can provide useful data about educational delivery, which will make it easier for further study and explanation.

To further understand the strategies employed by nurse educators who are facilitating learning in the clinical environment, a mixed-methods study was conducted which explored the strategies employed by nurse educators to prepare the undergraduate RN student for future practice. The Principal Investigator (PI) surveyed 71 nurse educators using an electronic survey based on the modified Principles of Adult Learning Scale (PALS). In addition, nurse educators
responded to surveys and were interviewed to explore the style, strategies and perceptions regarding optimal learning in the clinical environment.

Two different methods were utilized to analyze the data. The researcher utilized Statistical Package for the Social Sciences (SPSS) 25.0 to analyze the quantitative data. Conventional qualitative content analysis was selected as the method of data analysis for the qualitative piece, as this approach leads to concept development or model building. The quantitative findings from this study indicate that the nurse educators teaching in the clinical environment display a propensity toward the learner-centered teaching style and implement learner-centered behaviors. The analysis of qualitative data indicates that nurse educators are innovative and purposeful in their teaching. Merging of data resulted in congruence among the quantitative and qualitative data and key themes were noted from the data sets.

Key themes emerged from this study which allowed the PI to develop a conceptual model illustrating the various strategies utilized by nurse educators to prepare the undergraduate RN student upon program completion and for future practice. The conceptual model is called the Innovative Clinical Facilitation Model. The themes include exhibiting learner-centered practices, supporting diverse needs, implementing active learning strategies, and enhancing collaboration. These findings were attained based on the research questions and were noted to direct the teaching and learning process, enhance communication, motivate the learner, develop critical thinking while linking theory to practice, and set the tone while influencing culture in the environment. The Innovative Clinical Facilitation Model can be used to help others understand the components of facilitation in the clinical environment. The model may also be used as a foundation on which to base future research. Recommendations were made for nursing education, research, and practice.
Keywords: nursing education, clinical education, clinical teaching, learning environment, nurse educator, teaching strategies
AN EXPLORATION OF CLINICAL NURSING EDUCATION:
THE NURSE EDUCATOR’S PERSPECTIVE

BY

TONYA A. DIXON
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A DISSERTATION SUBMITTED TO THE GRADUATE SCHOOL
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FOR THE DEGREE
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Doctoral Director:
Joseph Flynn
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DEDICATION

With love, I dedicate this to my loving and encouraging mother, Thelma Rene Brown, who is deceased but never forgotten.

To my family: Abe, Abe Jr., Ashley, A’Miayah (Sweetie).
Always remember, with God all things are possible.
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CHAPTER 1

INTRODUCTION TO THE STUDY

Overview of the Nursing Profession

The registered nurse (RN) profession is the largest of the health care professions (Benner, Sutphen, Leonard-Kahn, & Day, 2010), and is comprised of 2.9 million licensed RNs nationwide (Bureau of Labor Statistics, 2017). According to Jamshidi (2012), nursing is a discipline that requires professionals who possess expert knowledge and skills which are acquired through formal educational institutions (e.g., higher learning) and experience. Nursing is a practice discipline; as such, theory and practice cannot be separated because theory guides practice and practice informs theory (Raines, 2018). Students must learn to be nurses through exposure to real-life experiences (Benner et al., 2010), and through engagement. In addition, given the expectations of the undergraduate RN student upon program completion, theoretical and practical knowledge in a real-life environment are vital, especially in clinical training. This is because the clinical environment is where students begin to get acclimated to the profession and for the realities of practice.

Nursing education is provided in multiple learning environments within the nursing curriculum. These environments are provided to ensure knowledge acquisition across the nursing program. Nursing students engage in classroom, lab, and clinical learning environments. In the classroom, students are exposed to theoretical knowledge and learning is scaffolded to prepare a generalist RN upon program completion. During lab, students practice skills and provide patient care in a simulated environment. The clinical component of nursing education requires a
combination of theoretical knowledge, application of skills, and exposure to the real-life clinical environment. Clinical provides an opportunity to problem solve, develop critical thinking, and improve clinical judgment (Huston et al., 2018). In addition, clinical is where students are prepared for the realities of practice and are expected to mature personally and professionally (Ehrenberg & Haggblom, 2007). Although classroom and laboratory settings are vital to undergraduate RN student learning, researchers consider the clinical portion of the nursing curriculum to be critical for students (Laske, 2019; McClure & Black, 2013; Sedgwick & Harris, 2012). In fact, the clinical portion has been recently recognized as the heart of the professional RN’s curriculum (Farzi, Shariari, & Farzi, 2018).

Nursing programs are highly regulated. The National Council of State Boards of Nursing (NCSBN, 2012) regulates nursing program curriculum, standards, and entry into the profession. The majority of undergraduate RN programs is comprised from one of three tracks (Nursing, 2019). RN students can successfully complete a diploma, an associate degree, or a bachelor’s degree program to be eligible to take the National Council Licensing Examination for Registered Nurses (NCLEX-RN) and attain licensure. Students who graduate from a board-approved nursing program have demonstrated their ability to successfully complete program requirements. However, research indicates that undergraduate RN students are often not prepared for practice upon program completion (Berman, Beazley, & Karshmer, 2014; Bvumbee, 2016; Institute of Medicine, 2015; Kavanagh & Szweda, 2017; Lasater, Nielsen, Stock, & Ostrogorsky, 2015; Shinnick, Woo, & Mentes, 2011). In addition, educators are utilizing traditional teaching practices which may impact preparedness, bringing facilitation to question. Facilitation is important in all aspects of nursing educational delivery, specifically in the clinical component (Oermann, 2015).
Facilitation greatly influences the student’s success, the credibility of nursing programs, and the future of the profession (e.g., ensuring growth and a strong professional reputation; Oermann, 2015). However, to date, there is a dearth of literature surrounding the style and methods used by nurse educators in clinical learning environments, creating a gap in the literature. The method of facilitation can enhance or deter the undergraduate RN student’s preparedness. The purpose of this study was to explore this gap and develop an understanding of facilitation in the clinical learning environment.

Controversy exists regarding what impacts the learning environment. It has been said that the educator greatly impacts the clinical learning environment (Gaberson & Oermann, 2007; Ismail, Aboushady, & Abeer, 2016; Muthati, Thurling, & Armstrong, 2017; Sweet & Broadbent, 2017). On the other hand, researchers have noted that, oftentimes, licensed RNs are not prepared to teach clinicals (Davidson & Rourke, 2012; Jetha, Boschma, & Clauson, 2016), although nursing schools recruit licensed RNs (full time and adjunct) to teach clinicals (Jetha et al., 2016). The concerns regarding delivery may be based on the licensed RNs’ varied experiences, education, and/or roles these licensed RN professionals hold.

Individuals in the role of nurse educator have various titles. Licensed RN professionals who teach in the clinical learning environment are referred to as staff nurse preceptors, clinical faculty members full time or adjunct (Dahlke, O’Connor, Hannesson, & Cheetham, 2016), clinical preceptors (McClure & Black, 2013; Udlis, 2008), clinical teachers (Jetha et al., 2016; Mogan & Knox, 1987), clinical instructors (Collier, 2017; Dahlke, Baumbusch, Affleck, & Kwon, 2012; Ismail et al., 2016; Reising, James, & Morse, 2018), clinical facilitators (Sweet & Broadbent, 2017), clinical nurse educators (Taniqama, Kai, & Takahashi, 2012), nurse teachers (Saarikoski & Leino-Kilpi, 2012), or nurse educators (Clavon, 2014; Jamshidi, 2012; Levey,
Regardless of title, the role of educator is vital, specifically in clinical learning. For the purposes of this study, licensed RNs who facilitate, influence learning, and have a responsibility to prepare undergraduate RN students in the clinical environment were referred to as nurse educators.

Influencing Learning

Teaching and learning are uniquely intertwined, and both impact student success. Just as there are theories on teaching, there are theories on learning. Learning theories focus on how people learn, whereas theories on teaching focus on identifying the methods that are most likely to facilitate attainment of the learning outcomes (Reigluth, 2014). Knowles (1980) noted that “the behavior of the teacher probably influences the learning climate more than any other single factor” (p. 41). Knowles’s (1980) quote is significant because it highlights the influence that teachers have on the learning experience. Because clinical nursing is impacted by the nurse educator, teaching is the focus for this study.

Many concepts may impact the preparedness of the undergraduate RN student upon program completion. This study focuses on the following concepts: teaching style and behaviors, student needs, teaching strategies, and the learning environment. Because the educator is thought to greatly influence learning, facilitation is important to understand. When educational delivery is understood, knowledge and awareness may be increased, traditional practices may be challenged, the findings may be applied, and educational standards may be improved.

In the past decade, two national reports were published that challenge the educational delivery in nursing education; one challenges traditional teaching practices, while the other challenges the learning environment. The first report, issued by the American Association of Colleges of Nursing (2008b), is entitled *Essentials of Baccalaureate Education for Professional*
Nursing Practice, addresses curriculum challenges and issues regarding today’s creation of baccalaureate nursing programs. In the report, it was recommended that clinical education offer breadth and depth, thereby ensuring that knowledge and skill competence are integrated into professional nursing practice. The following suggestions have been provided to ensure a strong foundation for clinical learning among baccalaureate students:

1. Development of a solid base in education, inter-professional communication, collaboration, professionalism, and professional values.
2. Development of knowledge skills, and abilities to function in the role.
3. Clinical experience should provide opportunities for building clinical reasoning, management, and evaluation skills.
4. Nursing education and practice must work together to better align education with practice environments.

The report called for further assessment of educational delivery methods, and the establishment of opportunities to develop partnerships, enhance collaboration, and better align theory to practice in the learning environment of baccalaureate undergraduate RN programs.

The second report, issued by the Institute of Medicine (IOM, 2011), is entitled The Future of Nursing: Leading Change, Advancing Health; it challenged the efficacy of traditional teaching practice. This report stated that nursing education should be redesigned, thereby creating prepared graduate nurses who are able to meet current and future health care demands. This report also stressed the need to examine innovative learning solutions that advance the way nurses are educated and prepared (p. 304). As noted, many programs focus too much attention on curriculum that fails to adequately prepare nurses. The report indicated that memorization, which was once a large part of the student learning experience, is no longer a viable option to ensure student knowledge transfer. The IOM (2011) recommended that new teaching-learning
strategies be implemented, and that learning environments that foster engagement and are learner-centered should be created.

Various nursing advisory boards and researchers have recommended that nurse educators transition their teaching methods from a teacher-centered approach to a learner-centered approach (American Association of Colleges of Nurses, 2008a; Chickering & Gamson, 1991; Conti, 1985c; Didham, 2003; IOM, 2011, 2013; National Advisory Council on Nurse Education and Practice, 2002; National League for Nursing, 2003, 2005b; Weimer, 2013). Researchers continue to emphasize the importance of content delivery, ensuring transfer of knowledge and acquisition of critical thinking skills. Thus, educators and programs must consistently assess how to best prepare students, thereby creating a strong workforce. The style in which clinical education is delivered is key.

Teaching Styles and Strategies

The term teaching style references how learning environments and instructional experiences are constructed, sequenced, and delivered. These teaching styles are based on strategies utilized when facilitating. There are two primary methods of facilitation: teacher-centered and learner-centered. The teacher-centered style is dominant across North America (Conti, 2004). Historically, nursing schools have often used a teacher-centered style to deliver content because educators rely on a lecture-based approach (Candela, Dalley, & Benzel-Lindley, 2006; Stanley & Dougherty, 2010; Weimer, 2013).

The teacher-centered approach has been documented as problematic for various reasons. One is that teacher-centered learning creates dependent students (Jones, 2015; Smart, Witt, & Scott, 2012; Weimer, 2013). Another is that this approach limits a student’s critical thinking and problem-solving skill development (Kahl & Venette, 2010). Numerous researchers have argued
that teacher-centered practices are no longer an effective way to educate adult students (Brookfield, 2012; Candela et al., 2006; Chickering & Gamson, 1991; IOM, 2011; Jeffreys, 2012; Weimer, 2013). Recommendations have been made to modify the teacher-centered style of instruction and implement a learner-centered style which is more conducive to learning.

The learner-centered teaching method is an umbrella framework, which is rooted in principles of adult learning theory (Conti, 1985a). In learner-centered teaching, the educator guides students to apply knowledge through an interactive method (Candela et al., 2006; Weimer, 2013) which involves an active, comprehensive process that encompasses many different teaching strategies (Ellis, 2016). Learner-centered teaching impacts nursing practice (Ironside, 2006) and encompasses several adult learning principles, such as personalizing instruction, relating to experience, assessing student needs, climate building, active participation among learners, and content flexibility (Conti, 1985b). Learner-centered teaching has a positive effect on learning outcomes (Conti, 1985c; Conti & Welbourne, 1986; Curran, 2014; Schaefer & Zygmont, 2003; Totin Meyer, 2002), increases critical thinking skills (Brandon & All, 2010), develops lifelong learning skills, and actively engages students in the learning process (Colley, 2012; Conti, 1985c; Conti & Welbourne, 1986; Knowles, 2011; Schaefer & Zygmont, 2003; Weimer, 2013). In addition, a learner-centered approach is valuable since it offers flexibility and allows for educators to better connect with students who are diverse (i.e., with unique needs and challenges; Oermann, 2015). However, further research regarding identification of effective teaching strategies is needed to identify how students are educated (Wiltcher, 2015). Learner-centered practices are recommended, but their implementation has not yet been assessed in the clinical learning environment.
Learning Environment

The learning environment—specifically, the clinical learning environment—is a significant factor in nursing education, yet it is complex. The learning environment plays a major role in how a student acquires knowledge. In fact, D’Souza, Venkatesaperumal, Radhakrishnan, and Balachandran (2013) noted that the quality of nursing education depends on the clinical experience provided in the student’s program. The attributes of the learning environment have caused much debate but have been gathered based on the nursing student’s perspective.

Researchers have identified multiple concerns that are impacted by the clinical learning environment. Undergraduate RN students are said to experience fear of failure (Farzi et al., 2018), unpleasantries in the clinical learning environment (Farzi et al., 2018), and have verbalized a difference between the ideal and the real clinical environment (Luanaigh, 2015; O’Mara, McDonald, Gillespie, Brown, & Miles, 2014; Papathanasiou, Tsaras, & Sarafis, 2014), making it difficult to learn and adjust. In addition, nursing students have verbalized concerns regarding nurse educator competence in the clinical learning environment.

Researchers have described the learning environment differently (Bloom, 1956; Moos, 1973, 1979). Bloom (1956) described the educational learning environment as the conditions, forces, and external stimuli that affect the individual and that may be influenced by physical, social, and intellectual experiences. Moos (1973) initiated the concept of the classroom learning environment and argued that relationship, personal development, and system change should be considered when assessing the learning environment. Other researchers have developed tools that describe the various components of the clinical learning environment (Chan, 2002; Flott & Linden, 2015; Newton, Jolly, Ockerby, & Cross, 2010; Saarikoski, Isoaho, Warne, & Leino-Kilpi, 2002, 2008; Saarikoski & Leino-Kilpi, 2002, 2008; Sand-Jecklin, 2009). A great deal of
research on the learning environment has been based on the student perspective, thereby disregarding the voice of the nurse educator, who dramatically facilitates and impacts the learning experience. For purposes of this study, Moos’s (1973) description was selected, as Moos’s concept encourages the assessment of the learning environment in context.

To enhance student learning and ensure content mastery, an exploration of educational delivery, as well as a change in teaching practices, must occur in today’s nursing programs. Nursing programs must assess the content and experiences they are providing to students (American Association of Colleges of Nursing, 2008b), assess the rigors of the curriculum and pedagogical practices utilized (Benner et al., 2010), and identify how to incorporate innovative related practice opportunities (Greiner & Knebel, 2003; IOM, 2011; National League for Nurses, 2005a). Researchers have also recommended that processes regarding facilitation of learning be examined (National League for Nurses, 2003), and faculty members enhance their ability to ensure that higher-level thinking occurs (National League for Nurses, 2005a).

Despite these aforementioned program recommendations, there is a dearth of literature regarding current educational delivery practices utilized in the clinical learning environment. Yonge et al.’s (2005) study noted that only 39 of 1,286 research articles examined clinical nursing education. These previously addressed concerns can greatly impact the experience of undergraduate RN students, thus reaffirming the importance of exploring the delivery of nursing education, specifically in terms of identifying how knowledge is dispersed in the clinical learning environment through instructional practices.

Purpose

The overall purpose of this study was to identify the manner in which nurse educators are preparing the undergraduate RN student for future practice in the clinical environment. To
achieve the study’s purpose, the PI surveyed and interviewed nurse educators to understand their strategies and perspectives regarding educational delivery in the clinical environment. Specifically, the PI explored the instructors’ teaching styles, teaching behaviors, teaching strategies, assessment of students’ needs, and asked nurse educators to identify what they believe contributed to an optimal clinical learning environment.

Research Questions

To achieve this study’s purpose, the PI utilized a mixed methods approach to collect data. Mixed methods research involves both quantitative and qualitative methods (Creswell & Plano Clark, 2018; Tashakkori & Creswell, 2012). For the purposes of this study, an electronic survey and personal interviews were used. The following quantitative questions guided this research:

1. What is the dominant teaching style of nurse educators based on the modified Principles of Adult Learning Scale (PALS)?

2. What behaviors do nurse educators exhibit according to the modified PALS instrument and factor scores?

No hypotheses were developed, specifically because research questions 1 and 2 were descriptive in nature.

To obtain information based on the nurse educator’s perspective, the PI surveyed and interviewed current nurse educators to answer the following research questions:

1. What do nurse educators believe helps students learn in the clinical learning environment?

2. What specific teaching strategies do nurse educators utilize in the clinical learning environment to enhance learning?
3. What strategies do nurse educators utilize that contribute to an optimal clinical learning environment?

This study utilized a mixed methods approach. The PI developed the following mixed methods questions to guide this research study:

1. What results emerge from comparing the qualitative data about the specific strategies with outcome data from the quantitative instrument data (the modified Principles of Adult Learning Scale), which measures teaching styles and factors?

2. To what extent do the qualitative results support the quantitative results?

Overview of Methodology

This research study employed a convergent mixed methods design to explore and describe the teaching styles and strategies nurse educators used in the clinical environment to prepare undergraduate RN students for future practice. The convergent mixed methods design was selected, as this approach allows the researcher to explore two differing data strands and compare, contrast, or seek correlations among the findings. A G*Power analysis was utilized to determine the sample size (Faul, Erdfelder, Lang, & Buchner, 2009), resulting in 71 completed online surveys. Interviews were conducted with nurse educators who volunteered until data saturation occurred; the end number was five. Conventional content analysis was utilized to analyze the data, as it allows for the development of a conceptual model (Hseih & Shannon, 2005).

This exploration of clinical facilitation was important because researchers have noted that nursing students are often underprepared upon program completion (Benner et al., 2010; Burns & Poster, 2010) and recommend that nurse educators implement innovative practice. In addition, little research details facilitation in clinical learning from the nurse educator’s perspective. The
exploration and identification of teaching styles and strategies utilized, which contribute to an optimal clinical learning environment, is vital for understanding how nursing education is delivered and for seeking ways to improve it. This study has illuminated current teaching styles of nurse educators, uncovered best practices, and highlighted specific strategies that enhance clinical learning therefore filling in the gap in clinical nursing education research, and encouraging further research in this area.

Nurse educators who are licensed in the United States and taught the undergraduate RN student were invited to participate in this study. Participation involved completing an internet-based survey instrument and answering three open-ended research questions. The PI investigated the nurse educators’ propensity towards demonstrating learner-centered teaching style and determined that nurse educators are utilizing adult learning principles in their clinical teaching, based on the modified Principles of Adult Learning Scale and PALS factors (PALS; Conti, 1985a). PALS factors included in this study were: Learner-Centered Activities, Personalizing Instruction, Relating to Experience, Assessing Student Needs, Climate Building, Participating in Learning, and Flexibility for Development. Additionally, nurse educators were interviewed to gain a fresh perspective. By participating in this study, nurse educators were provided an opportunity to reflect on their teaching styles, describe the specific strategies utilized in the creation of an optimal clinical learning environment, indicate methods to prepare the undergraduate RN student, and contribute to nursing educational delivery.

Theoretical Influences

Several theories influenced this study. The primary theory was Knowles’s theory on adult learning (andragogy), which looks at the facilitation of learning when working with adults. Knowles (1984) argued that adult learners often value self-direction, experiential learning, and
collaboration; thus, the educator should be a “facilitator of knowledge” (p. 7) and educators must be encouraged to use varied approaches to meet the diverse needs of students. Knowles (1984) believed that instruction should focus on the process, not so much the product. This theory of andragogy, when applied, aligns with the learner-centered teaching style. Adult learning theory served as an anchor for the literature review and research questions.

Additional influence was drawn from the concept of learning environment by Moos (1973). Moos questioned the components of the optimal learning environment and believed that relationships, personal development, and system change should be included when assessing the environment. Exploration of learning environment was relevant for this study, as the learning environment in which undergraduate RN students learn has been problematic and called into question (Chan, 2002). Learning environment provided a grounding base for this study.

This study was also influenced by Principles of Good Practice. Chickering and Gamson (1991) asserted that providing good teaching and learning should be the hallmark of every institution of higher learning and is a shared responsibility between teacher and learner. According to Chickering and Gamson (1991), good practice in undergraduate education encourages student-faculty contact, cooperation among students, active learning, prompt feedback, dedicated time, and serves a diversity of needs and various ways of learning. Since in the eyes of the PI, curriculum and instruction is impacted by Principles of Good Practice, it is relevant for this study.

Impact on Curriculum and Instruction

This study impacted both curriculum and instruction. The terms *curriculum* and *instruction* must be explored, as there are varying definitions for each term. First, distinctions
between formal, informal, and hidden curriculum are provided, as these concepts play a key role in nursing education.

Curriculum may be formal or informal (Keating, 2014). Formal curriculum is a plan of study that provides the philosophical underpinnings, goals, and guidelines for delivery of a specific education program (Keating, 2014). In nursing education, a formal curriculum considers the coursework completed in the classroom setting as the backbone of knowledge formation. However, the formal curriculum is often accompanied by an informal or hidden curriculum. Various authors/researchers (Connelly & Clandinin, 1988; Giroux, 1988; Illich, 1978; Jackson, 1968) agreed regarding the four major meanings of the hidden curriculum. The four major meanings include:

1) The hidden curriculum as the unofficial expectations, or implicit but expected message.
2) The hidden curriculum as unintended learning outcomes or messages.
3) The hidden curriculum as implicit messages arising from the structure of schooling.
4) The hidden curriculum as created by students.

The phrase hidden curriculum was coined by Phillip Jackson in 1968 in his book, Life in Classrooms. Jackson (1968) defined hidden curriculum in academia as the unofficial expectations, implicit values, and norms that occur but may not be intentional. Jackson noted that the hidden curriculum plays an important role in education. Connelly and Clandinin (1988) explained that the hidden curriculum is that which focuses on unintended outcomes or messages. The authors argued that these outcomes or messages may never be recognized or identified, and if they are, they may never be formally acknowledged (Connelly & Clandinin, 1988). Illich (1978) argued that the hidden curriculum is in fact hidden and that instruction extends beyond the teacher. Giroux (1988) noted that various aspects of learning contribute to the success of the hidden curriculum, and include practices, procedures, rules, relationships, and structures. Giroux
(1988) insisted that the hidden curriculum referred to the norms and values usually not talked about in teachers’ statements of objectives or goals, even though such norms and values are implicitly and effectively taught. Giroux (1988) also argued that any pedagogical approach that ignored the hidden curriculum ran the risk of being incomplete and insignificant, thus highlighting the need to consider these factors when facilitating.

Consideration of the hidden curriculum should play a central role in the investigation of the educational process. In nursing education, the hidden curriculum is implemented through dialogue, interactions, laboratory work, classroom activities, and within the clinical learning environment (Chen, 2015). The clinical learning environment allows opportunities to engage in a hidden curriculum (whether it be intentional or unintentional).

**Instruction** encompasses the specific conditions teachers present to students, including materials, objectives, and activities of instruction (Giroux, 1988). In nursing education, the way in which instruction is delivered (i.e., teaching style), as well as the strategies utilized, impacts student learning. Learner-centered teaching and implementation of adult learning principles are characteristic features of the hidden curriculum (Schiro, 2008). The instruction that is implemented by the nurse educator is typically based on the institution’s curriculum standards and requirements and is influenced by the educators’ level of preparedness and philosophy.

Curriculum and instruction are important concepts in nursing education. Both curriculum and instruction have the ultimate purpose of creating learning opportunities that develop nurses’ ability to practice professionally and competently. In this study the PI sought to understand teaching styles and behaviors, explored instructional strategies, and attempted to identify what contributes to an optimal learning environment, as each of these impact curriculum and instruction as well as undergraduate RN student preparedness.
Clarification of Key Terms

There are terms that are critical in communicating the context of this study. Based on inconsistencies in the literature, those terms require clarification. Therefore, the following standard and operational definitions are provided.

Clinical experiences may be referred to as clinical teaching, clinical instruction, clinical education, clinical practice, or clinical practicum; all are descriptors for the planned faculty-guided learning experiences that involve direct contact with patients (National Council of State Boards of Nursing, 2012).

Critical thinking refers to the development of the thinking process. The literature provides numerous terms for these thought processes, including (1) clinical judgment, (2) critical thinking, (3) problem solving, and (4) thinking like a nurse (Gonzalez, 2018).

Organization of the Study

This study is organized into six chapters. Chapter 1 presents an introduction, statement of the problem, purpose, research questions, overview of the methodology, aims and expected outcomes, theoretical influences, relationship of the study to curriculum and instruction, clarification of terms, and ends with the summary. Chapter 2 provides a review of the literature on the nursing profession, the learning environment, clinical teaching models, and teaching styles. Chapter 3 outlines the methods for this study, including research design and population. Chapter 4 provides demographic and quantitative data. Chapter 5 presents the qualitative findings based on the data gathered from open-ended survey questions and individual interviews. Additionally, Chapter 5 answers the mixed methods questions, which compared and then merged the quantitative and qualitative data sets and describes the themes that were derived from this
study, which led to a conceptual model. The final chapter is 6, which provides an interpretation of the findings, relates previous research, provides alignment to the theories utilized in this study, discusses limitations, and offers recommendations and implications for research and practice.

Summary

This introductory chapter provided an overview of the nursing profession, highlights the concerns regarding styles and strategies, and has described the importance of an optimal learning environment. It has highlighted the need for a comprehensive assessment of educational delivery in nursing education and illuminates the need for a comprehensive review of undergraduate RN student preparation. Identification of clinical educational delivery in nursing provides a starting point to investigating and understanding how the undergraduate RN student is prepared for the future. It is through the exploration of styles and strategies that nursing as a profession can begin to understand the specifics utilized in education delivery in the clinical environment. After all, the clinical environment is thought to be central to student learning.
CHAPTER 2
REVIEW OF LITERATURE

This literature review drew upon the work of scholars who have investigated teaching styles, teaching strategies, use of adult learning theory principles, and optimal learning environments. Literature was gathered from the fields of social science, adult/higher education, and nursing. Multiple databases were consulted.

There are several components to the literature review. The first focused on clinical teaching and the learning environment. Search terms included clinical education, clinical environment, clinical learning environment, clinical instructor, clinical nursing, clinical teaching, clinical training, faculty, learning environment, nursing education, preceptor, preceptor role, and preceptor preparation. The remaining components focused on teaching style as well as teaching and learning. The following search terms were used: andragogy, adult learning theory, collaborative teaching, learner-centered, strategies, teacher-centered, teaching methods, and teaching styles. General and academic search engines, peer-reviewed journals, practitioner resources, and citation analysis all contributed to the literature review.

In the literature, the research that identifies the teaching styles and strategies used by nurse educators in the clinical learning environment is scant. Even though an exploration of educational delivery has been recommended by national nursing organizations, nursing accreditors, and researchers, few have focused on facilitation in the clinical environment. Furthermore, nursing education research has failed to identify strategies to prepare the
undergraduate RN student. Because the clinical learning environment is detrimental to the success of the undergraduate RN student, this study contributes to this scant body of research.

Review of Relevant Research

The literature review is presented in several parts, with each part representing the overarching concepts highlighted in the introductory chapter. These major concepts were selected as they were identified to be key contributors to the preparedness of the undergraduate RN student in the clinical learning environment. The concepts include learning styles, teaching styles, clinical learning and clinical teaching, facilitation approaches and strategies in clinical teaching, and the learning environment. However, prior to a discussion on teaching, the concept of learning must be discussed.

Learning Styles

There are various thoughts regarding learning styles and its relationship to teaching. Studies indicate that a relationship exists between learning styles and academic performance (Li, Yu, Liu, Shieh, & Yang, 2014; McAlister, 2010). Conversely, another study indicated that learning styles are non-static and ever changing, necessitating flexibility in teaching styles and lifelong learning (Bieschel, 2011). In either case, researchers have argued that having a stronger understanding of learning styles can be beneficial to both teachers and students (Li, Chen, Yang, & Liu, 2011). In addition, researchers have indicated the best way to assist students in learning, is to create a harmonious learning environment and use teaching methods that are closely matched to the students’ preferred learning styles (Li et al., 2014; McAlister, 2010). In the case of nursing education, Garwood, Ahmed, and McComb (2018) insisted that traditional teaching
and learning strategies must be constantly reviewed by nurse faculty to ensure that the strategies are practical for current health care demands and align with students’ learning styles.

Garwood (2015) conducted a longitudinal study that evaluated the learning preferences of the undergraduate RN student population. In this study, faculty provided a variety of teaching strategies including video clips, PowerPoint lectures, small group case studies, assigned readings, and concept maps. The research indicated that nursing students preferred active learning strategies over traditional lectures. The students in Garwood’s (2015) study also met or exceeded national standards with regard to teamwork, collaboration, evidence-based practice and safety. Research from Garwood (2015) also highlighted the importance of active engagement. In fact, Garwood et al. (2018) argued that teaching and learning strategies must be constantly reviewed by faculty to ensure they are practical for current health care demands and align with students’ learning styles.

In nursing education, learning styles have been assessed in classrooms and simulated settings. There are multiple instruments that measure learning styles. Within the nursing literature, two instruments are frequently used: (1) the Learning Style Questionnaire (LSQ; Honey & Mumford, 2000) and (2) the Learning Style Inventory (Kolb & Kolb, 2005). These models are widely used but are not without flaws. The LSQ fails to predict preferences among instructional models and student performance, whereas the Learning Style Inventory indicates that nursing students are concrete learners, learn by experience, and are people oriented (Kolb, 2005).

Teaching Styles

There are two primary styles of teaching; similarly, there are multiple ways to learn. Teaching and learning do intersect. While a number of ways exist to conceptualize teaching,
theory and research suggests that there are two fundamental teaching styles that influence learner outcomes: (1) a responsive, collaborative, learner-centered mode, and (2) a controlling teacher-centered mode (Behar-Horenstein, Mitchell, Notzer, Penfield, & Eli, 2006; Conti, 1989). The following section describes teaching styles, reviews studies on teaching, and discusses the relationship between teaching and learning.

Teacher-Centered

In teacher-centered instruction, the primary focus is on transmission of knowledge from teacher to learner through repetition, memorization, and recitation of standardized data sets (Candela et al., 2006). The teacher-centered method focuses on the teacher (rather than the learner), transmission of information, and passive student behavior (Weimer, 2013). In nursing education during the late 1980s and early 1990s, teaching was delivered using the teacher-centered model. Nursing has now begun to focus on a concept-based curriculum, which is more learner-centered. The concept-based curriculum focuses on mastering concepts in four domains: (1) biophysical, (2) psychosocial, (3) professional, and (4) the health care system (Goodman, 2014).

Methods of teacher-centered instruction are similar to the “banking concept” of education, in which the student functions as an open repository to whatever knowledge the teacher chooses to deposit (Freire, 2008). Paolo Freire notes that, “In order to counteract the teacher-centered model, it is necessary to assess practice and implement approaches which focus on the learner and not the teacher” (Freire, 2008, p. 72). The primary teaching method in the teacher-centered style is lecture. Critics argue that teacher-centered instructional strategies limit the development of critical thinking and problem-solving skills (Kahl & Venette, 2010).
Learner-Centered

Learner-centered teaching enhances critical thinking skills, promotes mutual respect, and encourages the learner to become self-directed and responsible in their learning. The literature refers to the term learner-centered in a variety of ways, including student-centered, collaborative, diverse, innovative, and alternative pedagogies, making it difficult to gather data. Examples of teaching methods housed under the learner-centered framework are active learning, cooperative learning, collaborative learning, problem-based learning, group projects, role play, and simulation (Candela et al., 2006; Weimer, 2013). Strategies utilizing the learner-centered framework follow principles of adult learning. Studies are split on the advantages based on context.

Current literature exists describing the principles, advantages, and disadvantages of learner-centered nursing education (Clavon, 2014; Curran, 2004; Ellis, 2016; Greer, Pokorny, Clay, Brown, & Steele, 2010; Schaefer & Zygmont, 2003). Several of these studies were based on the Principles of Adult Learning Scale (PALS) developed by Conti (1985a). The literature that follows highlights the research conducted utilizing the PALS, details various educators’ propensity for learner-centered teaching, and discusses beliefs on learner-centered teaching. In the following studies, barriers to the learner-centered approach are identified. However, additional research is warranted to further investigate application of this teaching modality.

Ellis (2016) conducted a study to investigate the role of nurse educators’ beliefs and self-perceptions in their use of learner-centered teaching in the nursing education classroom. In the study, 122 nurse educators completed a researcher-developed online questionnaire that explored self-perceptions and beliefs, and the correlation of those attributes with their use of behaviors indicative of learner-centered teaching. Ellis (2016) found that nurse educators who identified
themselves as learner-centered instructors and believed that learner-centered teaching was beneficial in understanding and applying nursing concepts were somewhat more likely to utilize the learner-centered style in the classroom.

Two studies were found indicating that nurse educators are implementing teacher-centered strategies. Clavon (2014) examined teaching styles and factors related to teaching styles. Clavon surveyed 105 nurse educators (faculty) teaching at private and public universities in the northern and southern regions of the United States. The study found the respondents to be teacher-centered. Schaefer and Zygmont (2003) conducted a study utilizing the PALS instrument. The focus of the study was to compare instructional methods to stated philosophies of teaching. The researchers concluded that learner-centered teaching ultimately improves students’ learning outcomes and increases critical thinking skills. Schaefer and Zygmont recommended a change in educator teaching practices. Barriers to implementing a learner-centered approach included academic structure, system problems, and an outcome versus process orientation. The results from the PALS in both Clavon’s (2014) and Schaefer and Zygmont’s (2003) studies indicated that, although nursing experts recommend a learner-centered teaching style, nursing education continues to implement a teacher-centered style. Although Schaefer and Zygmont (2003) did not provide details of the methods, their study was more robust in that it provided a comparison of what an educator says versus what the educator actually does.

Greer et al. (2010) conducted a secondary analysis of data collected by an international survey of 694 nurse educators regarding pedagogical teaching approaches and strategies. The sample included nurse educators from North America, Asia, and Europe. The purpose was to describe the learner-centered teaching characteristics of nurse faculty who reported using contemporary pedagogy. Themes that emerged were concepts of power, role of the teacher,
responsibility of the learner, and philosophy of evaluation, which was guided by Weimer’s (2013) conceptual framework of a learner-centered philosophy of teaching. The learner-centered role of the teacher included enthusiasm, belief in students, expertise, partnership, adaptability, creativity, and positive self-perception. Respondents perceived students’ responsibility as engaged, self-directed partners who gained insight through peer interaction. Respondents verbalized a need for students to take responsibility in collaboration with the evaluation process. This study also highlighted that novice teachers had less confidence and skills required to implement a learner-centered teaching style. In addition, nurse educators identified large class sizes, inadequate time for teaching responsibilities, and resistance to change as factors inhibiting the learner-centered approach to teaching. Recommendations were made to provide faculty development specific to learner-centered teaching practices.

Support of the application of a learner-centered teaching style has been advocated in nursing clinical research literature. A study conducted by Valiee, Moridi, Khaledi, and Garibi (2016) identified the most effective teaching strategies of clinical instructors from the perspective of nursing and midwifery students. Third- and fourth-year baccalaureate nursing students were recruited and completed the 30-item Clinical Instructors Effective Teaching Strategies Inventory. Findings indicated that treating students with respect, striving to promote students’ independence and self-confidence, proficiency in care and clinical education, and role modeling topped the list of effective teaching strategies. The results of this study point out the important role of the clinical instructor, suggesting that instructors should follow a learner-centered approach to teaching. This study’s tool was unidimensional and lacked subscales with which to measure different aspects of instructors’ behaviors. However, the significance of this study is the relationship that the findings have in support of the learner-centered teaching style.
Valiee et al.’s (2016) study also confirmed the importance of informal teaching and providing a holistic approach.

Research has been conducted which discourages a learner-centered approach. Weimer (2013) argued that faculty historically has controlled the learning process. The author asserted that the learner-centered approach may be difficult to implement, as it requires five key changes to practice, including: (1) balance of power, (2) the function of content, (3) the role of the teacher, (4) the responsibility for learning, and (5) the purpose and process of evaluation. Weimer (2013) argued that resistance to the learner-centered approach was based on the fact that it is more work, more threatening, and involves losses. In fact, this approach may be difficult for students who are passive, disconnected, or dependent. Finally, the author notes that an educator disconnects from the learner-centered approach because this approach tests the educators’ views of power and authority in the learning environment.

Clinical Learning and Clinical Teaching

The clinical learning experience is invaluable to RN students. The clinical experience provides students with an opportunity for consolidating knowledge, socializing into the professional role, and acquiring professional values. Clinical nursing has been described as the “heart” of professional education (McCabe, 1985), although it has undergone changes. Clinical teaching has its own specific purposes, specifically in nursing education. The major purposes of clinical teaching in professional education are generally those of preparing students to apply their previously acquired knowledge to patient care situations and to acquire the kinds of professional and personal skills, attitudes, and values thought essential for entering the health care system (Wong & Wong, 1987). In nursing education clinical instruction is a primary responsibility of RNs who are either full-time, part-time, adjunct, or staff. Sedgwick and Harris (2012) found that
the complexities of clinical learning, diversity of students, and preparedness levels make clinical
teaching difficult. The many changes highlight the need for exploring delivery of an effective
clinical learning experience.

Ideal Clinical Teaching

Ideal clinical teaching has been identified through identification of best practices and
preferred characteristics. However, best practices in clinical teaching are not clearly defined in
the nursing education literature, although the concept has been discussed for more than 25 years
(Patterson & Klein, 2012). In the absence of credible evidence, educators use their judgment,
which is often based on tradition or innovative, untested approaches (Ferguson & Day, 2005).
This deficit in nursing education is problematic, and research is needed to identify best practices
in nursing education (MacIntyre, Murray, Teel, & Karshmer, 2009). The next section describes
characteristics of ideal clinical teachers, assesses best practices, and discusses effective clinical
teaching from the perspective of students and clinical facilitators.

Gaberson and Oermann (2007) are nursing scholars who have conducted research on
teaching in nursing. The researchers describe the characteristics of the best clinical teachers as
those who:

1. Assess each student’s learning needs.
2. Plan patient assignments and other clinical activities that are individualized, that reflect
   the competencies to be developed, and that are appropriate to the student’s current level
   of knowledge and skill.
3. Promote transfer of learning to the clinical setting by asking questions and planning
   teaching strategies that help students think about how theory relates to their patients.
4. Ask high-level questions that encourage thinking and are consistent with the students’
   level of knowledge.
5. Give clear explanations and directions.
6. Effectively demonstrate procedures and clinical skills.
7. Serve as a role model for students.
8. Provide time for students to develop their clinical competencies before grading their performance.
9. Create a climate that is supportive of students as they develop their clinical skills and in which they are comfortable asking questions when unsure.
10. Provide immediate and honest feedback, combined with suggestions as to how students can improve performance.

Muthati et al. (2017) conducted a qualitative, exploratory descriptive study on select nursing students in Johannesburg, South Africa, using focus groups during the second, third, and fourth years. The researchers assessed the type of clinical facilitation that undergraduate RN students believed nurse educators should offer in both laboratory and clinical environments. The findings indicated that students preferred three items from the nurse educators: (1) standardization of procedures, (2) the ability to apply knowledge to clinical practice, and (3) the ability to communicate and provide feedback.

A study conducted in Australia utilized focus groups, conducted interviews, and gathered artifacts on the best practices of nurse educators in clinical (Needham, McMurray, & Shaban, 2016). Best practices in clinical were conceptualized by three main themes: assessing, learning to facilitate, and facilitating effectively. The researchers recommended exploration of the nurse educators’ skills and an assessment of the elements used in everyday practice. Although the Muthati et al. (2017) study focused on the student perspective and the Needham et al. (2016) study attained the nurse educator perspective, both studies agreed that assessment of the environment, effective facilitation, and communication are vital to nursing student success.

Researchers have no clear consensus on the most important attributes of an effective clinical teacher in nursing (Matthew-Maich et al., 2015). In fact, the lack of analysis has resulted in the lack of an operational definition of effectiveness for nurse educators in the clinical setting (Collier, 2017). Many researchers have described the ideal characteristics of the effective clinical
teacher based on both student and faculty perspectives. The findings from various research studies support the fact that effective clinical teaching and a supportive environment influence learning (Flott & Linden, 2015; Hooven, 2015; Luanaigh, 2015; Moonaghi, Mirhagi, Oladi, & Zeydi, 2015; Nabolsi, Zumot, Wardam, & Abu-Moghli, 2012; Papastavrou, Dimitriadou, Tsangari, & Andreou, 2015; Papathanasiou et al., 2014; Reising et al., 2018; Saarikoski & Leinon-Kilpi, 2002). In addition, researchers have agreed that encouraging an environment of respect and feedback are important to student learning (Moonaghi et al., 2015; Muthati et al., 2017).

Literature on teaching and learning ranges from recommended styles of teaching to ideal clinical teaching, and from the ideal learning environment to the perception of what defines optimal clinical teaching. Data from studies over the last decade have led researchers to the conclusion that there is a difference between the ideal and the realities of teaching. The gap that remains is to describe the current teaching strategies that are utilized in the clinical learning environment during undergraduate RN student education. This gap is important because the manner in which nursing education is delivered is vital to the success of undergraduate RN students upon program completion and novice and future nurse educators. Previous studies have explored the teaching styles of faculty in classrooms (Clavon, 2014), focused on specific teaching practices (Crookes, Crookes, & Walsh, 2013; Schaefer & Zygmont, 2003), and described characteristics of ideal clinical teachers (Ismail et al., 2016; Reising et al., 2018; Sweet & Broadbent, 2017). However, this study explored teaching styles of currently practicing nurse educators who teach the undergraduate RN student in the actual clinical environment. This study has expanded current research by focusing on actual practice, capturing the nurse educator’s perspective, and adding understanding to the gap related to the manner in which education is delivered in the clinical component of nursing education. To address issues that impact clinical
learning, alternative and actual teaching strategies are utilized. This next section discusses approaches and strategies in clinical teaching.

**Approaches and Strategies in Clinical Teaching**

There are multiple approaches to clinical teaching and learning. Just as there are teaching models, there are a multitude of teaching strategies, learning styles, and ways to facilitate learning in an effort to prepare students. Although these multiple approaches exist, delivery of education remains a challenge. The strategies that are implemented do impact student preparedness. Nurse educators as facilitators of learning need to be aware of the approaches that enhance student learning. These strategies may only be known based on further exploration and knowledge sharing. The section that follows discusses some overarching approaches.

**Approaches to Learning**

Active learning as an overarching approach has been successful in health care education. During active learning, students engage in the learning process. Active learning targets the development of students’ skills and the exploration of their attitudes and values toward content and the learning context. In the process, students acquire and refine knowledge, skills, and attitudes, while being actively involved in the process of inquiry (Huber et al., 2016). Active learning can take many forms; in fact, there is an abundance of active learning strategies. In nursing education, popular active learning strategies include: (1) concept-based learning, (2) problem-based learning, (3) inquiry-based learning, and (4) team-based learning. Each of these popular strategies are discussed below.

Concept-based learning in nursing education is used increasingly in nursing education to support organization, transfer, and retention of knowledge. Concept-based learning involves
multiple variables that include (1) teacher planning, (2) student preparation, (3) application of knowledge to clinical experiences, (4) teacher-student interactions during clinical study, and (5) discussion in clinical conferences (Nielsen, 2016). Nielsen (2016) argued that concept-based learning is promising to support integration of theory with practice and clinical judgment through application experiences with patients. It is said that providing explicit faculty instruction helps students to identify common misconceptions or errors in thinking (Ogdie et al., 2012). Concept-based learning is gaining prominence as a teaching modality to foster understanding (Bristol & Rosati, 2013; Giddens, Wright, & Gray, 2012; Tanner, 2010).

Problem-based learning (PBL) is an inquiry-based method of instruction that guides students’ solutions of real-world problems through cooperative group work (Duch, Groh, & Allen, 2001) and is suggested to build critical thinking skills. PBL is also referred to as context-based or inquiry-based learning and is student-centered. PBL is widely used in medical and nursing education to nurture students in the ability to apply health care knowledge and develop problem-solving skills and clinical reasoning skills (Chan, 2017). The application of PBL teaching strategies provides an opportunity for faculty to integrate theory to practice and equips nursing students with practical skills in critiquing information, problem-solving, and self-directed learning; a greater sense of responsibility and self-confidence is established, which allows for a smoother transition into the professional environment (Darkwah, Ross, Williams, & Madill, 2011).

Simulated learning is a form of team-based learning. However, it can be done individually. Simulation started out as an alternative teaching method but has become a major part of the nursing students’ laboratory learning experience. Simulation is accomplished through the use of mannequins in a safe, controlled environment, and provides an opportunity for nurse
educators to evaluate critical thinking and thought processes in a controlled manner (National Council of State Boards of Nursing, 2014). More nursing programs are utilizing simulation. In fact, for some schools, simulation accounts for 50% of student clinical time (Richardson, Gilmartin, & Fulmer, 2012). However, use of simulation is not consistent in nursing programs. A variety of teaching approaches such as simulation, problem-based learning/case studies, and online/web-enhanced methods have been employed to enhance levels of critical thinking, satisfaction, and academic achievement (Brannan, White, & Long, 2016).

This section described four overarching approaches that nurse educators have utilized. However, these are broad in nature. Various strategies assist in the preparation of the undergraduate RN student and have been documented as successful. Lack of research on the current strategies based on the nurse educator perspective leaves a gap in the literature. The next section discusses some of the strategies that were often utilized in previous studies.

Specific Strategies

Primary concerns in nursing education are the development of critical thinking skills, the ability to apply theoretical knowledge to clinical practice situations, and the use of sound clinical judgment in any situation. Critical thinking allows the nursing student to learn how to apply sound clinical judgment and has become a primary goal of nursing programs (American Association of Colleges of Nursing, 2014a). Development of critical thinking is a concern based on reports of students being underprepared upon program completion. Various teaching strategies may be used in nursing education based on these expectations, including concept mapping and reflection. Concept maps and reflection are thought to enhance critical thinking skills and require some form of active engagement. The next section discusses those trending strategies and details how they are used in nursing education.
A relatively new active learning strategy is the use of concept mapping. Studies have demonstrated that students need to be actively involved in learning to develop critical thinking skills. Concept mapping is an active learning strategy that moves students from memorization to higher level metacognitive analysis and critical thinking (Addae, Wilson, & Carrington, 2012). Concept mapping also serves as a bridge between theory and practice (Khan, Ali, Vazir, Barolia, & Rehan, 2012). Concept maps have been used to help students develop critical thinking skills, provide holistic and patient-centered care, and link theory to clinical practice (Irvine, 1995). Gaberson, Oermann, and Shellenbarger (2015) endorsed concept maps to facilitate learning while engaging learners.

Irvine (1995), the originator of the concept mapping process, indicated that concept maps assist in the development of learning and may help nurse educators become more effective as teachers. However, in a study conducted by Harrison and Gibbons (2013), concept maps were difficult to construct for some and were very beneficial for others. The researchers suggested continued use of concept maps but with more explicit direction on how to complete them. Harrison and Gibbons (2013) also noted the importance of providing feedback after completion of concept maps. A limitation to this study was the concept maps that were assessed were completed in non-patient care courses. A study conducted by Kaddoura, VanDyke, Cheng, and Shea-Foisy (2016) explored how junior baccalaureate nursing students perceived concept maps on the development of clinical judgment in a medical-surgical nursing course. The concept maps were reviewed and evaluated by clinical instructors. Findings indicated that concept maps promoted clinical judgment and critical thinking.

Reflection has gained increased recognition as a critical component of professional nursing practice and as an educational strategy to acquire knowledge and learn through practice.
(Asselin & Fain, 2013). Scholars contend that reflection offers nurses the opportunities to build on existing knowledge through clinical experiences and develop clinical judgment (Tanner, 2006). Reflection is a strategy that encourages students to critically examine their thoughts on a clinical experience, and this thinking leads to the development of insights about future practice (Asselin & Fain, 2013). Reflection is an additional teaching strategy that has been applied in nursing education across clinical groups and levels of education. Reflection is utilized in pre-conference and post-conference as a mechanism to prepare and debrief nursing students. Reflection is nested in programs to meet specific clinical goals, structured with group facilitation (Asselin & Miraglia, 2015). For example, the Debriefing for Meaningful Learning (DML) instrument developed by Dreifuerst (2015) provides a well-published strategy utilized to get students to reflect on practice. During DML, teachers and students explicate different aspects of reflection to generate new meanings from situations. According to research, this strategy enhances clinical reasoning (Dreifuerst, 2012).

Discussions are a large part of clinical nursing education. One popular strategy which is rendered via discussion is the one-minute preceptor method by Neher, Gordon, Meyer, and Stevens (1992). The one-minute method is a stepwise strategy that has five steps: (1) get a commitment, (2) probe for supporting evidence, (3) teach general rules, (4) reinforce what was done right, and (5) correct mistakes. This strategy assists students as it allows for organization of thoughts, presentation of facts, review of assessment, and provides immediate feedback. The one-minute method also assists in developing teaching behaviors.

A national survey was conducted by Sawin, Kissinger, Rowan, and Davies (2001) with 265 experienced nurse preceptors. In the survey, preceptors were asked to identify strategies they frequently used in clinical teaching. During that time 65 total strategies were utilized. These were
grouped into five different categories including (1) orientation, (2) history, (3) physical diagnosis and management, (4) feedback and evaluation, and (5) general. Although 65 strategies were noted, nearly half of the studies could not be used across all levels of learners. This study looked at teaching at the master’s level. Nearly a decade later, Hossein, Fatemeh, Fatemeh, and Tahereh (2010) interviewed fifteen nursing faculty regarding teaching strategies utilized in clinical. The research noted that the use of multiple styles was necessary due to the constantly changing clinical environment. However, these varying styles were not described. The researchers recommended further research in clinical education to develop teaching styles, standards, and strategies to improve quality in nursing education.

Literature on approaches to clinical teaching ranges from recommendations to descriptions of specific teaching strategies that enhance learning. Data from studies over the last decade has led researchers to the conclusion that a variety of measures may be utilized to facilitate learning in nursing education. Nurse educators do have a choice in the way in which they deliver education. The gap that remains is nursing education has failed to assess the actual teaching strategies that are being implemented in the clinical learning environment. This gap is important because nursing education research has primarily focused on classroom teaching, while in fact clinical teaching is said to dramatically impact nursing student success. While some studies explored alternative approaches (Brannan et al., 2016), and ideas regarding preferred learning style (Li et al., 2014; McAlister, 2010), this study described actual strategies implemented to enhance clinical learning. This study also expands current research as it explored what nurse educators believe helps students learn in the clinical environment and added understanding to the gap regarding how nurse educators are preparing the undergraduate RN student to the realities of clinical practice.
Learning Environment

The learning environment and components that impact learning was first assessed by Moos (1973). Moos (1973) believed that three dimensions influence an optimal learning experience in the classroom and argued that they should be assessed, including: relationship, personal development, and system maintenance and system change. In the 70s the learning environment itself began to be explored and became a concern. When one considers the learning environment in the education of nurses, students learn in multiple environments including classroom, laboratory, and clinical. Although each of these contributes to student preparedness, in undergraduate RN student education, the clinical environment is noted as significant.

Clinical Learning Environment

The clinical learning environment affects achievement of learning outcomes, preparation for practice, and student satisfaction with the nursing profession (Flott & Linden, 2015). In clinical, students apply knowledge and skills while caring for patients and preparing for professional practice (Hooven, 2015). An optimal clinical learning environment is vital to nursing education, as the undergraduate RN student spends approximately three times as long in clinical than in the classroom (Moscaritolo, 2009). Hooven (2015) searched for instruments focused on the clinical environment that accounted for the facilitator perspective, but none were found. Consequently, no research was found that described the clinical learning environment from the nurse educator perspective. Much of the research on the clinical learning environment included instruments that were developed which focused on the clinical environment based on the student perspective. The following section reviews instruments that were designed to assess
the clinical learning environment; each of them has components that are linked to the three dimensions of an optimal learning environment as discussed by Moos (1973).

In Australia, Dunn and Burnett (1995) developed the Clinical Learning Environment Scale (CLES), a 23-item instrument with five subscales: staff-student relationships, nurse manager commitment, patient relationships, interpersonal relationships, and student satisfaction. The instrument measures the impact of the overall clinical learning experience. The instrument was developed based on a review of previous instruments and utilized an expert panel of nurse educators for review of the instrument. The CLES provides the educator two opportunities: (1) to gather thoughtful data regarding learning opportunities in the clinical learning environment, and (2) to reflect on ways to implement strategies to achieve these optimal learning outcomes.

In response to the deficits to the CLES, and the limited instruments based on clinical settings, Chan (2002) developed the Clinical Learning Environment Inventory (CLEI) tool, which evaluates faculty effectiveness in providing relevant learning opportunities correlated with student satisfaction during their clinical experience. The CLEI tool identifies and assesses nursing students’ perceptions of the psychosocial characteristics of their clinical learning environment. The CLEI tool consists of two forms: (1) captures actual perceptions, and (2) assesses the desired experiences. The questions on the form are identical but with minor differences in wording. The six subscales on the CLEI include individualization, innovation, satisfaction, involvement, personalization, and task orientation. Chan (2002) described the clinical learning environment as a multidimensional entity that directly affects the outcomes of students’ clinical placement.

Saarikoski and Leino-Kilpi (2002) developed an instrument entitled the Clinical Learning Environment and Supervision Scale (CLES-Scale). The instrument focused on the impact of
organizational culture, including management/leadership style, on students’ clinical experiences. They found that culture, atmosphere, and principles of teaching and learning produce an optimal clinical learning environment. A few years later, Saarikoski et al. (2008) collaborated and added additional subscales to the CLES-Scale, labeling it the (CLES+T). The subscales included pedagogical atmosphere, supervisory relationship, leadership of the ward manager, the premises of the ward, and the role of the clinical nurse teacher. This instrument assessed the teaching, learning, and the role of the clinical nurse teacher, but failed to describe the specific strategies that contribute to the optimal clinical learning environment.

Sand-Jecklin (2009) believed that student learning is impacted by the environment, instructional methods, degree of clinical competence, type of interactions/relationships with students, and feedback/evaluation methods. Therefore, they developed an instrument that evaluates the quality of student learning including those components. The instrument was labeled the Student Evaluation of Clinical Education Environment (SECEE). This instrument is noteworthy, as it highlights the significance of teaching as well as the environment in clinical learning but lacks the personal development component.

Newton et al. (2010) developed an instrument based on the CLEI, which was initially developed by Chan (2002) and includes various subscales. The subscales reflect the complex sociocultural reality of the clinical learning environment. The subscales include innovation, individualization, and personal development. The researchers indicate that although complex, clinical offers opportunities to engage or disengage in learning.

The preceding instruments provide information on what students’ desire in the clinical learning environment. Data from these instruments generally revealed that students preferred a more positive and favorable environment than they perceived as actually being present. Little
research has explored the perspectives of nurse educators regarding an optimal clinical learning environment (Dahlke et al., 2012), thereby leaving questions about the delivery of nursing education in the clinical environment. However, other factors impact the clinical learning environment, such as the multiple positive and negative influences that can support or hinder learning in the clinical environment. The next section discusses positive and negative influencers in the clinical learning environment.

Influencers of Clinical Learning

Chuan and Barnett (2012) conducted a study using a clinical learning environment scale in an effort to describe and compare student, tutor, and staff nurse preceptor perceptions of what contributed to or hindered student learning in the clinical learning environment. In their exploratory study, participants indicated that negative attitudes impacted the clinical learning environment. Similarly, Bisholt et al. (2014) conducted a mixed methods study comparing the student experience in the clinical learning environment. These researchers found that the nurse educator must be diverse, flexible, and meet the needs of the nursing students. In addition, they concluded that a pedagogical atmosphere is essential for student learning. This study indicated that attitude had a negative impact on the learning environment. Both studies highlighted the idea that having a positive attitude supports student learning.

Reising et al. (2018) conducted a multi-site study to explore the characteristics and student experiences that affect clinical experiences. In this study, students ranked instructor knowledge, experience in the field, and support as the highest characteristics affecting their experiences. Reising et al.’s (2018) findings are consistent with the study conducted by Girija (2012) in that professional competence, relationships with students, and personal traits influenced the students’ clinical learning experiences.
Papathanasiou et al. (2014) conducted a study to assess nursing students’ views and perceptions of their clinical learning environment. The authors noted that there was a significant difference between the preferred and actual clinical learning environment. The students generally wished for a more positive environment than what they experienced. Papathanasiou et al. (2014) recommended a change in teaching with an emphasis on innovation and individualization. A limitation of this study was the participants were from one university during three different semesters with differing clinical experiences.

O’Mara et al. (2014) examined nursing students’ clinical experiences in acute care settings. The students described a challenging clinical environment as one which lacked communication, where students felt ignored and were afraid to ask questions or take on additional responsibilities, and these negative experiences led to poor learning opportunities. This study highlights the significance of establishing relationships and effectively communicating. However, this study was conducted across various sites, which may affect the generalizability of the findings.

Luanaigh (2015) conducted a case study in an effort to understand the influence that RNs have on nursing students in the clinical learning environment. Luanaigh (2015) indicated that student learning was mediated through interaction, and concluded that responsiveness to student learning needs, creating a sense of belonging, and influencing professional identity and learning were important. Luanaigh’s (2015) research coincides with previous studies highlighting the significance that interaction has on learning. A similar study by Moonaghi et al. (2015) explored the factors that either facilitate learning or form barriers in clinical education. Three primary themes noted to facilitate learning included communication, promoting self-confidence, and
providing a supportive atmosphere. A limitation to the research was its focus on one large teaching facility.

The preceding research indicated that essential elements of a clinical learning environment for RN students include the following: atmosphere, relationships between students and clinical staff, students’ inclusion in clinical care, mentoring pedagogical practices (Chan, 2002; Dunn & Burnett, 1995; Hooven, 2015; Hosada, 2006; Saarikoski et al., 2008) and students’ own active, motivated, and confident role in learning (Houghton et al., 2012; Papathanasiou et al., 2014).

In summary, each study presented herein took into account the nuances of teaching and learning, which include, in particular, the importance of engagement, teaching style, and the significance of environment. Negative influencers included lack of direction (O’Mara et al., 2014), negative attitudes (Chuan & Barnett, 2012), negative character (Bisholt, Ohlsson, Engstrom, Johansson, & Gustafson, 2014), poor communication (O’Mara et al., 2014), and lack of ability to connect classroom learning to practice situations (Hooven, 2015). Conversely, positive influencers included a supportive atmosphere (Hooven, 2015; Luanaigh, 2015; Moonaghi et al., 2015; Nabolsi et al., 2012; Papastavrou, 2015; Papastavrou et al., 2015; Papathanasiou et al., 2014; Reising et al., 2018; Saarikoski & Leino-Kilpi, 2002), implementing effective teaching style and strategies (Flott & Linden, 2015; Saarikoski & Leino-Kilpi, 2002), applying principles of teaching and learning (Saarikoski & Leino-Kilpi, 2002), displaying knowledge (Reising et al., 2018), providing multiple instructional methods (Chan, 2002; Moos, 1973; Saarikoski & Leino-Kilpi, 2002; Sand-Jecklin, 2009), personalizing experiences (Shivers, Hasson, & Slater, 2017), providing communication and feedback (Moonaghi et al., 2015; Muthati et al., 2017), being approachable (Collier, 2017), and implementing active engagement
These research studies have highlighted several major components in the environment which are conducive to learning.

Literature on the learning environment has a broad range. Components of the learning environment are discussed, tools that assess the learning environment are described, and comparisons are made between what is ideal and the real. Data from these studies has led researchers to conclude that the environment impacts learning. The gap that remains is determining from practicing nurse educators what exactly they believe contributes to an optimal clinical learning environment. This gap is important because students are thought to spend the majority of their time in the clinical environment, need to be exposed to the realities of practice, and experience a reality shock once they transition into this clinical environment. Some studies explored the student’s perspective of the optimal learning environment (Luanaigh, 2015; O’Mara et al., 2014; Papathanasiou et al., 2014), and others looked at characteristics and student experiences that affect their clinical experiences (Reising et al., 2018). However, this study has explored what nurse educators believe contributes to an optimal environment and has shared the specific strategies utilized when facilitating in the clinical learning environment. This study expands current research by seeking the nurse educator perspective and by taking a closer look at current practice. The theoretical frameworks which were foundational are discussed next.

Theoretical Frameworks

There are many learning theories. Learning theories describe how students absorb, process, and retain information, and relate to how an educator can enhance learning (Merriam & Bierma, 2014). No learning theory can fully explain what is happening or expected to happen when an aspiring health care professional is engaged in learning (Taylor & Hamdy, 2013). However, existing theories are central to understanding the facilitation of adult learning and the
context: the way it occurs. Theories related to teaching styles, the application of adult learning theory, and engagement in the social context are of particular relevance to this study. Therefore, two theories and one framework influenced this study.

First, the principles of adult learning are based on the concept of andragogy. Andragogy refers to the specific principles and methods used in the education of adults. Knowles (1984) conceptualized adult learning theory and called it andragogy, the art and science of helping adults learn. Andragogy provides a foundation for a way of thinking about adult education. Adult learning theory has core principles that assist in designing and conducting adult learning (Draganov, Andrade, Neves, & Sanna, 2013; Knowles, Holton, & Swanson, 2015). The six principles of andragogy include: (1) the learner’s need to know, (2) self-concept of the learner, (3) prior experience of the learner, (4) readiness to learn, (5) orientation to learning, and (6) motivation to learn.

Knowles’s (1984) theory of andragogy noted that adult learners have diverse needs and that educators have specific roles to play in educational delivery. Knowles (1984) argued that adult learners often value self-direction, experiential learning, and collaboration, thus the educator should be a “facilitator of knowledge” (p. 7) and must encourage educators to use varied approaches to meet the diverse needs of students. Knowles (1984) believed that instruction should focus on the process, not so much the product. This theory of andragogy, when applied, aligns with the learner-centered teaching style.

Out of a desire to improve education for adults, Conti (1985) developed the PALS instrument to assess the propensity an educator has toward being learner-centered, based on his or her use of the principles of andragogy. In addition, the instrument contains seven factors in support of learner-centered teaching:
1. Learner-centered activities
2. Personalizing instruction
3. Relating to experiences
4. Assessing student needs
5. Climate building
6. Participating in learning
7. Flexibility for development

These seven factors measure the propensity an educator displays that encompass the principles of adult learning. According to Conti (1985a), an educator may utilize a learner-centered style, teacher-centered style, or somewhere in between, depending on the strategies implemented.

Facilitation of learning and strategies utilized are significant to undergraduate RN student preparedness. In addition, much of what is being delivered in the clinical learning environment is not known in nursing education, although recommendations have been made that facilitation be evaluated. The theory of andragogy and the beliefs Knowles (1984) describes regarding facilitation of learning with the adult population is quite relevant, as undergraduate RN students are adult learners. Exploring the application of adult learning principles may dispel the concerns previously described by nursing organizations regarding teaching styles.

The second theory, developed by Moos (1973), includes three dimensions that he considers components of the educational learning environment. Moos’s (1973) work was influenced by the behavioral-environment theory, developed by Lewin (1939), which indicates that the environmental surroundings directly impact a person’s behavior. Moos (1973) initiated the concept of the classroom learning environment and developed a tool, the Classroom Learning Environment Inventory (CLEI). The CLEI includes three dimensions that characterize the educational environment, which are (1) the relationship dimensions that recognize the nature and intensity of personal relationships within the environment and the mutual support and mutual aid,
(2) the personal development dimensions that determine maturity and self-esteem, and (3) the system maintenance and system change dimensions include the degree to which the environment is orderly, clear in expectations, maintains control, and responds to change. Moos (2002) argued that these three dimensions should be included when assessing the environment.

This theory was influential, as it stresses the importance of assessing the learning environment and ensuring that facilitation is optimal. As previously mentioned, the learning environment in nursing education is where RN students become socialized and acclimated into the profession and sharpen the much-needed skills required upon program completion and necessary for entry into practice. Exploration and an understanding of the learning environment are significant because previous research has not sought this understanding.

This study was influenced by Principles of Good Practice. Chickering and Gamson (1991) asserted that providing good teaching and learning should be the hallmark of every institution of higher learning and is a shared responsibility among teacher and learner. According to Chickering and Gamson (1991), good practice in undergraduate education encourages student-faculty contact, cooperation among students, active learning, prompt feedback, dedicated time, and provides a diversity of needs and various ways of learning. Because curriculum and instruction are impacted by Principles of Good Practice, it is relevant for this study.

Deficiencies in the Research/Summary

As detailed in the literature review, a significant amount of research has (1) recommended a learner-centered approach based on needs in the profession, (2) discussed influencers of clinical learning, (3) encouraged the use of specific approaches to enhance preparedness for practice, and (4) described what students believe contributes to the optimal learning environment. Much of the research was based on classroom teaching, as research on
clinical education is rare. Yonge et al. (2005) found that only 4.4% of studies focused on clinical teaching, while 16.6% focused on the classroom.

A gap exists, as past research has failed to capture the nurse educators’ perspective regarding facilitation of learning focused on the clinical environment. Additionally, nursing education has failed to provide a model of facilitation in the clinical learning environment, which decreases the opportunities for knowledge sharing, future professional development, and future research. This study seeks to provide empirical research regarding nurse educators’ teaching styles, strategies, and beliefs about the contributing factors in the optimal clinical learning environment. Current knowledge in this area may dispel previous beliefs regarding inappropriate facilitation. Experts believe that teachers can help learners most by identifying their individual teaching style and striving to improve it (Bradshaw & Lowenstein, 2011; Conti, 2004; Tanner, 2007). The next chapter details the methodology utilized in the study.
CHAPTER 3
METHODOLOGY

Chapter 3 describes the methodology that was used in this study. Specifically, this chapter explains the following: (1) the selected research design and the four steps used for this design, (2) the recruitment procedures utilized for the participants, (3) instrumentation and data collection methods, and (4) assumptions. Chapter 3 wraps up with a conclusion and provides an introduction to the remaining chapters.

The purpose of this study was twofold. First, the PI attempted to learn about the teaching styles and strategies employed by nurse educators when facilitating learning among undergraduate RN students in the clinical learning environment. Data was gathered through the use of a quantitative instrument: The Principles of Adult Learning Scale (PALS), which is a 44-item Likert-type questionnaire. Nurse educators were asked to self-report through an online survey. The second purpose of this study was to learn about the specific needs of students, the strategies utilized by nurse educators, as well as the beliefs of nurse educators regarding factors that contribute to an optimal learning environment. Qualitative data was gathered using two methods: (1) open-ended survey questions, and (2) one-on-one interviews.

The quantitative questions were framed based on the Principles of Adult Learning Scale (PALS). The open-ended research questions were developed based on the concerns that were noted in the literature, directly aligned with the study’s purpose, and influenced by the theories. The questions were developed with the intent to attain responses that corresponded to the
overarching framework without being too narrow or broad while allowing for exploration.

Questions were modified based on feedback from a sample group of educators.

Research Questions

To explore the delivery of clinical nursing education, the PI created various research questions. The following quantitative research questions guided this study:

1. What is the dominant teaching style of nurse educators based on the modified Principles of Adult Learning Scale (PALS)?
2. What behaviors do nurse educators exhibit according to the modified PALS instrument Factor scores?

The following qualitative questions guided this study:

1. What do nurse educators believe helps students learn in the clinical learning environment?
2. What specific teaching strategies do nurse educators utilize in the clinical learning environment to enhance learning?
3. What strategies do nurse educators utilize that contribute to an optimal clinical learning environment?

The following mixed methods questions guided this study:

1. What results emerge from comparing the qualitative data about the specific strategies with outcome data from the quantitative instrument (the modified Principles of Adult Learning Scale) data measuring teaching styles and factors?
2. To what extent do the qualitative results support the quantitative results?

Research Design

To facilitate this study, the PI used a mixed methods research design. Specifically, the convergent mixed methods design was used, as this approach allows for quantitative and qualitative data to be collected concomitantly, analyzed separately, and then merged or compared (Creswell & Plano Clark, 2018). The convergent design allowed the PI to collect various data strands, which helped to attain deep explanations regarding the way in which clinical education
is delivered in nursing education. The data analysis portion of this mixed methods study was based on the conventional content analysis, which allows text data from multiple data strands to be analyzed and allows themes to be derived directly and inductively from the raw data obtained (Hseih & Shannon, 2005).

Population and Sample

The population selected for this study included licensed RNs who facilitated the learning of the undergraduate RN student in the clinical learning environment. Once the target population was attained, exclusion criteria were applied. Each participant was required to be a licensed RN who has taught undergraduate RN students, in the clinical learning environment, within the past two years. Given that the sample was based on a nonprobability (self-selected) sample, rather than a probability sample, no estimates of sampling error could be calculated (Sue & Ritter, 2012). To ensure an adequate number of participants, the online survey was open for 30 days.

A nonprobability convenience sample, as well as the snowball sampling technique, was used. The convenience sample allowed the researcher to select participants because they were willing and available to participate in the study. The snowball sampling requires that participants identify others in order to become members of the sample (Creswell, 2012). The snowball technique was selected, as nurse educators who facilitate learning in the clinical environment comprise a very specific group.

It was expected, when the study began, that participants would be primarily female based on the history of nursing. In fact, 94.4% of study participants identified as female. Males were not excluded from participating in this study, though males represented a much smaller demographic group than that of females. A G*Power analysis was utilized to document the sample size (Faul et al., 2009). Therefore, with a medium effect size of .30, an alpha equal to .05,
and a power equal to .80, the sample size included a minimum of 67 participants to ensure statistical significance. The PI met the minimum required sample size by attaining 71 participants.

The following protocol was used to select participants for individual interviews who were willing to participate. The intent in participant selection was to not only contribute to the research but to attain responses from a diverse sample who met the inclusion criteria. The sample was diverse in gender, ethnicity, and years of experience. Since the sample was considered a hard to reach group, two sampling strategies were utilized for the interview participants including snowball and virtual sampling was used. A social media website was developed to recruit participants (virtual sampling). In addition, personal and professional contacts were consulted as a reference point (snowball sampling). These personal and professional contacts according to Patton, (1990) is referred to as a seed of a snowball sample. These contacts (seeds) then build the snowball. These two methods according to Patton (1990) was noted to be a best defense against a lack of sample diversity.

The qualitative sample size was derived based on recommendations from researchers regarding the determination of sample size. According to Charmaz (2006), the aim of the study is the primary driver for data saturation. Charmaz argues that a small study with modest claims (p. 114) might achieve data saturation quicker than a study that is aiming to describe a process that spans disciplines. Additionally, Ritchie, Lewis, and Elam (2003) outlined seven factors that might affect the potential size of a sample: the heterogeneity of the population, the number of selection criteria, the extent to which nesting of criteria is needed, groups of special interest that require intensity in study, multiple samples within one study, types of data collection methods, and the budget and resources available. Conversely, Strauss and Corbin (1990) argue that
saturation should be concerned with reaching the point at which it becomes counterproductive to continue and that the new information that is discovered does not necessarily add to the overall story, model, theory or framework (p. 136). In this study, data saturation occurred after completion of five individual interviews. The determination for saturation in this case was a failure to contribute to the overall model and was based on data analysis, heterogeneity of the population, and types of data collection methods.

A screening tool and demographic questionnaire was developed by the PI and was administered to participants to ensure that respondents met the study’s inclusion criteria (see Appendix B). Participants were screened at the onset of the study to ensure suitability for study participation. Inclusion criteria used for this study included: (1) RN licensure in the United States, (2) an associate degree or higher in nursing, and (3) experience teaching undergraduate RN students, in the clinical learning environment, within the last two years. Exclusion criteria applied to this study included: (1) nurse educators who taught solely online (specifically since online programs have less face-to-face interaction and less social engagement), (2) nurse educators who were teaching Certified Nursing Assistants (CNAs) and Licensed Practical Nurses (LPNs; specifically since this study was focused on undergraduate RN students), and (3) nurse educators who taught solely in simulation/laboratory settings (specifically since the actual clinical learning environment was an important aspect of this study). The demographic questionnaire is located in Appendix C.

Recruitment Strategies

Several steps were taken to recruit participants, since the selected group was very specific within the profession and nursing education. Nurse educators are employed in academia, as well as health care organizations; however, their roles are not always made explicit. Therefore, deans,
directors, chairs, and presidents of nursing programs from colleges and universities (community, state, and private), who provided education to undergraduate RN students, were solicited via mailing address (as identified by the state’s department of professional regulations website). Deans, directors, chairs, and presidents were selected as the target group to approach, because these individuals often have access to interact with full-time, part-time, and adjunct faculty who teach in the clinical learning environment. Three overarching strategies were utilized to recruit participants, which included: (1) a mass mailing, (2) use of social media networking, and (3) direct invitation using the snowballing technique.

The first strategy used to recruit participants involved mass mailings. For the mass mailings, a letter of transmittal (study overview) was used for the introductory contact letter (See Appendix I). The contact letter was sent to deans, directors, chairs, and presidents of university nursing programs listed on the state rosters in Michigan, Illinois, Wisconsin, and Indiana (see Appendix A). Each mailing contained an introductory contact letter plus two supplementary documents. Each document included information regarding the study’s purpose, the plan, expectations of participants, risks/benefits, criteria for participation, the use of the study results, and a link to the website teachingstyleprofile.com, where the consent, survey, and open-ended questions were housed (See Appendix N). The supplemental materials included a poster and a flyer with tear off tabs (See Appendix L), and a poster advertisement that provided an option to post study information in lounges or on faculty bulletin boards (see Appendix K). The use of mini-posters/flyers was selected, as these documents are portable and provide information to potential participants. A total of 255 packets were mailed out by the U.S. Postal Service in December of 2018.
While the PI attempted to reach all nurse educators from colleges and universities in the Midwest, several mailings failed to reach the intended audience. Five envelopes were returned, as these were unable to be forwarded to the correct address. Five college and universities emailed the PI requesting (1) documentation of IRB approval, and (2) that all documents be sent via email for electronic distribution. Three colleges/universities contacted the PI via email indicating that their institution required an internal IRB approval (a 30-45-day process) plus additional documentation before disseminating requests to faculty. In addition, one college indicated that their program was no longer being offered and therefore could not participate.

The second strategy used to increase study participation was through the use of social media/networking sites, listservs, and professional databases. Social media/networking sites such as Facebook, Twitter, and LinkedIn were used. Information posted on the social media/networking sites included details about the study, criteria for participation, how the study results would be utilized, and a link to the website teachingstyleprofile.com, thereby enabling participants to complete the study’s survey instrument. Social media/networking sites were used to encourage potential participants to forward the request for participation to other licensed RN colleagues who met the inclusion criteria, thus allowing the research to utilize the snowballing technique. Nurse educators were contacted via various listservs (e.g., Clinical Nurse Specialist, Nurse Educator, and Professional Nurse Educators Group) and were provided with the same information as on social media/networking sites.

The third and final strategy used to recruit participants was through direct invitations, which were made available through the snowball technique. Using the snowball technique, current nurse educators who met the inclusion criteria sought other qualified nurse educators to participate. The PI, who practices as a nurse educator in a clinical learning environment, initiated
the snowball technique. The PI provided nurse educators with standard invitations, which were disseminated to colleagues (see Appendix M). The cards requested study participation and provided contact information, which included the PI’s email as well as the teachingstyleprofile.com website information. (See Appendix N for website screenshot.) Participants could also request that a link be sent to their private email, directly, thus allowing for the distribution of the electronic postcard. The email option was selected, as it is the most economical and convenient method for postcard distribution. In fact, according to Pew Internet and American Life Project’s websites, 79% of Americans use their email on a daily basis, thereby making this method a viable option (Smith, 2010). According to Sue and Ritter (2012), there are various disadvantages associated with using the snowballing technique, which include difficulty obtaining a list of potential participants, the probability that unsolicited emails will go to spam or junk mail files, and the fact that unsolicited emails may also be blacklisted when sent in bulk. No emails were received that indicated they were received as spam. The participants for this study were very specific and not easy to access. Based on the complexity of recruitment strategies, a wide net was cast in an effort to recruit participants.

Consents and Confidentiality/Anonymity

The PI ensured that this study met the ethical standards of research and rights of the participants. The three major issues regarding ethics were disclosed and included in the informed consent document, thereby allowing participants to understand how their confidentiality and anonymity would be upheld, as well as how the PI would ethically interpret and report the results (Sue & Ritter, 2012). Additionally, the PI ensured that Northern Illinois University’s IRB requirements were attained and waited to conduct this study until permission was received. Additionally, the PI contacted Gary Conti, the developer of the original Principles of Adult
Learning Scale (PALS), to obtain his permission to use the instrument, with modifications (see Appendix G).

Participant consent was collected electronically prior to the initiation of the online survey (See Appendix H). Participants were provided with information about the survey, the research institution, the primary investigator, and risks and benefits associated with participation. This information was communicated in the invitation to participate, as well as on the first page of the survey. Participants were asked to check a box indicating their agreement to participate in the study. Those who declined by selecting “no” as an option were automatically disqualified from participation, whereas those who consented (i.e., selected the “yes” option) were allowed to move forward in the study. In addition to survey consent, audiotaping consent was required. Copies of the consent form used for audiotaping are provided in Appendix O. The signed consent documents were collected by the PI and participants were provided with a copy of their signed consent document. In addition, participation in the study was voluntary, thus, the PI reiterated that participants were able to withdraw from the study at any time.

Precautions were taken to maintain confidentiality, specifically since websites often record IP address information by default. To maintain confidentiality, the IP address tracking and email address tracking options were disabled through the Survey Monkey platform. Participants were provided with the option to review their individual survey results, if they opted to provide their email address before survey completion; 24 participants opted in. To prevent data bias, the PI did not provide participants with their individual results until the survey ended/closed.

Those who participated in the interview portion of the study were given a pseudonym. Documents linking identities to the participant were kept separate from the data. No personal demographic information was maintained that linked the participant to the results. Access to data
was restricted by the PI and was only made available to one other individual (i.e., the quantitative methodologist who was consulted to assist with data analysis during this study).

Instrumentation

Few instruments were located, in the literature, that assessed the concepts around learner-centered teaching or teaching strategies. One instrument evaluated the process of learner-centered teaching, one instrument evaluated the application, perceptions, and beliefs of learner-centered teaching, and one instrument evaluated one’s propensity toward learner-centered teaching, as well as the application of the principles associated with the adult learning theory. The information detailed below offers background on the three aforementioned instruments and discusses the process associated with instrument selection.

Blumberg (2011) developed the Learner-Centered Teaching Practice rubric, which assesses learner-centered teaching practices. Furthermore, this rubric aligns with Weimer’s (2002) Five Key Changes to Practice framework, and includes: the balance of power, the function of content, the role of the teacher, the responsibility for learning, and the purposes and processes of evaluation. The rubrics assess educators on a continuum, which begins at teacher-centered education and moves to learner-centered education. Blumberg (2011) assigned numbers to the instrument; however, the instrument does not detail the teaching strategies used during teaching, leaving a gap in the literature.

Ellis (2016) developed a tool called the Ellis Learner Centered Teaching in Nursing Education Questionnaire, which measures the application of learner-centered teaching in the classroom, as well as one’s perceptions and beliefs about the use of learner-centered teaching in the nursing education classroom. The instrument is divided into four subsections, which include: the process of guiding students, interactive practice, critical thinking, and reflection. Ellis’s
(2016) instrument focuses on nursing education in the classroom, which does not include clinical teaching/experience.

Conti (1985a) developed the PALS instrument, which allows the educator to assess their propensity toward the learner-centered or teacher-centered style based on an overall score, and measures specific behaviors utilized in their teaching based on seven factor scores including; (1) Learner-Centered Activities, (2) Personalizing Instruction, (3) Relating to Experience, (4) Assessing Student Needs, (5) Climate Building, (6) Participation in the Learning Process, and (7) Flexibility for Personal Development (Conti, 2004). Each of the seven PALS factors are described in Appendix E.

Each of the instruments has strengths and weaknesses. Blumberg (2011) and Ellis’s (2016) instruments make the assumption that the application of learner-centered teaching had already been implemented. The PALS looks at propensity toward the learner-centered style and identifies the application of adult learning principles, which are desired for nursing professionals. In addition, PALS has been used independently in over 100 adult education studies in the United States and Canada. The PALS instrument does not have a nursing focus, as the original tool was based on adult education. However, permission was received from the original researcher to modify the PALS instrument, so it would be more geared towards nursing. Given the strengths and weaknesses noted above, as well as the opportunity to modify the PALS, Conti’s (1985a) instrument was selected for this study.

**Principles of Adult Learning Scale (PALS) Instrument**

The PALS is a 44-item instrument that “measures the frequency with which one practices teaching/learning principles that are described in the adult education literature” (Conti, 2004, p. 79). Specifically, the instrument measures the degree to which educators support a collaborative
teaching/learning style of instruction. The original version of the PALS instrument is located in Appendix D. The PALS instrument provides scoring on two measures. The first measurement relates to the total score, which describes the propensity toward either a learner-centered or teacher-centered approach. Besides providing an overall score, the other score can be further divided into seven factors, with each factor indicating a component of teaching style (Conti, 2004). Factor scores are calculated by summing the value of the responses for each factor (See Appendix E). By analyzing these factors, educators can identify specific teaching behaviors/preferences and can create a plan to modify problematic/inconsistent teaching behaviors/preferences (Conti, 1984). Conti (1984) noted that because the instrument consolidates many learning principles, which are widely discussed, practitioners might therefore use the instrument in several ways.

**Principles of Adult Learning Scale (PALS) Scoring**

The PALS survey can be completed in less than 15 minutes and may be self-scored. Those who take the PALS survey respond to the frequency with which they practice the action described in the items. Responses that are congruent to the learner-centered mode are assigned a high value, while those that are antithetical are assigned a low value. For the purposes of this study, a modified Likert continuous scale, which ranged from zero to five, was used when the PI recorded participant responses.

The PALS has a specific directive on how to score data. The PALS survey includes a 44-item summative rating scale that includes positive and negative responses. Each item consists of a statement that relates to a characteristic of adult teachers. Participants were asked, during the survey, to select a number ranging from zero to five, which represented the frequency of practice in the participant’s learning environment. The numbers correspond to a descriptor of a particular
frequency and points were distributed as follows: Always = 0, Almost = 1, Often = 2, Seldom = 3, Almost Never = 4, and Never = 5. For negative items, point values were assigned in the same manner as the corresponding number assigned to the frequency descriptor. For positive items, the values were Always = 5, Almost Always = 4, Often = 3, Seldom = 2, Almost Never = 1, and Never = 0. Missing items were assigned a neutral value (i.e., a 2.5 score).

According to Conti (1982, 2004), the 44-item instrument has a possible high score of 220 and an average score of 146. High PALS scores indicate a high degree of support for a learner-centered approach, whereas a low score indicates a low degree of support for a learner-centered approach (Conti, 2004). Oftentimes, scores are within one standard deviation of the mean, with overall scores ranging between 126 and 166 (Conti, 2004). Movement within one standard deviation of the mean indicates an increased commitment toward a particular teaching style (i.e., learner-centered, or teacher-centered). Scores in the second deviation, a 20- to 40-point deviation from the mean, indicate strong support of a particular teaching style. A detailed grid of specific PALS factor scores, as well as a point distribution, is located in Appendix J.

The original PALS survey is located in Appendix D. Permission was provided by Dr. Gary Conti, through personal communication (March 5, 2016), to modify the survey’s wording to reflect the nursing environment (for modified version see Appendix F). In the original PALS survey, the word class/classroom is used; for this study, that word has been changed to clinical. This change is reflected in questions 1, 7, 10, 13, 15, 26, 28, 29, 37, and 40. In question 29, the word “desk” was eliminated. However, the response still reflects productive work. In question 40, the phrase standardized test was eliminated, and national norms remains to reflect the comparison of achievement on a national exam such as the national licensing exam for nurses.
Principles of Adult Learning Scale (PALS) Validity and Reliability

The PALS survey is a valid and reliable instrument (Conti, 1982). Reliability occurs when scores from the instrument are stable and consistent (Creswell, 2012). Since the PALS instrument was modified, after receiving Conti’s permission, the original validity and reliability were reestablished during data analysis. In the original version of the PALS instrument, construct validity regarding items was established after receiving positive testimonies from two juries of adult educators (both local and national). A local jury consisted of three adult education professors from Northern Illinois University who analyzed the items, provided comments regarding the item constructs, and suggested item improvements (Conti, 1982, p. 139). A national jury was also used, which consisted of ten adult education professors who analyzed the instrument. The reliability of the PALS, as a stable standard for measuring the degree of an adult education practitioner’s approval for the learner-centered mode, was established by the test-retest method. The Pearson correlation for the 23 practitioners in the sample group yielded a reliability coefficient of .92 (Conti, 1982, p. 142). The PALS was also tested for social desirability of the included items and for the clarity of the item’s interpretation (Conti, 1985b). Reliability of each scale was rendered using the Cronbach alpha statistic.

Qualitative Interview Instrument

The questions utilized in the qualitative portion of this study were derived based on the PI’s desire to identify perspectives of nurse educators regarding three major concepts in clinical nursing education and were based on the theoretical frameworks that grounded this study. The major concepts explored in this study included: (1) teaching styles, (2) teaching strategies, and (3) the learning environment. A pilot test was performed by a group of four nurse educators who
examined the interview questions and associated meanings, the instructions regarding completion, and any technical challenges. Questions were modified based on feedback from this group.

The qualitative responses were attained via survey and by interview. An interview protocol was used to ensure some consistency in questioning was maintained (See Appendix P). Although the PI utilized two different methods to attain qualitative question responses, the questions asked were the same. The survey method was selected to elicit responses from a broad base of nurse educators. The interview questions were asked to elicit detailed responses in case the open-ended questions were not completed and to provide more details than open-ended questions provided.

Procedures in the Convergent Design

The convergent mixed methods design has several steps to ensure a sound mixed methods study, which include: (1) designing the quantitative and qualitative data strands; (2) analyzing both strands of data; (3) merging, comparing, contrasting, and synthesizing the data, and then creating joint displays or comparison reports; and (4) interpretation of the merged results, providing a complete explanation of the results, and, making a plan for future research.

The following sections describe each of the steps utilized in the convergent mixed methods design. Step 1 provides an overview of the design and data collection for the quantitative and qualitative strands. Step 2 discusses the analysis of each strand and procedures used. Step 3 describes the strategies used to merge and compare the data. Step 4, which is the final step, describes the method utilized for interpretation of the merged results. Each section discusses both the quantitative and qualitative data sets.
Design and Data Collection (Step 1)

Quantitative Strand

The survey method, which was conducted through the use of a web-based survey distribution resource, was selected as a method because of the following advantages: convenient access to samples; reduced costs (Sue & Ritter, 2012); faster responses; more tailored formats; quick troubleshooting; automated data collection, scoring, and reporting; and access to larger samples (Converse, Wolfe, Huang, & Oswald, 2008 as cited in Mertens, 2014); increasing popularity (Creswell, 2012); and the ability to identify attributes of a large population from a small group of individuals (Sue & Ritter, 2012). In addition, a survey may be completed using several technological platforms, including a computer, iPad, tablet, or smartphone. The survey method is a simple and relatively quick way to assess participants from a broad geographic distribution. Furthermore, the survey method was selected since the study’s population involved a defined group of individuals. Likely, since the PI requested that participants connect to a website to complete the online survey, this improved survey completion rates, as well as provided a form of anonymity.

Just as there are advantages to utilizing the survey design, there are also disadvantages that must be acknowledged. One disadvantage of using a survey is that the researcher does not know who is completing the survey. Additionally, survey software can cause a user to encounter technological issues, thus potentially resulting in lost data. Another disadvantage of a survey is that potential respondents have been exposed to far too many digital surveys, thereby resulting in overload or survey fatigue (Sue & Ritter, 2012). Due to survey length, survey overload, or survey fatigue, it is possible that potential respondents will abandon the survey. To prevent abandonment of the survey, only necessary questions, using a Likert scale, were used.
Qualitative Strand

The qualitative questions were researcher derived and were based on the three primary concerns in the literature, which include: (1) teaching style, (2) teaching strategies, and (3) building an optimal learning environment. The purpose of collecting the qualitative strand was to enhance, corroborate, and/or compare the data that was collected quantitatively. The qualitative findings in this study did enhance the details noted in the quantitative data. This study also corroborated the findings regarding the propensity towards a learner-centered teaching style and implementation of learner-centered teaching strategies. Using an electronic questionnaire, qualitative data was gathered through open-ended questions. It is not uncommon, as noted by Creswell and Plano Clark (2018), for survey participants to experience survey fatigue, provide incomplete answers to open-ended questions, and/or not provide detailed responses. Therefore, participants were asked to participate in interviews in an effort to gain more detailed descriptions, thus resulting in richer data. Five individual interviews were conducted to attain the nurse educators’ perspectives of educational delivery in the clinical learning environment.

Collecting data via interviews allowed participants to elaborate about student needs, teaching strategies, and the factors that they believe contribute to the optimal clinical learning environment in the overall preparation of the undergraduate RN student. According to Creswell and Plano Clark (2018), the qualitative component of a convergent design allows the researcher to obtain a more complete understanding, to validate findings, and/or to determine if participants respond similarly in comparison to the quantitative predetermined scales. Although the findings from the open-ended surveys were similar to the results of the interviews, the individual interviews provided a more complete understanding of the quantitative data and corroborated survey findings.
Data for the open-ended strand was collected upon the completion of three open-ended questions, which were obtained via electronic submission. The open-ended questions were placed at the end of the 44-item Likert scale. In addition to completing the three open-ended questions, nurse educators were asked to participate in an interview. Individual interviews allowed the researcher to collect robust qualitative information, which was based on the open-ended question responses. The PI anticipated that interviews would take 30 to 45 minutes. However, of the five interviews conducted, the shortest interview was 45 minutes and the longest interview lasted for 1 hour and 15 minutes.

Ethical considerations with regard to privacy and confidentiality were discussed with each participant prior to the interview. A separate consent was required for those who opted in for an individual interview (see Appendix O). To ensure privacy, each interview was held at a mutually agreed upon, undisclosed site. To ensure confidentiality, pseudonyms were used during data collection. All interviews were audio-recorded by a voice recorder with speech recognition capabilities. The benefits associated with audio-recorded interviews are that they provide conversation accuracy (Creswell & Plano Clark, 2018) and allow researchers to be more attentive to the process of inquiry and the interviewees’ responses. The PI took diligent notes during the interviews, regarding important points to revisit or reflect upon, or for additional follow up and/or probing. During the timeframe that existed between the survey launch and closing the quantitative survey, the researcher spent time analyzing the qualitative data received.

Data Analysis (Step 2)

GoDaddy was selected as the host website for this research study. Survey Monkey was selected as the online survey development software service company. GoDaddy and Survey Monkey were selected due to accessibility, ease of use, monitoring options, and data collection.
capabilities. The PI was also familiar with these electronic systems. The next section describes the specifics on data analysis.

Conventional qualitative content analysis was selected as the data analysis method used for this study. In conventional content analysis, coding categories are derived directly and inductively from the raw data obtained (Hseih & Shannon, 2005). Conventional content analysis focuses on the characteristics of language, with regard to communication, placing specific attention on the content or contextual meaning of the text (Lindkvist, 1981; Tesch, 1990). Text data may be in verbal, print, or electronic form and may be obtained from survey questions, interviews, or print media (Kondracki, Wellman, & Amundson, 2002).

Conventional content analysis has strengths and weaknesses. An advantage is that researchers can gather extensive information from study participants without imposing preconceived categories or theoretical perspectives (Hseih & Shannon, 2005). A challenge associated with conventional content analysis is that the researcher may fail to develop a complete understanding of the context, thereby resulting in one’s failure to identify key categories of content. Additional disadvantages to conventional content analysis are that it is limited with regard to theory development and it provides a limited description of the participants’ lived experiences. Although the knowledge generated in this study was based on the participants’ unique perspectives, this was not a grounded theory study. Both grounded theory and the phenomenological approach to research go beyond that of content analysis and provide an in-depth understanding regarding an individual’s lived experiences.

Given the limitations of content analysis, Lindkist (1981) noted that the conventional qualitative approach leads, at most, to concept development or model building. Knowledge generated in this study was based on the participants’ unique perspectives and was grounded in
actual data. In this study, participant perspectives were sought from the data, crucial concepts were captured, and codes were developed, which resulted in a clinical nursing education conceptual model.

Merging the Data (Step 3)

The two data sets (quantitative and qualitative) were merged, during step 3, after being analyzed separately in step 2. Convergence among the data sets was sought. The results were merged so a more complete understanding of the delivery of undergraduate RN student clinical nursing education emerged. By merging the two strands, more information is provided compared to what would be learned by exploring quantitative or qualitative data alone (Creswell & Plano Clark, 2018).

Interpretation of the Merged Results (Step 4)

Once the quantitative and qualitative data was merged, insights were generated regarding the delivery of nursing education in the clinical environment. From these interpretations, themes were noted. From the themes a conceptual model was developed based on the four primary themes. The conceptual model, called The Innovative Clinical Facilitation Model, provides a detailed visual depiction of the strategies that nurse educators utilize when facilitating learning of the undergraduate RN student in the clinical learning environment.

Assumptions

There are several assumptions that the researcher noted before this study was carried out. The first assumption was that the demographic tool used was sufficiently written, resulting in the researcher being able to gather suitable data. The second assumption was that the questions were appropriate and could elicit information about the nurse educators’ teaching style, teaching
strategies, and beliefs regarding the delivery of undergraduate clinical nursing education and the environment in which it is delivered. The third assumption was that participants would respond honestly and thoroughly. Before this study was carried out, the researcher acknowledged that various facilitation methods could be utilized to ensure knowledge/learning transfer among students enrolled as students in undergraduate RN programs. Furthermore, the PI recognized that multiple variables can impact facilitation.

Summary

This chapter addressed the methodology used in this study. Detailed information was provided in terms of the purpose, design, recruitment strategies, the population and sample, ethical considerations (i.e., permissions, consents, and confidentiality), instrumentation and instrumentation construction, and the validity and reliability of the study instruments. In addition, the detailed data collection plan, data analysis processes, and pre-study researcher assumptions were discussed. The findings are provided next and are separated into three separate chapters. Chapter 4 provides the quantitative findings, Chapter 5 discusses the qualitative findings, presents the results of the data gathered from both quantitative and qualitative findings, then illuminates the facilitation strategies derived from this study. The study concludes with Chapter 6, which provides a discussion and recommendations for future practice and research.
CHAPTER 4

PRESENTATION OF QUANTITATIVE FINDINGS

Introduction

There is limited empirical research that focuses on the clinical learning environment, specifically identifying the styles and practices exhibited by nurse educators. National nursing organizations, scholars, and researchers have encouraged an exploration of educational delivery in nursing education, specifically focused on teaching styles, as well identifying what contributes to optimal learning. Previous literature has focused on the ideal clinical learning environment. This study sought to address this gap by focusing on facilitation in the clinical learning environment.

The purpose of this study was to identify the teaching styles used by nurse educators, through using a modified version of the PALS, and to identify the seven PALS factors that determine specific teaching practices. This aforementioned information was gathered electronically through the use of a quantitative instrument. This study utilized a convergent design, which answered the research questions. In the convergent design, data is gathered concomitantly, analyzed separately, and then merged or compared (Creswell & Plano Clark, 2018). Chapter 4 presents the findings of each data strand and presents information according to the order of the research questions. Within Chapter 4, the researcher has provided information about participants (e.g., demographic details).
Demographics

The population selected for this study included licensed RNs who reside in the United States and facilitated learning in the clinical environment in undergraduate RN student education. Each of these nurse educators met the inclusion criteria and indicated that they facilitated learning of the undergraduate RN student in the clinical learning environment. A G*Power analysis was conducted to document the necessary sample size (Faul et al., 2009). With a medium effect size of .30, an alpha equal to .05, and a power equal to .80, a minimum of 67 individuals were needed to participate in this study. Of the 85 individuals who were recruited to participate in this study, 71 individuals (83.5%) completed the required protocol, thereby exceeding the minimum sample size identified.

The average age of participants was 49.36 years old ($SD = 10.67$). The youngest participant was 28 and the oldest participant was 66 years old, thereby resulting in a range of 38 years between oldest and youngest. Sixty-seven participants (94.4%) identified as female and 4 participants (5.6%) identified as male. Many participants were Caucasian ($n = 55, 77.5$%), and had an RN/MSN/APN for education ($n = 47, 66.2$%). The majority of the nurses were geographically located in the Midwest, specifically in Illinois, Indiana, Michigan, and Wisconsin. However, some nurses reported living in other states, including Florida, Georgia, Kansas, Missouri, New Hampshire, New York, Oregon, Texas, and Vermont. Registered nurses can be licensed in multiple states, which is in accordance with the Nurse Compact Act (National Council of State Boards of Nursing, 2019). In addition to different states of licensure, it is possible that some of the nurses indicated where they are licensed, but did not specify the state that they taught in. Appendix Q provides more demographic information.
Presentation of Findings (Quantitative)

Quantitative data was collected electronically. Participants completed a 44-item instrument which utilized a Likert scale, through Survey Monkey, which is a web-based system. Quantitative data was extrapolated, and teaching styles were determined through use of SPSS. Quantitative results are presented based on the research questions and are presented in order. Quantitative Research Question 1 focused on the propensity towards either a learner- or teacher-centered style, and quantitative Research Question 2 focused on behaviors nurse educators exhibited based on the modified PALS.

Quantitative Research Question 1: Teaching Style

Research Question 1 stated, “What is the dominant teaching style of nurse educators teaching the undergraduate RN student based on the modified Principles of Adult Learning Scale (PALS)?” The first research question was analyzed using descriptive statistics with regard to the total score. The average score was 135.10 (SD = 13.495), which is within one standard deviation of the population mean of 146. This indicates that there was average support for a learner-centered approach. The minimum score was 106.50 and the maximum score was 160.50, for a range of 54.00 points. Population scores were also analyzed.

Population scores may range from 0 to 220, and the PALS has a population mean of 146 with a standard deviation of 20. According to Conti (2004), scores above 146 indicate a tendency toward the learner-centered approach while scores below 146 indicate support of the teacher-centered approach (see Figure 1). Full PALS scores for the participants ranged from 106.50 to 160.50 with a median of 135.5. The mean for the
group was 135.1 with a standard deviation of 13.495. The mean is .53 (146-135.5=10.5; 10.5/20=.53) standard deviations below the mean for the PALS.

![Distribution of PALS scores for nurse educators.](image)

**Figure 1.** Distribution of PALS scores for nurse educators.

The teaching style data which is based on the modified Principles of Adult Learning Scale (PALS) indicates that nurse educators who facilitate learning in the clinical environment have an average propensity towards the learner-centered teaching approach, meaning that the nurse educators’ overall approach incorporates learner-centered practices. The distribution of the full PALS scores as seen in Figure 1 appears normally distributed, meaning that both learner- and teacher-centered practices are used by nurse educators.
Quantitative Research Question 2: Teaching Behavior

Research Question 2 stated, “What behaviors do nurse educators exhibit according to the modified PALS Factor scores?” Data from the modified PALS instrument factor scores was used to answer this question. The protocol stated, “An individual’s total score on the instrument is calculated by summing the value of each of the seven factors” (Conti, 1985a, p. 11). Scores between 0-145 indicated a teacher-centered style. Scores between 146-220 indicated a learner-centered style. The average score was 150.5, which denotes that participants scored above 146, thereby indicating a propensity towards the learner-centered approach on average for all subscale factors (Appendix R).

The results indicate that nurse educators are utilizing teacher- and learner-centered styles. There are several possible explanations for these findings. First, perhaps the results of this study are a true depiction of the propensity nurse educators have in the clinical environment. Perhaps these nurse educators represent the paradigm shift towards implementation of learner-centered practices which has been recommended by national nursing organizations and researchers for decades. After all, data collected in this research was from across the United States and does provide a good geographic representation from nurse educators who facilitate in a variety of nursing programs. Second, maybe the results were based on the population of undergraduate RN students. After all, the implementation of a learner-centered approach requires learners who are ready and motivated. If students lack motivation and are not ready to learn, that makes a learner-centered approach difficult to implement, giving way to a teacher-centered approach. Third and finally, perhaps the results were based on the educator’s level of preparation (or lack thereof in some instances). According to the research, nurse educators can be trained in a variety of ways and some receive no training at all. Several failures may influence these results, including a
failure to: (1) understand the learning style of students, (2) self-reflect on teaching style, (3) maintain an arsenal of teaching strategies, or (4) understand the needs of students in the clinical context. Each of these possible failures are beneficial when in the educator role. In addition, a variety of components are thought to influence teaching style, those factors are presented next.

Individual Factor Scores

The overall score on the PALS can be further subdivided into seven factors. “Each factor represents a similar group of items that make up a major component of the teaching style” (Conti, 2004, p. 80). The factor titles are listed and are made up of the adult education learner-centered (collaborative) mode concepts. This section provides a frequency score for each factor, description of each factor, lists the number of items included in the survey, scores the mean, standard deviation, and distribution of the scores on each factor. This is followed by a relevant description of how nurse educators responded to each factor. Finally, the frequency is visually depicted in a histogram display of each of the individual PALS factors.

PALS Factor 1

The score for Factor 1, Learner-Centered Activities, relates “to evaluation by formal tests and to a comparison of students to outside standards” (Conti, 2004, p. 80). The factor contained 12 items. Scores may range from 0 to 60, and the factor has a population mean of 38 with a standard deviation of 8.3 (p. 91). Scores for the nurse educators ranged from 7.50 to 46.5 with a median of 31.50. The mean was 30.74 with a standard deviation of 7.471, and it was .78 standard deviations below the mean for the factor (38-31.50=6.5; 6.5/8.3=.78). The distribution was normally distributed (see Figure 2).
Scores for this factor based on nurse educator responses were on the high end, indicating support of the learner-centered approach found in the adult education literature. The majority of nurse educators in this study reject teacher-centered behaviors. The opposition indicated here “implies that they practice behaviors which allow initiating action by the student and that they encourage the student to take responsibility for their own learning” (Conti, 1985, p. 9). This is achieved through the initiation of learner-centered activities.

**PALS Factor 2**

The score for Factor 2, Personalizing Instruction, relates to doing “a variety of things that personalize learning to meet the unique needs of each student” (Conti, 2004, p. 80). Factor 2 contains six items. Scores may range from 0 to 30, and the factor has a population mean of 31 with a standard deviation of 6.8 (p. 91). Scores for the nurse educators ranged...
from 15 to 36 with a median of 25. The mean was 25.04 with a standard deviation of 4.593, and it was .87 standard deviations below the mean for the factor (31-25.04=5.96; 5.96/6.8=.87). The distribution was normally distributed, with slightly higher numbers on the right side of the histogram (see Figure 3).

Figure 3. Distribution of Factor 2, Personalizing Instruction, of PALS for nurse educators.

The scores for PALS Factor 2 indicate that nurse educators do a variety of things that personalize learning to meet the unique needs of each student. Nurse educators’ base objectives off of individual motives, meaning various methods, materials, and assignments are utilized. These nurse educators “encourage cooperation rather than competition” (Conti, 1985, p. 9). These findings solidify that the nurse educators are utilizing a variety of approaches in their teaching in the clinical learning environment.
PALS Factor 3

The score for Factor 3, Relating to Experience, conveys “learning activities that take into account your students’ prior experiences and encourage students to relate their new learning to experiences” (Conti, 2004, pp. 80-81). Factor 3 contains six items. Scores may range from 0 to 30, and the factor has a population mean of 21 with a standard deviation of 4.9 (p. 91). Scores for the nurse educators ranged from 17 to 30 with a median of 23. The mean was 23.50 with a standard deviation of 3.116, and it was .11 standard deviations above the mean for the factor (22.93-23.50=.57; .57/4.9=.11). The scores were distributed over a small range and were normally distributed (see Figure 4).

Figure 4. Distribution of Factor 3, Relating to Experience, of PALS for nurse educators.
PALS Factor 4

Based on the frequency diagrammed here in PALS Factor 3, these nurse educators indicate that they organized learning according to the problems that students may encounter in everyday life. This means the focus is not just on coping with current problems or accepting the values of others. Instead, students are “encouraged to ask basic questions, specifically those questions that raise the student’s consciousness” (Conti, 1985, p. 10).

The score for Factor 4, Assessing Student Needs, relates to “treating a student as an adult by finding out what each student wants and needs to know” (Conti, 2004, p. 81). The factor contains four items. Scores may range from 0 to 20, and the factor has a population mean of 14 with a standard deviation of 3.6 (p. 91). Scores for the nurse educators ranged from 8 to 20 with a median of 17. The mean was 16.32 with a standard deviation of 2.671, and it was .47 standard deviations above the mean for the factor (14.6-16.32=1.72; 1.72/3.6=.47). The scores were distributed over a wide range with more scores on the upper range, indicating a positive skew (see Figure 5).

Scoring on this PALS Factor 4 was significant, as assessing student needs had a positive skew. This means nurse educators are treating students like adults and finding out what each student wants and needs to know. “Gaps between a student’s knowledge and the present levels of performance is diagnosed” (Conti, 1985, p. 10).

PALS Factor 5

The score for Factor 5, Climate Building, relates to “setting a friendly and informal climate as an initial step in the learning process. Dialogue and interaction with other students are encouraged” (Conti, 2004, p. 81). The factor contains four items. Scores may range from 0
to 20, and the factor has a population mean of 16 with a standard deviation of 3.0 (p. 91). Scores for the nurse educators ranged from 8 to 20 with a median of 16. The mean was 15.85 with a standard deviation of 2.525, and it was .05 standard deviations below the mean for the factor (16-15.85=.15; .15/3.0=.05). The scores were distributed normally from low scores to high, with one dip at 17.0 (see Figure 6).

Figure 5. Distribution of Factor 4, Assessing Student Needs, of PALS for Nurse Educators.

PALS Factor 5 indicates that nurse educators value a friendly and informal climate. The nurse educator scores indicate that dialogue and interaction is encouraged, and barriers are eliminated by utilizing competencies that adults already possess as building blocks for objectives. In this factor, risk taking is encouraged and errors are accepted as part of the learning process. By scoring toward the learner-centered mode, nurse educators indicate that learners can explore much like they do in society. This “exploration includes elements related to
self-concept, practice [of] problem solving skills, and development [of] interpersonal skills” (Conti, 1985, p. 10). When utilizing this approach to teaching, failures serve as a feedback device to direct future and positive learning.

![Figure 6. Distribution of Factor 5, Climate Building, of PALS for Nurse Educators.](image)

**Figure 6.** Distribution of Factor 5, Climate Building, of PALS for Nurse Educators.

**PALS Factor 6**

The score for Factor 6, Participation in the Learning Process, relates to “the amount of involvement of the student in determining the nature and evaluation of the content material” (Conti, 2004, p. 81). Factor 6 contains four items. Scores may range from 0 to 20, and the factor has a population mean of 13 with a standard deviation of 3.5 (p. 91). Scores for the nurse educators ranged from 4 to 20 with a median of 13. The mean was 12.85 with a standard deviation of 3.235, and it was .30 standard deviations above the mean for the factor (13.9-
12.85=1.05; 1.05/3.5=.30). The scores were distributed over a wide range with uniform scores at the end of the range (see Figure 7).

![Figure 7. Distribution of Factor 6, Participation in the Learning Process, of PALS for Nurse Educators.](image)

PALS Factor 6 indicated that the nurse educators have the students identify problems they wish to solve and allow the students to participate in decision making. The nurse educators who scored higher on this factor also “encourage adult to adult relationships between teacher and students in the development of learning and when evaluating performance” (Conti, 1985, p. 10).

**PALS Factor 7**

The score for Factor 7, Flexibility for Personal Development, relates to whether teachers see themselves as a provider of knowledge or as a facilitator (Conti, 2004, p. 82).
The factor contains seven items. Scores may range from 0 to 35, and the factor has a population mean of 13 with a standard deviation of 3.9 (p. 91). Scores for the nurse educators ranged from 2 to 17 with a median of 11. The mean was 10.77 with a standard deviation of 3.291, and it was .57 standard deviations below the mean for the factor (13 - 10.77 = 2.23; 2.23/3.9=.57). The scores were distributed normally (see Figure 8).

Figure 8. Distribution of Factor 7, Flexibility for Personal Development, of PALS for Nurse Educators.

Based on the scores from the modified PALS Factor 7, nurse educators indicate a propensity towards personal development. These scores have a primarily right-sided skew, meaning that nurse educators maintain flexibility by adjusting the learning environment and curricular content to meet the changing needs of the students, to stimulate understanding and future personal growth (Conti, 1985, p. 10).
Summary

The results of the quantitative survey based on the modified PALS instrument indicated that nurse educators display a propensity towards being learner-centered when facilitating in the clinical learning environment. In addition, the findings indicated that nurse educators exhibit behaviors that support implementation of adult learning principles in the clinical learning environment, meeting a variety of student needs. Most importantly, these findings dispel the findings in previous studies that argued that educators were in fact primarily teacher-centered, utilizing traditional teaching practices. These findings illustrate that nurse educators in the clinical learning environment are answering the call recommended by nursing organizations and researchers by implementing innovative teaching practices which include learner-centered behaviors.
CHAPTER 5
PRESENTATION OF QUALITATIVE FINDINGS

Introduction

The previous chapter presented the quantitative findings of this study: specifically, the propensity nurse educators displayed towards the learner-centered teaching style. Additionally, the previous chapter provided information regarding the implementation of adult learning principles, as applied in the clinical environment based on the modified PALS factor scores. Qualitative results are presented here in Chapter 5. The three qualitative research questions were asked in an open-ended survey format as well as individual interviews, and those findings are all presented next in order of research question. The qualitative chapter wraps up with the presentation of the mixed-methods questions which resulted in a conceptual model.

The conceptual model was developed from this data using the conventional content analysis method. First, text was analyzed inductively based on repetition, similarities and differences, transitions, and linguistic connections that occurred frequently in the text. Next, themes and subthemes were derived by spending time with the data and looking for patterns. This strategy resulted in four themes, including: implementing learner-centered practices, supporting diverse student needs, implementing active learning strategies, and enhancing collaborative partnerships. These themes are direct indicators of the way nurse educators prepare the undergraduate RN student for practice. These indicators include: facilitates the teaching and learning process; enhances communication and motivates the learner; develops critical thinking
skills and links theory to practice; and indicates how nurse educators set the tone and influence the environmental culture.

Two data strands were utilized to answer the qualitative research questions. The first data strand was obtained from open-ended survey questions from 71 participants. The second strand of data was obtained from individual interviews conducted with five nurse educators. The qualitative data findings are presented as follows: demographics of the interview participants are provided, data from open-ended questions are described, and descriptions from interviews are highlighted. Finally, the themes are discussed.

Demographics of Interview Participants

The interview participants included licensed RNs who facilitated learning in the clinical environment. Each of these nurse educators met the inclusion criteria and indicated that they facilitated the learning of undergraduate RN students in the clinical learning environment. These nurse educators were drawn from a convenience sample of nurse educators who were willing to participate in an individual interview. Each of these nurse educators practiced in the Midwest, specifically in Illinois, Indiana, and Wisconsin. A table of the demographics for those who participated in the individual interviews is located in Appendix V.

The three qualitative questions that guided this study sought to attain the perspectives of nurse educators, specifically in terms of what undergraduate RN students need to learn in the clinical learning environment, what specific strategies nurse educators use to enhance learning, and what nurse educators believe contributes to an optimal learning environment. These questions were asked to allow the participants to expound regarding needs, style, and environment. The qualitative data was gathered from two different strands. The first strand was through three open-ended survey questions (open-ended data strand) and the second strand was
collected by conducting individual interviews. For each research question, open-ended survey responses are summarized, and interview data is discussed in detail. Data is presented in order of the research questions.

Data Responses

Qualitative Research Question 1: Helping Students Learn

The first qualitative interview question stated, “What do nurse educators believe helps students learn in the clinical learning environment?” When answering this question, practitioners reflected on their roles as educators. This question allowed the participants to provide examples of their beliefs about the clinical learning environment. Given the responses provided, Research Question 1 was themed as Supporting Diverse Needs. Under this theme, four subcategories were noted, which include an educator who truly facilitates, provides flexibility, individualizes the learning, and motivates the learner. Details supporting the theme and sub-themes follow.

Open-Ended Data Responses

Open-ended survey responses varied and were categorized based on nurse educator responses. Although responses were derived from open-ended questions, many of the categories were truly a description of the strategies that nurse educators used in the clinical learning environment. The five primary categories noted included: planning strategies, teaching strategies, educator characteristics, environmental structure, and goals for teaching. Each category was based on facilitator strategies and less were based on student-focused items. These individual responses were noted to be in direct alignment with the frameworks noted in the study, specifically, strategies, characteristics (behaviors) and environment. A table of responses to open-ended research question 1 is located in Appendix S.
Individual Interview Responses

The nurse educators who were interviewed responded similarly and again spoke specifically about their responsibility in providing what the undergraduate RN student needs in the clinical learning environment. Nurse educators provided great detail and were very enthusiastic and passionate in their responses, indicating an abundance of pride as facilitators of learning in the clinical environment. In addition, nurse educators indicated that being flexible, individualizing the learning, and motivating students were the items they noted as helpful. Similar to the open-ended data responses, when responding to Research Question 1, nurse educators described planning strategies and teaching strategies, and referenced educator characteristics, specifically their responsibility as a facilitator of learning. Detailed data from interviews follows.

All nurse educators described themselves as a guide. Adele stated, “Students need guidance.” Trinity stated, “My role is to guide and assist students.” Misty suggested that, “Having 6-8 students limits flexibility. To me this is not supporting them; I can’t gauge their learning if I am leaving them out there without guidance.” Thomas added, “I feel that my role is to guide and support.” Denzel asserted, “I guide them to get them to understand their role as the nurse.” Each of these nurse educators acknowledged that their responsibility was to facilitate learning. Specifically, each participant declared that they believe that students need guidance and support when learning.

When assisting student learning in the clinical environment, faculty described the importance of offering flexibility. Denzel indicated, “I make variations in my teaching,” and further emphasized, “I adjust based on years of experience and entry level of the student.” Adele stated, “My teaching varies, based on experience, I am flexible, very flexible, based on the
student. In the beginning of the program, I have to be realistic and understand where they are. I do raise the bar as the semester progresses.” Adele and Trinity noted that they both allow students to make mistakes. Specifically, Adele stated, “I will expose them and allow them to make mistakes. I realize they all have varied learning styles.” Trinity acknowledged that

“One of the places where I am flexible, is the allowing of mistakes. To me as an instructor, mistakes are a part of the learning process. This is how they learn. Oftentimes students are protected and not allowed to have a near miss situation. Allowing the students to make a mistake as long as it does not reach or harm a patient is something that I allow to occur in my clinical teaching. There is something about reflecting on what you failed to do or simply overlooked that is powerful.”

The nurse educators suggested that being flexible and preventing rigidness is beneficial to the student learning experience. In addition, the interviewees stated that it is okay to continuously change and/or develop when facilitating.

The nurse educators acknowledged the importance of providing individualized learning, individualized assignments, individualized evaluations, and individualized feedback. Adele mentioned, “I take prior experience into account, and vary my teaching based on course requirements.” Denzel indicated, “If I have eight students, then I make rounds on eight; I will assess each and give each one of them individual feedback.” Thomas said, “I actually test their skills to see where they are, then I work with them.” Misty specified, “I develop assignments that are based on student need and prior experience,” and further explained her process by stating, “I also try as much as I can to give students individual time.” Trinity explained,

“I believe that learning depends on the nursing program and the semester, so I need to know where they are. I meet with students individually to learn about their individual needs. Over the years I have learned that each student comes with their own backpack of knowledge, beliefs, learning styles, values, and experiences. This backpack needs to be unpacked for me to understand where the student is and to figure out what that student needs.”
Nurse educators referenced the importance of implementing strategies that allow for individual time with students. Through having individual time, nurse educators can personalize the student learning experience. In addition, nurse educators indicated that assessing prior knowledge and experiences was critical. Through these individualized assessments, the instructors indicated that they were better able to meet the needs of the undergraduate RN student, as well as identify various learning styles, to develop a knowledgeable, professional and prepared student.

Developing the best possible undergraduate RN student is an expectation in nursing education. In addition, the development of the student is not just the responsibility of the educator. The student has great responsibility in nursing programs to contribute and develop into a professional and knowledgeable RN. The task of learning, displaying knowledge, and becoming a professional RN is not a simple task. However, growth, knowledge, and development into the role is expected.

Although student learning is expected, in these interviews the responsibility of the student was not described as being significant. The majority of the responses regarding what the student needed was described as an educator responsibility. In fact, several nurse educators discussed their role in motivating and developing professional students and spoke little about what the student’s role was in learning. However, the undergraduate RN student as well as the educator plays a role in learning.

The nurse educator plays a critical role in developing students’ behaviors, sense of control, and ability to make decisions and be responsible for one’s actions. During the researcher’s interview with Adele, she acknowledged her role in developing the professional student. She posited, “I am seriously interested in their success, and I tell them I want them to be
prepared. I want them to be set for success, walk in and be confident, and feel safe while providing excellent care.” Denzel indicated, “I like to build accountability and confidence. In fact, I can’t stress enough the importance of building confidence. When students are confident, they go into a skill clear minded; I like to set students up for success.”

During the interviews, many of the nurse educators referenced the following terms when talking about the professional student nurse: “building self-esteem,” “promoting self-reflection,” “building confidence” (Denzel), “encouraging self-starters” (Thomas), and “encouraging independence” (Misty). Denzel spoke very seriously about confidence building; he stated, “First of all, I feel that it is a two-way street as far as trust goes. I want to build accountability and confidence. Once that level of confidence is built and I as the instructor [am] easy to approach[,] I think that is the recipe for success. I can’t stress enough the importance of building confidence in the students. When they are confident, they go into a skill or an intervention with a clearer mind. . . than if they would go in under a lot of stress. I like to set them up for success.”

Nurse educators implied that students are at different levels of experience and indicated that they used role modeling to demonstrate expected behaviors. Based on the excerpts, nurse educators described the way in which they encouraged and built confidence among students, specifically through communicating their desire for the student to be successful and providing support during the learning process.

Based on the data from open-ended survey questions and interview questions, several themes emerged regarding what nurse educators believe helps students learn in the clinical learning environment. First, the themes seemed to be driven based on what the nurse educator does, not what the student does. Themes most illustrated were those that enhance communication and motivate the learner. Nurse educators believed that communication and motivation are imperative to the student’s development, specifically on the journey of a professional nurse. In
addition, several nurse educators discussed how much time they spent planning and providing clear objectives to enhance student learning and growth. This was strongly supported by practices such as being a facilitator, being flexible, individualizing the learning based on student need and program level, and motivating the student. These findings illustrated that nurse educators are dynamic teachers who build confidence, motivate students, and encourage responsibility and accountability. The aforementioned themes have highlighted practices that nurse educators believe can help undergraduate RN students learn in the clinical environment. The findings denote that nurse educators believe their actions are critical for ensuring student success and preparation for future practice.

When reviewing the responses of nurse educators as a whole, what stood out was how these nurse educators displayed enthusiasm, provided ideas on engagement, discussed their responsibility as a facilitator, described the need to individualize learning, and emphasized the need to motivate student nurses. The themes for Research Question 1 captured the intense feelings nurse educators have about acting as a support for the students. This theme also highlighted the nurse educators’ desire to utilize strategies that meet the needs of each student on an individual basis: specifically, those that enhanced communication and further motivated the student. The responses from these nurse educators focused primarily on the role of the educator in terms of facilitating and meeting the students’ needs in the clinical learning environment.

Qualitative Research Question 2: Strategies That Enhance Learning

Research Question 2 stated, “What specific teaching strategies do nurse educators utilize in the clinical learning environment to enhance learning?” This research question was used to determine the types of activities that were implemented, during the time of the study, while
facilitating clinical learning. Nurse educators provided more than one response, signifying the use of multiple strategies.

From the open-ended questions, an abundance of data was gathered, and categories were created. Similarities were noted among the data strands, although the verbiage was different. After removal of duplications and additional coding, 85 teaching strategies emerged. The majority of responses regarding teaching strategies were related to active, engaging, and guided teaching/learning strategies. Other responses focused on planning of activities, communicating, and developing and motivating students. A table of open-ended survey responses is provided in Appendix V.

The nurse educators who were interviewed spoke specifically about commonly utilized teaching strategies and described behaviors that generate active teaching strategies. During these individual interviews, each nurse educator stressed that a primary objective of facilitation was to get the students to think as they would in practice when making a decision, and to be able to apply what they learned in the classroom to the clinical environment. In addition, nurse educators indicated that they utilized several strategies to achieve those objectives.

Several teaching strategies were noted as utilized by nurse educators in the clinical learning environment to enhance learning. The theme was labeled as Implementing Active Learning Strategies. The strategies most illustrated were those that develop critical thinking and link theory to practice. These are two of the most desired requirements of the undergraduate RN student. These strategies were reported consistently in both open-ended survey question responses as well as individual interview responses.

Nurse educators indicated that they implement various teaching strategies and implemented active learning strategies such as case studies, concept maps, Socratic questioning,
thinking aloud, one-minute method, assigned readings, reflections, and collaborative learning.

The strategies utilized outlined how nurse educators develop critical thinking and link theory to practice. All the nurse educators (those surveyed and interviewed) were consistent in their desire to cultivate critical thinking skills and link curriculum (theory) to the practice setting.

The nurse educators who were interviewed indicated that they use a variety of teaching strategies to facilitate learning in the clinical environment. Nurse educators verbalized the recognition of this implementation as vital to future success as an RN. Nurse educators described these strategies with terms such as “thinking like a nurse” (Trinity) and “developing clinical judgment and connecting the dots” (Adele). Additional verbiage associated with facilitating higher-level thinking included: “making connections” (Thomas), “developing critical thinking” (Denzel), and “developing nursing judgment” (Misty). The primary theme was created based on the fact that nurse educators instituted strategies that align theory to practice, thereby assisting in the development of higher-level thinking (concept-based learning).

Eight active teaching strategies support the theme of facilitating higher-level thinking. These strategies include use of cases, Socratic questioning, concept mapping, thinking aloud, applying the one-minute method, assigning directed readings, reflection, and encouraging collaborative learning. In the section that follows, each strategy is briefly described, and the associated benefits of the strategy are provided. This information is followed by aligned participant responses.

An overwhelming number of participants weighed in on the importance of aligning theoretical knowledge to clinical practice. In fact, the majority of the nurse educators who were interviewed described various ways to align classroom theory in the clinical practice environment. Thomas denoted, “I adjust the learning based on experience and level in the
program.” In addition, several participants pointed out that they discuss current content covered in the classroom with students during clinical. Misty stated, “I base my teaching on what they are doing in class.” Denzel pointed out, “I like to make sure I am tying theory to clinical. For example, any activities they have done in the week, I try to reemphasize them, or give them a patient based on what they learned in theory.” Adele indicated,

“I take course requirements and content into consideration. I have a large binder full of assignments and activities for students to get them where they need to be. I call it my student reference binder. I use these to help them to connect ideas. I want them to have hands on, I try to provide context. I have [a] student reference binder and it has assignments, cases, completed sample concept maps, so I have additional assignments in there including resource articles, and other evidence-based practice journal articles. In my clinical there is no down time and I will provide them with items from that binder and that helps them learn and manage their time.”

When using cases, the student is given a case study, case scenario, case presentation, or a patient care plan, then the student obtains crucial information, makes an assessment of multiple data points, and develops a plan of action. The educator can assess the student’s ability to connect the dots, determine if the student is applying steps in the nursing process, and determine if the student is utilizing critical thinking and if the student possesses the ability to transfer previous experiences to new situations. Denzel indicated, “I provide them with a case scenario and ask them what’s going on with the patient based on the case scenario.” Trinity added,

“I use cases to encourage the students to learn about popular diseases that they may encounter in everyday nursing care. The cases can be moderate to complex, based on the level. I use cases to sharpen their thinking and I will use them when students believe there is nothing to do, or during down time.”

In the examples provided above, nurse educators utilized cases to sharpen critical thinking skills and to increase time on task. In addition, through using cases, students are challenged to apply theoretical knowledge in a practical manner. Nurse educators emphasized how prepared they were in increasing critical thinking and applying theory to practice.
When using Socratic questioning, educators may ask the following questions, “What do you think?” “What are some possibilities?” and “How could you have handled that differently?” The use of questioning develops critical thinking skills and provides guidance to the educator about a student’s ability (or lack thereof) to integrate information, formulate concepts, and to look at the big picture. In addition, the use of questioning allows educators to determine if the undergraduate RN student is able to apply theory to a practice situation, can analyze a situation successfully, and can synthesize information.

Various participants explained how they used the Socratic method of teaching. Misty stated, “I review their patients with them, we talk about what they are thinking. I use questioning which encourages them to make the connections. I would call this developing nursing judgment.” Thomas indicated the following, “I ask them pertinent questions. I require them to discuss the pathophysiology of the disease. I look for the light bulb to go off. I am expecting them to process and connect the information. I am looking for them to make the connections.”

Additionally, Denzel explained that he uses questioning techniques in several ways. First, Denzel stated that he presents students with NCLEX-RN styled board questions. He uses this style of questions to assist students in developing higher-level thinking. Denzel proclaimed that,

“I use NCLEX-styled questions in post-conference. So, we generally go over about twenty questions. Discussing NCLEX questions not only provides the question but also rationale for each incorrect answer. I use this strategy because these types of questions really help them to begin thinking like a nurse. These questions are similar to what a student may see on the NCLEX-RN exam.”

The second technique Denzel uses is through cases; specifically, he stated, “I will give them a case scenario and ask them what’s going on with the patient, to really determine what they are thinking.” Adele added her perspective regarding the use of the Socratic method by stating, “I engage them and ask them questions, I will typically walk around and have
discussions with them. Students will ask me questions, but me telling them the answer doesn’t help them.” The use of questioning techniques to verbally employ the application of higher-level thinking was referred to throughout all interviews. These questioning strategies are often used to develop thinking skills.

Concept mapping was utilized by the majority of nurse educators who were interviewed. In addition, nurse educators who completed the open-ended survey questions mentioned how they use concept mapping. Concept maps stimulate metacognition, assist in explaining complex concepts, and are thought to enhance nursing knowledge (Addae et al., 2012). Trinity stated, “I require them to complete concept maps in order to help them map out their thoughts and make connections.” Thomas indicated that he has students complete his own version of a concept map during post-conference. Specifically, Thomas stated, “I have them make connections to pathophysiology.” Adele pointed out,

“I have them do concept maps. Concept maps are required in my clinical. I encourage them to try different templates to complete the maps. I give them an opportunity to use what works for them. Different formats may help them to organize their thoughts. All students learn in different ways. I ask them to self-reflect and determine what works for them. I actually work on concept maps in post-conference and that gets them to understand. Being that a majority of the program is taught on-line this is a totally different approach. Doing it this way meets the needs of the individual learning styles.”

The nurse educators agreed that concept maps can be used to assist in tying theory to practice. Completing concept maps can assist students in developing higher-level thinking skills, as well as encourage students to make connections.

Thinking aloud is a tool of direct questioning. During this process, the student is asked to provide a rationale for their specific answers to questions, how techniques were used or will be used, and how conclusions were reached. This is a method for developing critical thinking skills. Thinking aloud encourages students to verbalize thoughts to support decisions. After
verbalization, the educator then has a clear understanding of the student’s ability to transfer knowledge to a clinical case and describe their decision-making process. Misty stated, “I have a one-to-one meeting in which I ask them what they are thinking, I ask them what they are focusing on.” Trinity asserted, “I require students to discuss with [me] what they believe is going on with the patient.” Adele explained,

“Students often ask me questions, but I turn it around and ask them to present it to me. I make them take ownership of their learning. My students will often try to stomp me, because they assume I know everything. I do tell them I do not know everything, but I have been exposed to many things and that they to need to expose themselves and ask those why questions. This is the part of education that is challenging. However, students tell me time and time again. As much as they hate being challenged, they love being challenged. So, they do appreciate the direct questioning and the feedback that I provide.”

There are several techniques which allow nurse educators to further understand the student’s communication skills, critical thinking skills, organizational skills, and several other skills based on presentation. These discussions may be quite detailed or may be brief. The detailed methods are considered thinking aloud, whereas the brief encounters are referred to as the one-minute method. Each method of presentation is described below.

During the one-minute method, the student assesses the patient and describes to the educator what has occurred. This method allows for a student to present his/her thoughts in a brief timeframe. The educator then challenges the student to provide supporting information to defend his/her assessment. After supporting information is provided, the educator then provides feedback about what was correct, and will provide generalized information, which the student can apply to later cases. This technique allows the student to process, present a case, draw on all resources, critically assess the case, and make generalizations.

The majority of nurse educators required that students provide a synopsis of a nursing report. Trinity stated, “I utilize nursing reports and have them report off what is happening.”
Adele stated, “I ask the students to get nursing reports and then give me a report of what is going on.” Denzel explained, “I have students ... gather information after a nursing report, then they have to report off to me with their nursing report.” Misty said, “I use brief one-to-one sessions to encourage discussion.” Trinity, Denzel, and Misty all claim that the one-minute method is important in the clinical learning environment. In these instances, the student is asked to gather data from various forms, write a synopsis, and is then required to report or discuss with the nurse educator. Nurse educators agreed that these were excellent ways to evaluate assessment skills, the ability to gather data, organize thoughts, and communicate their thoughts verbally.

An additional way to determine knowledge and engage RN students was through assigning directed readings and/or written assignments. Assigned directed readings allows students to make connections, encourages students to conduct future research, and teaches students to utilize evidence-based practice in their thinking. Students are also able to review unfamiliar information (e.g., cases, diseases, pathologies, or techniques). Some examples of assigned directed readings include the use of concept maps, case studies, care planning, nurses’ notes, written assessments, and evidence-based practice research on a disease, diagnosis, policies and/or procedures. Trinity stated, “Every student is expected to complete a nurses’ note, written plan of care, written assessment, and complete a concept map on unfamiliar topics. This is an everyday expectation and is due at the end of the clinical day.” Thomas added, “I expect students to be able to research, process, and connect all the pathophysiology in their thinking and writing.” Assignments are used in the clinical learning environment and allow nurse educators to assess a variety of skills.

During the reflection process, a student examines his/her performance and the learning that has occurred. This process of reflection allows students to generalize information and to
develop critical thinking skills that are necessary for more independent practice. Reflection also stimulates learning in practice, enhances readiness to apply new knowledge, and promotes practice change (Asselin & Fain, 2013). This strategy is used, according to the nurse educators, in pre-conference, post-conference, verbally, and/or in reflective writing.

Reflection was described in several ways by the nurse educators. Thomas stated, “I use reflection in post-conference as a way to debrief. This is done at the end of the clinical day.” Thomas has students reflect on their own performance (i.e., self-reflection). In this way reflection was used to get the undergraduate nursing students to look at how they prioritized and/or organized their thoughts. Adele stated that she utilizes “Debriefing for Meaningful Learning” as a strategy to get students to reflect. Through utilizing this strategy, students are able to reflect and to develop critical thinking skills. Trinity indicated, “I encourage students to use reflection when they have encountered a negative professional behavior. I ask the student to consider the negative behavior and determine what or how things could be done differently. I basically ask them to give it a positive spin or consider an alternative approach.”

An additional form of reflection described by participants was reflective journaling. In reflective journaling, students express their thoughts on the session(s) in writing. Reflective journaling may be done in the clinical setting or after clinicals. Students use reflection to learn to process, generalize, and learn more about the big picture (Dreifuerst, 2012). Thomas stated, “I ask students to do reflection journaling.” Denzel noted, “I will sometimes incorporate reflective thinking in post-conference.” Misty explained, “I have students do verbal journaling and allow them to reflect on the things that went well.” Trinity expressed a deviation from the other participants and stated, “I encourage reflection,” but Trinity also stipulated that “reflection along with everything else is required during the clinical day. This allows the student to immediately
process and critically think about their experience.” Regardless of the manner in which reflection is instituted, nurse educators use reflective activities as a deliberate strategy to enhance performance in the clinical setting.

During the collaborative learning process, the educator develops or selects a case and the student(s) works with others to discuss a possible case history, evaluation strategy, a possible diagnosis, and recommendations. The collaborative learning process strengthens assessment, enhances dialogue, builds confidence, and encourages collaboration. Some examples of collaborative learning are developing care plans and providing group work. Trinity described the use of peer-to-peer activities and stated, “Peer-to-peer activities are used to encourage collaboration. I believe this strategy is necessary for their future as nurses and assists them in understanding what it is like to collaborate as a member of a team.” An additional place where nurse educators described the application of collaborative learning was during post-conference. In post-conference, students can reflect, work in teams, present topics, or have a dialogue. Trinity acknowledged, “I ask them to present in post-conference and share their peer-to-peer experience and indicate how they worked as a team.” Thomas indicated, “I ask students to share what they did and observed in post-conference.” Adele says, “In post-conference we debrief and share experiences as a team.” Collaborative learning encourages the nursing student to integrate scholarly inquiry, to work as a member of a team, and to apply clinical knowledge.

These findings illustrated the specific strategies nurse educators are utilizing to enhance learning and prepare the undergraduate RN student for practice upon program completion. The findings denote that nurse educators believe that implementing active teaching strategies through the implementation of assignments and activities that enhance critical thinking skills and link theory to practice is critical for ensuring undergraduate RN student success and preparation for
future practice. These findings also display the ways nurse educators are implementing strategies that attempt to close the gap between theory and practice.

**Qualitative Research Question 3: Optimal Clinical Learning Environment**

Qualitative Research Question 3 stated, “What strategies do nurse educators utilize that contribute to an optimal clinical learning environment?” When asked this question, several nurse educators believed that it was asking the same as the previous question, which was focused on specific teaching strategies. The duplication of responses indicated that nurse educators believe instituting helpful and meaningful teaching strategies can contribute to the creation of an optimal learning environment. In those instances, the previous responses were recorded.

Several sub-themes merged regarding strategies nurse educators utilize that contribute to an optimal clinical learning environment. Themes most illustrated were those that sets the tone and influences the environmental culture. The primary theme that emerged from both open-ended survey and individual interview responses was supported by two subcategories. The primary theme was enhancing collaborative partnerships. The subcategories included: (1) developing partnerships among staff, students, and educator, and (2) developing partnerships through presence. The subcategories were selected because these categories were consistently reported across the majority of the open-ended survey responses and were also consistent across all interviews. The responses from both open-ended and individual responses are provided next.

Participants who completed the electronic open-ended survey question regarding contributions to the optimal clinical learning environment had varying responses. Many of the responses were somewhat broad and very lengthy (i.e., very long text responses), as there was no character limitation set on the amount of words that could be used in the open-ended survey questions. Given the length and broad nature of the responses, the text responses were revisited
frequently and were coded into categories. The primary focus was around developing
partnerships, collaborating, organizing, and being available. The text was narrowed into six
categories: (1) identification of expected behavioral characteristics, (2) descriptions of the ideal
environment, (3) specific teaching strategies, (4) planning techniques, (5) communication
strategies, and (6) facilitation strategies. Within each of these overarching categories, the themes
were around working towards this collaborative environment with clear expectations. There were
several nurse educators who believed that this question was an extension of the previous
question. A visual display of the responses is located in Appendix W.

Nurse educators who were interviewed provided multiple considerations that should be
taken into account when creating an optimal learning environment. Although different verbiage
was used, the perceptions were consistent. Interestingly, the individual interview responses were
similar to those noted in the open-ended survey, just more detailed. The majority of responses
focused on partnership development, supporting the student in the environment, and providing
clear expectations.

Nurse educators during interviews were passionate about their role and described in great
detail the measures nurse educators took to provide an environment that was conducive to
learning. In fact, the majority stressed the difficulties that can occur when the environment was
not welcoming or lacked a team vibe. The nurse educators who were interviewed emphasized the
importance of developing partnerships and being present. The individual interview data is
provided next.

The critical nature of developing partnerships among staff, students, and faculty was
evident in all interviews. Although different terms were used when discussing the learning
environment, it was clear that this triad or partnership be developed and nurtured throughout the
learning experience. Nurse educators discussed items such as being collaborative, establishing trust, having a shared vision or goals, having open and ongoing communication, and displaying mutual respect. When explaining the importance of partnerships, nurse educators used the following terms: “communicate with staff and connect with the nurse,” “establish a welcoming environment among staff” (Trinity), “collaborates and communicates with staff” (Adele), “discuss and coordinate with all members of the team,” “planning and coordinating with the team” (Misty), and “developing a partnership among staff, student, and faculty” (Denzel). In addition, Thomas stated, “I believe involvement and making everyone feel as a member of the team; making people feel welcome makes it easier.” Nurse educators all indicated that a high level of engagement occurs, and this engagement is actually required among the staff nurses and managers when planning the clinical day. Trinity pointed out the following.

“Establishing a warm environment is paramount. I recall as [a] nursing student not feeling welcomed, and I never understood why. I just recall feeling like I did not belong, or I wasn’t wanted; that affected me. What I try to do for my students is to alleviate this feeling. I try to communicate with the staff and connect with the nurse. I also do things like provide orientation, introduce students to staff, and try creating a friendly and collegial environment by trying to help out as much as I can, as a licensed RN when we are on the floor working and learning. This is also a form of partnering and role modeling shows the students how not to behave in spite of the negative things they see on the nursing unit.”

Nurse educators further explained that dialogue and collaboration throughout the day are key success factors in clinical.

When assisting during the student learning process, in the clinical environment, faculty described the importance of being present, approachable, and engaging. Denzel indicated, “I feel as the instructor, I need to be present and easy to approach. I think that is the recipe for success.” Thomas added, “Instructor presence and building the professional student nurse is important.”
Trinity said, “I make myself available for students and set the stage where they can come to me with questions or concerns.” Adele explained, “I am always visible and approachable. I believe students appreciate presence.” Misty took these ideas one step further by providing a synopsis of how she utilizes strategies to provide an optimal learning environment. Misty indicated,

“I come in two hours ahead of the scheduled clinical time and work with the nurses and managers to develop an assignment. “I try to partner students with nursing staff who are receptive and who will take the student and teach them how and why they are doing what they are doing. Prior to that I conduct a tour, review equipment and introduce the student to their nurses. I clearly explain the process, so the students ... don’t feel as if they are intruders. I encourage them to speak up for themselves. So that means, I try to encourage them to be independent and take a part in their learning. So, I try to make sure that students are prepared, feel welcomed, and get my attention. I don’t want them to be self-guided. I want them to be successful.”

These responses emphasize the nurse educators desire to be present in the learning environment.

This theme encapsulated each of the participants’ struggle to deal with the exasperation they have experienced when working with the nursing staff in the clinical environment. The nurses indicated a need to set the tone and to help build a culture of collaboration. Nurse educators verbalized experiencing a combination of feelings, including not being welcomed or feeling ignored, and they indicated in some instances a need to “protect” the nursing students in an effort to assist them in their learning in this “professional” environment. This study highlighted the importance of setting the tone in the clinical learning environment and influencing safe and collaborative environmental culture reflective of future practice. Nurse educators indicated that establishing these partnerships set the tone for learning and dramatically influences environmental culture.

The qualitative findings chapter concludes with a presentation of the merged data. This section describes the conceptual model that was developed based on the cohesive findings. The findings are presented in the order of the mixed methods research questions.
Mixed-Methods Research Question 1: Comparison of Data Strands

Mixed-methods Research Question 1 asked, “What results emerge from comparing the qualitative data about the specific strategies with outcome data from the quantitative instrument (the modified Principles of Adult Learning Scale) data measuring teaching styles and factors?” To answer this research question, the qualitative data strands were compared to the data obtained from the quantitative instrument. The responses that nurse educators provided are aligned based on the description of each factor. Factors 1 through 7 are presented in order.

Factor 1: Learner-Centered Activities

According to the responses, nurse educators described implementing learner-centered activities by providing informal evaluation techniques and encouraging responsibility for learning. Informal evaluation techniques were described as 1:1 assessment, providing individual feedback, and assessing knowledge level as well as learning style. Encouraging responsibility for learning was described as self-reflection, preparedness, planning individual activities, ensuring accountability, and by expecting engagement and discussion.

Factor 2: Personalizing Instruction

Nurse educators expressed personalizing instruction by utilizing a number of techniques, personalizing learning, and meeting the individual student’s needs. These were exhibited by implementing active learning, higher ordered thinking, multiple strategies, Socratic questioning, games, group work, and written assignments. Personalizing learning was described through the utilization of the following strategies: individualized assignments, individual assessments, assignments based on experience, assignments based on level, and encouraging reflection. Meeting the student’s unique needs was explained as individualized teaching, assignments based
on experience, assignments based on identified needs, and by providing assignments based on level.

**Factor 3: Relating to Experience**

The planning of learning activities was also expressed by nurse educators. Learning activities were noted to be planned based on several factors including experience, program level, and based on the curriculum. In addition, these activities were often planned while collaborating with nursing staff. Nurse educators were noted to take prior experiences into account. This was denoted by assessing prior experiences, asking students to personally reflect, and lastly by assessing prior knowledge. Nurse educators in the clinical environment indicated a need to encourage students to make learning relevant. This was exhibited by encouraging reflection, and by utilizing evidence-based practice assignments.

**Factor 4: Assessing Student Needs**

Assessing students’ needs was demonstrated by holding individual conferences and providing informal counseling during the clinical rotation. Again, nurse educators described assessment of program level, considered current curriculum, provided a one-to-one need assessment by having a one-to-one dialogue, and by discussing students’ needs. Providing one-to-one feedback, one-to-one discussion and holding individual meetings was how nurse educators worked with and assessed students individually. Finally, nurse educators described counseling students. This was implemented by providing clear expectations, normative correction, and verbal and written feedback on an individual basis.
Factor 5: Climate Building

Building a climate for teaching and learning was a matter of significance. Several steps were taken to build an optimal climate including setting a friendly and favorable climate, encouraging dialogue, encouraging risk taking, and for many, errors were noted as part of learning. Nurse educators were consistent in describing the manner in which they built the climate. Specifically, nurse educators provided orientation, and encouraged a safe, collegial and welcoming environment. Dialogue was implemented by encouraging peer-to-peer activities, assigning collaborative group work, and by holding pre- and post-conferences as a group. Although nurse educators did not risk safety, many expressed the belief that it was okay to take a risk. They indicated that students were encouraged to be self-directed. Nurse educators encouraged independence in their students, allowing them to have near misses as long as safety was maintained. In this way, nurse educators recognized mistakes as part of the learning process.

Factor 6: Participating in the Learning Process

Nurse educators described working with students and had them identify their learning. This seemed to be achieved either through discussion or through written reflection. The one factor that nurse educators did not indicate was allowing students to participate in the decision making about content. Nurse educators did not describe in open-ended surveys or in the individual interviews that students were allowed to participate in decision making about content. In fact, no supporting comments indicated or remotely alluded to nurse educators acknowledging this as part of the teaching or learning process.
Factor 7: Flexibility for Personal Development

Nurse educators indicated their flexibility for personal development. Nurse educators indicated that they were facilitators of learning and described students as having a responsibility in the learning process. Nurse educators indicated that they often modified the environment by adapting to the learner’s level and learning style. Nurse educators noted that throughout the clinical rotation curriculum, activities needed to be adjusted to meet the students’ changing needs. This again was indicated by use of assessment of student progression and by assessing the learning environment.

Mixed-Methods Research Question 2: Support

The final mixed-methods research question read, “To what extent do the qualitative results support the quantitative results?” In this study, the qualitative findings supported the quantitative results. The modified PALS instrument assessed the level of learner-centered teaching strategies. Nurse educators described strategies aligned with implementation of learner-centered teaching based on the modified PALS instrument, and exhibited the strategies mentioned in Conti’s (1985a, 2004) PALS factor scores. The nurse educators who participated in this study implemented nearly all seven factors of the PALS instrument, with the exception of Factor 6, “Participation in the Learning Process,” as indicated by the PALS overall scores.

Innovative Clinical Facilitation Model

When reviewing the qualitative data from open-ended surveys and individual interviews regarding the nurse educators’ perspectives on student needs, teaching strategies, and ideas on what contributes to an optimal clinical learning environment, responses were similar. In fact, three central themes were evident: (1) the need to support diverse needs, (2) the desire to
implement active learning strategies, and (3) the importance of enhancing collaborative partnerships. These three themes, when merged, illustrate the strategies nurse educators utilize in the clinical environment, which are innovative and thought to contribute to the preparedness of the undergraduate RN student upon program completion.

The Innovative Clinical Facilitation Model was developed based responses from the quantitative and qualitative data derived from this study. The data analysis resulted in a conceptual model that provides a sphere of activities in clinical facilitation. The model may be used to alleviate concerns regarding facilitation, recommend strategies for clinical facilitation, capture the fundamentals of facilitation in the clinical learning environment, and may be used as learning domains for future clinical educator development. The intent of the model is to provide the discipline with an understanding of the manner in which clinical facilitation occurs and advance knowledge regarding current practices.

Each component within the Innovative Clinical Facilitation Model represents an overarching theme that was noted from the data in response to one of the four primary research questions. Research questions were developed based on concerns noted in the literature, as well as the influential theories that informed the research. The top of the model is the first overarching theme, Facilitating the Teaching and Learning Process. This theme was attained based on the quantitative research questions and was affirmed according to the open-ended survey and interview responses. Themes (2) Enhancing Communication and Motivating the Learner, (3) Developing Critical Thinking and Linking Theory to Practice, and (4) Setting the Tone and Influencing the Environmental Culture were derived from the qualitative research questions 1, 2, and 3, respectively. The heart at the center of the model symbolizes clinical training, which is the core (heart) of nursing education (Farzi, Shariari, & Farzi, 2018).
The Innovative Clinical Facilitation Model may be used by multiple constituents. The users of this model are ideally educators, professional development coordinators, nurse educators, clinical coordinators, adjunct and full-time faculty of clinical training, those educators who facilitate learning in the clinical context, as well as leaders in academia and practice. The content within the model represents current innovative strategies that may be used in undergraduate education in the clinical context particularly with a health care focus. Assessment of the model’s effectiveness may be obtained by assessing or evaluating the clinical outcomes of those who have been exposed to the strategies within the model. A visual of the Innovative Clinical Facilitation Model is provided in Figure 9.

Summary

This chapter has provided relationships noted among the data and discussed correlations and contradictions. This chapter also provided a conceptual model based on the findings from this study. These results show that nursing education has evolved, and nurse educators are no longer teaching the way they were taught utilizing a teacher-centered style. Nurse educators who participated in this study are using innovative teaching strategies in the clinical learning environment to prepare the undergraduate RN student for future practice. These strategies are focused on teaching and learning; communication and motivation; developing critical thinking; linking theory to practice; setting the tone in the environment and influencing the environmental the environmental culture. This study illuminates the growth that has occurred in the profession and dispels accusations regarding the nurse educator’s lack of innovation during educational delivery.
Figure 9. Conceptual Model of the “Innovative Clinical Facilitation Model, the Heart of Clinical Nursing Education.”
It is the hope of the PI that the conceptual model entitled “Innovative Clinical Facilitation Model” be used to assist novice nurse educators with facilitation techniques, encourage seasoned nurse educators to further develop professional repertoires, assist nurse educators in general to become more effective, encourage nurse educators, academia and practice to better manage the clinical environment, and properly plan and deliver clinical education. Nursing programs can also utilize the “Innovative Clinical Facilitation Model” conceptual model to determine if these innovative facilitation strategies promote or impact undergraduate RN student preparedness.
CHAPTER 6
DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

Introduction

Chapter 6 provides a discussion, conclusions, and recommendations for future practice and research. This study was robust, thereby resulting in several profound findings, including the benefits of using innovative strategies to direct the teaching and learning process, to enhance communication and motivate learners, to develop critical thinking and link theory to practice, and to ensure the environment is conducive to learning. Within this final chapter is a recapitulation of the study’s purpose and findings; relationship to previously conducted research; study limitations; implications of findings; recommendations for education, policy, and practice; and contributions.

Recapitulation of Purpose and Findings

The overall purpose of this study was to explore the ways in which nurse educators are teaching in the clinical environment and preparing undergraduate RN students for future practice. To examine clinical teaching practices, the PI explored four major concepts: (1) teaching styles, (2) identification of students’ needs, (3) teaching strategies, and (4) factors that contribute to an optimal clinical learning environment. The PI surveyed 71 nurse educators and interviewed five nurse educators. From the data, a conceptual model was developed, entitled the Innovative Clinical Facilitation Model, that depicts the strategies utilized when facilitating learning in the clinical environment. The four themes from which this model is based include (1)
facilitating the learning process, (2) enhancing communication and motivating the learner, (3) developing critical thinking and linking theory to practice and (4) setting the tone and influencing culture.

The findings of this study suggest that nurse educators who are teaching in the clinical learning environment are fulfilling the recommendations made by national organizations (e.g., American Association of Colleges of Nursing, 2008b; IOM, 2011), as well as recommendations of nursing researchers regarding what nurse educators “should” be doing when facilitating in nursing education. The findings of this study dispel the notion that nurse educators are utilizing traditional teaching practices in the clinical learning environment and instead show that they are implementing innovative, learner-centered practices that are reportedly conducive to learning. The results of this study are compared with other research findings in nursing education and are discussed based on each of the four themes that were explored (e.g., teaching style and behavior, student needs, teaching strategies, and the components of an optimal learning environment).

Relating to Previous Research

**Teaching Style**

Current literature is unclear with regard to the ways nursing education is delivered, specifically current teaching styles, behaviors, and strategies utilized in the clinical environment. To date, there is quite a bit of controversy regarding how education is delivered during the preparation of the undergraduate RN student (American Association of Colleges of Nursing, 2008b; Candela et al., 2006; IOM, 2011). In fact, the American Association of Colleges of Nursing (2008b) and the Institute of Medicine (IOM, 2011) have recommended that nurse educators stop using the teacher-centered learning approach, an approach that has been utilized in nursing education for decades. It is believed that through implementing a learner-centered
Various researchers have noted that nurse educators who facilitate learning in the classroom use a teacher-centered approach (Clavon, 2014; Schaefer & Zygmont, 2003). Weimer (2013) indicated that if faculty used a learner-centered approach, they likely would experience difficulty implementing this approach, specifically because faculty would need to relinquish power/control. In nursing education, curriculum is usually predetermined, thus not allowing educators to give students leeway to make decisions regarding content or evaluation methods. Furthermore, because clinical nursing is delivered in real environments, real people may be impacted by the decisions made by students with regard to determining educational learning objectives, thereby resulting in safety concerns. Therefore, having students determine learning objectives is not possible, especially given the fact that curriculum standards need to be upheld for accreditation purposes.

Previous research studies have focused on facilitation in the classroom environment, whereas this study focused on the specific behaviors that nurse educators exhibit in the clinical environment, which include: (1) learner-centered activities, (2) personalizing instruction, (3) relating to experience, (4) assessing student needs, (5) climate building, (6) participation in the learning process, and (7) flexibility for personal development (Conti, 2004). As noted in Chapter 2, various researchers have found that learner-centered teaching improves student learning outcomes (Conti, 1985; Conti & Welbourne, 1986; Curran, 2014; Schaefer & Zygmont, 2003; Totin Meyer, 2002) and increases critical thinking skills (Brandon & All, 2010). The results of this study coincide with previous research, as the results indicate the propensity towards the use of each of these learner-centered behaviors.
Previous research findings have indicated that nurse educators utilize a teacher-centered approach (American Association of Colleges of Nurses, 2008a; Chickering & Gamson, 1991; Conti, 1985c; Didham, 2003; IOM, 2011, 2013; National Advisory Council on Nurse Education and Practice, 2002; National League for Nursing, 2003, 2005b; Weimer, 2013). Conversely, this study provided evidence that nurse educators display a primarily learner-centered approach. The findings of this study, specifically in terms of using a learner-centered approach, are significant because questions have been raised regarding how learning is facilitated and how knowledge of practices is best disseminated. In addition, because recommendations have been made by various accreditation and governing bodies for nurse educators to implement more learner-centered practices, this research indicates progress toward those recommendations.

**Identification of Students’ Needs**

Qualitative Research Question 1 stated, “What do nurse educators believe helps students learn in the clinical learning environment?” The preparedness of nursing students has been a concern and the facilitation of learning has been called into question (Benner et al., 2010; IOM, 2011). As mentioned in Chapter 2, undergraduate RN students are diverse in terms of needs and challenges (Larocque & Luhanga, 2013; Levey, 2016; Oermann, 2015; Taniqama et al., 2012); therefore, it stands to reason that these students have diverse learning needs. Additionally, multiple issues have been documented that hinder student learning success, which include a lack of direction (O’Mara et al., 2014), negative attitudes of facilitators (Chuan & Barnett, 2012), nurse educators with negative character (Bisholt et al., 2014), and nurse educators exhibiting poor communication (O’Mara et al., 2014). Peer-reviewed research findings have highlighted that nurse educators have to meet the needs of a diverse population, provide direction, have positive attitudes, and communicate effectively.
Extant research has not fully explored the nurse educator’s perspective. Previous research has identified learning needs based on the undergraduate RN student perspective (Bisholt et al., 2014; Farzi et al., 2018; Luanaigh, 2015; Muthati et al., 2017; O’Mara et al., 2014; Papathanasiou et al., 2014). However, no research was found that captured the nurse educator’s perspective regarding undergraduate RN student needs. Based on this deficit in the research, Chapter 2 provided research studies that indicate that facilitation (Oermann, 2015), flexibility (Bieschel, 2011), individualizing the learning (Moonaghi et al., 2015; Muthati et al., 2017) and motivation (Luanaigh, 2015) are key to assisting students in learning. Multiple needs have been noted based on the student perspective. These four identified needs in no way eliminate the other identified needs. However, because extant research is limited, these needs provide a baseline and therefore are discussed in the next section.

The first identified student need was facilitation. Nurse educators indicated that students expected facilitation. Based on conversations with nurse educators, proper planning, providing hands-on experiences, and being clear with expectations were noted to be cornerstones to facilitation of learning. Matthew-Maich et al.’s (2015) study reported similar findings to those of this research study, specifically since their study denoted that good nurse educators prepared students by utilizing engaging strategies to facilitate learning. Additionally, instructors who adjusted their teaching strategies to meet individual student needs experienced more success with regard to meeting the needs of the undergraduate RN students.

The next identified need emphasized the importance of being flexible. Items such as making adjustments to assignments, providing multiple teaching strategies, and making variations in strategies based on knowledge, experience, and academic level were illuminated in this study by nurse educators. Bisholt et al.’s (2014) study was similar to this study, as the
researchers argued that the role of the nurse educator is to be diverse, flexible, and meet the needs of the nursing students. However, Bisholt et al.’s (2014) study differed from this study, as it sought the nursing student’s perspective on the clinical learning environment, whereas this study sought the nurse educator’s perspective.

Individualizing learning was a matter of significance in this study. The majority of nurse educators indicated that a significant amount of time was spent assessing individual student knowledge, assessing experience, determining students’ individual needs, and providing individual feedback. This finding regarding the importance of individualizing the learning was similar to the studies conducted by Moonaghi et al. (2015) and Muthati et al. (2017). In addition, one nurse educator in this study indicated that high student-to-faculty ratios made it difficult to provide individual facilitation of learning. This acknowledgement correlated with studies by Benner et al. (2010) and Ironside and McNelis (2010), which indicated that increased student ratios increased teaching facilitation abilities.

Motivating the student was the fourth identified need and was considered a substantial contributor to enhancing student learning. Items such as building self-esteem, encouraging independence, and giving feedback were noted as factors that motivate students. Luanaigh’s (2015) findings were similar to those of this study, as both studies highlighted the significance of creating a sense of belonging and noted the importance of influencing professional identity in learning. The building of the professional identity involved a focus on who the student was becoming as well as what they know or can do. According to nurse educators, this was significant in the enhancement of learning.

Nurse educators in this study have identified strategies that help students in the clinical learning environment. These four identified strategies coincide with those identified by students
in previous studies, such as facilitation (Oermann, 2015), flexibility (Bieschel, 2011), individualizing the learning (Moonaghi et al., 2015; Muthati et al., 2017) and motivation (Luanaigh, 2015). Employing strategies such as these enhances communication and motivates the learner. The results of this study indicate that nurse educators are implementing strategies based on the theory of andragogy to prepare the undergraduate RN student for practice upon program completion. Theoretically, the results of this study may help the nursing profession to better understand the manner and the value in utilizing the learner-centered approach, thereby further preparing the undergraduate RN student for practice. In addition, if novice nurse educators are professionally trained and/or understand the strategies utilized in the learner-centered approach, then perhaps more educators would utilize these innovative approaches, as implementation of a learner-centered approach has been recommended over the past two decades in nursing education (American Association of Colleges of Nurses, 2008a; Chickering & Gamson, 1991; Conti, 1985c; Didham, 2003; IOM, 2011, 2013; National Advisory Council on Nurse Education and Practice, 2002; National League for Nursing, 2003, 2005b; Weimer, 2013).

**Teaching Strategies**

Qualitative Research Question 2 stated, “What specific teaching strategies do nurse educators utilize in the clinical learning environment to enhance learning?” In nursing education research, as discussed in Chapter 2, several primary concerns exist regarding specific teaching strategies. The first concern denoted in nursing literature is the question of how education is delivered (American Association of Colleges of Nursing, 2008b; IOM, 2011) and how nurse educators may better prepare students for practice upon program completion. Next, there is a concern that undergraduate RN students lack the ability to apply theoretical knowledge to clinical practice upon program completion (Benner et al., 2010; Burns & Poster, 2010; Hooven,
2015; Perkins & Kisiel, 2013). Then, undergraduate RN students are expected to improve their clinical judgment (Huston et al., 2018) and develop higher-level thinking, which are noted concerns at the time of program completion. These concerns are significant because RNs are making significant and critical decisions in the lives of patients when working in this complex health care environment. Therefore, there is a need to further explore how undergraduate RN students are being taught in the clinical learning environment.

As discussed in Chapter 2, the literature mentions ideal teaching strategies, and has recommended implementing innovative strategies in nursing education. However, little research was found that described current and specific strategies utilized in the clinical learning environment. One study listed specific teaching strategies (Sawin et al., 2001), yet that literature lacked exploration, discussion, or description regarding current teaching strategies and practices and was conducted nearly two decades ago. In addition, recent research over the past few years focused on the teaching that occurs when facilitating online or during simulation, again leaving a gap in the literature regarding the delivery of clinical education in nursing. The one commonality among current nursing education research is that educators should utilize a variety of strategies, avoiding the one-size-fits-all approach (Breytenbach, Ham-Baloyi, & Jordan, 2017; Skiba, 2015). However, even the research by Breytenbach et al. (2017) and Skiba (2015) excluded non-classroom teaching. Several studies have also argued the need for further research regarding the best use of teaching strategies (Breytenbach et al., 2017), as there are multiple approaches that may be utilized, and best practices are unclear. Conversely, Oermann (2018), an authority on nursing education, recommended that future researchers consider ways to influence performance in the clinical setting.
The findings in this study were similar to other studies which have been focused on strategies, though there are subtle differences between this study and others. This study indicated 85 different strategies, which is more than the 65 total strategies utilized in Sawin et al.’s (2001) study, which was conducted more than 18 years ago, thereby indicating that an increased number of strategies are being utilized compared to nearly two decades ago. Nielson’s (2016) study was similar to this study, as it acknowledged that integrating theory within the clinical environment, while developing clinical judgment, fosters deep learning. The findings from this study were also similar to the studies by Addae et al. (2012), Flott and Linden (2015), Hardin and Richardson (2012), and Nielson (2016), which recognized the importance of innovation with regard to implementation of strategies that develop clinical judgment. This current study, which explored facilitation of learning in the clinical environment, solidified the fact that nurse educators are implementing a variety of innovative, engaging, and active learning strategies in the clinical environment. From a practical perspective, the knowledge gained from this study about facilitation in the clinical environment can assist nursing education to change procedures and apply strategies such as these in the clinical and classroom environments to better prepare students, and to enhance the facilitation skills of novice nurse educators.

Optimal Clinical Learning Environment

Qualitative Research Question 3 stated, “What strategies do nurse educators utilize that contribute to an optimal clinical learning environment?” The third and final qualitative research question sought the perspectives of nurse educators by asking them to identify what they believe contributes to an optimal clinical learning environment. Although previous research acknowledges the value of the clinical learning environment as being critical to student success (Flott & Linden, 2015), previous research that discloses the strategies that the nurse educator
believes contributes to the optimal clinical learning environment was not located. Based on this absence in previous literature, research on the learning environment and assessment tools utilized to assess the clinical learning environment was described in Chapter 2.

Previously conducted research has highlighted several factors focused on the learning environment. As noted in Chapter 2, the research discussed how the learning environment affects achievement of learning outcomes, preparation for practice, and student satisfaction with the nursing profession (Flott & Linden, 2015). Chapter 2 also described the wide variety of attributes that researchers believe contribute to a positive learning environment, including effective clinical teaching and a supportive environment (Flott & Linden, 2015; Hooven, 2015; Luanaigh, 2015; Moonaghi et al., 2015; Nabolsi et al., 2012; Papastavrou, 2015; Papastavrou et al., 2015; Papathanasiou et al., 2014; Reising et al., 2018; Saarikoski & Leino-Kilpi, 2002). In addition, encouraging respect and feedback (Moonaghi et al., 2015; Muthati et al., 2017) were important to student learning. However, all of these aforementioned studies failed to disclose or detail the manner in which these attributes such as providing effective clinical teaching, encouraging respect, and feedback may be achieved.

Finally, Chapter 2 highlighted the history of the learning environment assessment scales that have been established and discussed recommendations for achieving an optimal learning environment. After the initial scale was developed on learning environment, researchers developed tools based on the clinical learning environment, which provide a different context. Several instruments focused on the clinical environment incorporated broad categories of measures such as relationships, student satisfaction, and individualization (Dunn & Burnett, 1995). Years later, atmosphere, culture, leadership style (Saarikoski & Leino-Kilpi, 2002), instructional methods, innovation, facilitation of learning, and engagement (Sand-Jecklin, 2009)
were all added as important measures to clinical learning environment scales. To date, what the literature does not provide is documentation of what nurse educators believe contributes to the learning environment, nor does it detail the strategies that may be implemented to develop an optimal learning environment. The findings from this research discusses some strategies and describe how those strategies may be used to help achieve optimal learning in the clinical context. Empirically, this new data on clinical facilitation in the clinical learning environment may help future researchers by utilizing the findings in the clinical context by further exploring or perhaps explaining their usage in nursing or other health care settings.

This study provides data that highlights the significance of establishing partnerships and nurse educator presence as measures that contribute to an optimal clinical learning environment. For example, nurse educators reported a desire to ensure that collaboration and coordinated care efforts were provided by nurse educators, nursing staff, and students during the clinical day. Nurse educators described this effort to coordinate care at the onset of the clinical day with the leaders and managers of the nursing team. In addition, nurse educators encouraged collaboration and served as a connection between nursing staff and students during awkward moments throughout the clinical day. Establishing this partnership and ensuring nurse educator presence was significant because the clinical environment has been noted to be difficult for all parties involved in clinical facilitation including nurse educators, nursing staff, and students. Therefore, establishing partnerships in the clinical environment was thought to make learning optimal and better prepare students for the realities of practice.

The commonality among previous research and this current study was the acknowledgement of the power of establishing relationships among nursing staff, students, and the nurse educators, as well as the significance of engagement in the clinical learning
environment (Sand-Jecklin, 2009). The results of this study are also similar to the study conducted by Flott and Linden (2015), which concluded that the clinical learning environment contained four attributes including space, psychosocial factors, interactions factors, and organizational culture. Although this study had similar results to the study conducted by Flott and Linden (2015), their results were derived by conducting a concept analysis of literature from peer-reviewed journals, while this study attained the perspectives of practicing nurse educators who facilitate learning in the clinical learning environment.

Limitations

This study had various limitations, which were noted by the researcher post-study completion. Some of the associated study limitations include a lack of previous research on the specific topic and limited access to data. Each limitation is discussed, and recommendations for future research follow.

Lack of Previous Research

Lack of availability of prior research conducted on clinical education and relevant to the thesis was a limitation. When literature is current, an explanatory approach can be taken as opposed to an exploratory approach (Creswell & Plano Clark, 2018). This research explored undergraduate RN student preparation by exploring facilitation style and strategies, resulting in a conceptual model which describes the current strategies utilized during clinical facilitation. However, with completion of the current study and with the development of the Innovative Clinical Facilitation Model, an explanatory approach can now be taken to explain facilitation in this clinical area of study. Encouraging greater research and conducting explanatory research on the clinical component of nursing education is an opportunity to discover what is not known.
about educational delivery in the clinical environment. The Innovative Clinical Facilitation Model may be used as a guide for future nurse educators to use in the preparation of the undergraduate RN student.

This study utilized peer-reviewed research, which was close to the scope of the topic, as there was a limited amount of previous research relevant to the thesis. The PI stresses that this study has been primarily concerned with exploring the delivery of undergraduate RN student learning in the clinical environment. The findings are, therefore, limited to the clinical environment and nurse educators who focus on facilitation of the undergraduate RN student. Based on these limitations, it is recommended that future research continue in the area of facilitation in the clinical learning environment in nursing. It is also recommended that research that is clinically focused and explanatory in nature be pursued.

**Limited Access to Data**

Lack of the staff nurse preceptor’s perspective was also a limitation. This study sought out participants defined as nurse educators who were considered preceptors in the clinical learning environment. These nurse educators contribute greatly to the preparedness of the undergraduate RN student (Omansky, 2010). Although staff nurse preceptors (nurse educators) were invited to participate, no participants indicated occupying the preceptor role during data collection. The PI attempted to be inclusive and incorporate multiple licensed RNs who function in the nurse educator role. The findings from this study are still reliable and valid, as a variety of nurse educators contributed to the findings. However, due to this limited access or inability to attain perspectives from preceptors, future studies should incorporate all nurse educators who serve as facilitators and contribute to the learning of the undergraduate RN student in the clinical learning environment.
Implications

This study’s findings have two broad implications. One of the implications supports the recommendations for change in facilitation practices. The second brings to question an even broader implication regarding the question of curriculum change from coverage of content to competence-based education delivery. Discussion of the implications of the findings follows.

The findings from this study indicated that nurse educators display a propensity towards learner-centered teaching in the clinical environment. After all, the research for decades has recommended a shift towards the learner centered style. However, the utilization of teacher centered practices cannot be refuted as some nurse educators displayed those practices as well. The utilization of both teaching styles may be based on multiple variables. Implementation of either style cannot occur without the understanding of the learning styles of students, assessment of curriculum, additional education, professional development for nurse educators, and collaboration among academia and practice.

The second broad implication of this study is it seems to support the argument of a need for the transformation of curriculum which covers content to curriculum which is concept-based. Historically content-laden curriculum has been a concern. In nursing education there is a great deal of content that needs to be covered to prepare undergraduate RN students for their National Licensure Exam for the RN (NCLEX-RN). On the other hand, undergraduate RN students are expected to display competence in an effort to be prepared of the realities of practice upon program completion. These assertions indicate the need to find a balance in an effort to meet the various needs of the undergraduate RN student. Since the issue of educational delivery is a national concern, and because this study contributed to the body of knowledge regarding current practices, recommendations for theory, practice, and policy are discussed next. If these
recommendations are acted upon they may assist in alleviating the concerns in nursing educational delivery.

Recommendations for Theory, Practice, and Policy

Educational Theory

This research is relevant to educational theory, specifically the theory on adult learning. In adult learning theory the focus on facilitation shifts from the teacher to the learner. Given the diversity of students, no longer is there only a need to only disseminate knowledge. There is a need to individualize the learning, to implement multiple active learning strategies in an effort to facilitate knowledge and better prepare undergraduate RN students.

This research speaks to the controversy in learning theory about the assumptions of the learner. There is a concern that the learner-centered approach discredits the knowledge of the educator and assumes that the student is prepared, motivated, and has previous experiences. This assumption dismisses the notion that some students may not be ready for a learner-centered approach. Perhaps this is a good segue into implementing concept-based curriculum. Previous research has documented the need to move away from concept-based curriculum. Perhaps implementation of learner-centered practices in the classroom may assist in that effort. This may encourage faculty development and curriculum developers to create and promote more education towards adult learning principles and implementation thereof. Incorporation of adult learning principles into the curriculum would overcome many of the challenges documented in previous research regarding the need to implement innovative practices and might better prepare students for the realities of practice.
Educational Practice

Education must keep pace and be aware of practice innovations while maintaining a therapeutic environment. Conversely, practice should be accommodating to academia, because educational delivery and preparedness of students inherently impacts practice. This section recaps the concerns previously discussed and provides a number of options for addressing the growing gaps between these two environments.

This research is relevant to educational practice based on the challenges among academia and practice. The problem is twofold. From the academic perspective, undergraduate RN students have expressed difficulties experienced in the clinical learning environment and indicate a difference between the ideal and the real in their clinical training settings, making it difficult to adapt from the classroom to the world of practice. On the other hand, according to research on practice, health care is growing increasingly complex and staff RNs are themselves busy trying to navigate in the clinical environment. Regardless, a lack of collaboration among academia and practice exists, making it problematic for students. This researcher recommends that academia and practitioners collaborate to meet the needs of the undergraduate RN student while in the clinical learning environment.

Education and practice should seek and adopt models such as the Innovative Clinical Facilitation Model, which provides strategies that may enhance not only educational delivery but also supports greater collaboration between education and practice. Adopted models should provide guidelines that emphasize the development of therapeutic environments. Other ideas for collaboration include: (a) shared education on clinical facilitation between staff nurses, leaders, students, and nurse educators; (b) the development of enhanced orientation programs for students and nurse educators at clinical facilitation sites; (c) professional development that provides
background about educational theory and learning; and (d) staff development in hospitals and clinical sites that host students for learning that creates an open forum for discussion, education, and ways to alleviate the concerns at hand.

Research has discussed the need for building relationships between academia and practice but has not described how to do this. Clinical education constitutes the largest portion of nurses’ educational costs and has been deemed as significant in student learning. More research should be focused on improving student engagement in the learning environment and enhancing the knowledge of those who are directly involved in this process. Investing in professional development that increases knowledge about educational theory, enhances practice, and promotes activities that encourage strengthened partnerships is recommended for educational practice.

Lastly, this research is important to educational practice, as it corresponds with the general concerns of practitioners, nursing organizations, academia, and practice. One concern is the broader priority of the desire to advance education and support the implementation of innovative practice. This research study contains valuable information for several constituents. At the least, this model may be used as a stepping stone to enhance facilitation. Several constituents may consider this research to be valuable, as follows: (1) educators might consider implementation of some of the strategies detailed within this study, (2) leaders in academia and practice may recognize the need for continued work towards enhancing and creating better partnerships, (3) clinical coordinators could use this as an orientation tool for new nurse educators, and (4) professional development coordinators could use this study as a framework for offering courses to enhance teaching and learning. Another benefit of this study is that it may influence educational policy makers as well.
Educational Policy

The findings from this research could be instrumental in development of policy, practice provision, or shape legislation in nursing education. This notion is based on the direct impact that nurse educators have on undergraduate RN student preparedness and the lack of clear policies on facilitation. Clinical education is a very complex process and involves multiple dimensions. Given the influence that facilitation style, strategies and environment have on undergraduate RN student preparedness, perhaps nurse educators should be required to self-reflect and seek continuous personal development. Enhancing the teaching and learning process is a very important aspect of effective teaching. Nurse educators should be offered regular faculty enhancement programs to maximize their teaching skills and maximize the quality of their teaching experiences. In this regard policy is recommended.

Policy is recommended that requires nurse educators to possess mastery levels of certain domains in teaching and learning. The development of competencies is specifically encouraged in three domains: (1) understanding of contemporary educational theories, principles and models underlying curriculum design and the value of adult learning, (2) demonstration of the strategies which allow for implementation and management of curricula based on sound, contemporary educational models, principles, and best practice, and (3) demonstration of effective communication skills that promote collaborative teamwork and enhance partnership among health profession educational and clinical practice. These domains may be attained through professional development, required training, or certifications.

The Innovative Clinical Facilitation Model speaks to three domains. Use of this model would be a good starting place by which to educate new and current nurse educators. Policy makers need to encourage implementation of these domains through the dissemination of
education models such as this. Given the importance of nursing education, education on these domains should be state or federal educational priorities. In addition, further policies on curriculum and instruction strategies should be sought. While there are many articles addressing the need for educators to change their methods, there are only a few articles that posit more concrete examples of exactly how that should look and, more importantly, how these changes can be effectively implemented.

This concludes the section on recommendations for educational theory, practice, and policy. Since the study resulted in an Innovative Clinical Facilitation Model, and has provided a framework for clinical facilitation, that model warrants further evaluation. The following section provides recommendations for future research in relation to the Innovative Clinical Facilitation Model.

Recommendations for Future Study

Current research over the past two years (2017-2019) has described the term *facilitation* in the theoretical (Barbour & Schuessler, 2019), simulated (MacLean, Geddes, Kelly, & Della, 2019), and online environments (Hampton, Pearce, & Moser, 2017). Interestingly, current research continues to acknowledge the challenges in teaching and learning in nursing (Chica & Shellenbarger, 2018; Oermann, 2018). Chica and Shellenbarger, (2018) and Oermann (2018) acknowledged that it is important for nurse educators to consider the challenges in teaching and learning when facilitating and acknowledged that nurse educators need more training (Lloyd-Penza, Rose, & Roach, 2019). The next logical step would be to take the strategies indicated in the Innovative Clinical Facilitation Model, develop instruments, and determine the extent to which they assess the desired learning objectives for the undergraduate RN student. This model may also be used as a guide to orient novice and future nurse educators, thereby resulting in
sharing of deliberate and best practices. Further research may be conducted within nursing or in other fields that utilize clinical facilitation in a healthcare environment. Research questions could include:

1) Do the strategies in this model improve undergraduate RN student preparedness?
2) How can programs support the implementation of this conceptual model?
3) Can these strategies be utilized in other clinical education or healthcare fields?

Answering these questions may lead to improved facilitation and learning in the clinical environment. Answering these questions could lead to better support of novice nurse educators or those new to clinical facilitation. In addition, other health care programs may benefit from implementation of these strategies.

Contributions

The completion of this research contributes vastly to the body of knowledge on this subject. Many gaps were noted in the literature regarding nursing educational delivery. There was an indicated gap in what we know about clinical facilitation and the manner in which it occurs. Although nursing education describes best practices, no such research was found that surveyed and interviewed nurse educators about the teaching strategies that enhance learning in the clinical context. In addition, although environment has also been discussed, no such research was found that detailed the strategies that nurse educators believe contributes to an optimal learning environment. Although this research focused specifically on learning in the clinical context, it makes multiple contributions to the body of knowledge.

The data gathered from this study answered the individual research questions and made several contributions to the academic body of knowledge. The contributions include advancing previous knowledge by building the academic knowledge base, creating a bridge for further
research, providing a conceptual model (framework) on clinical facilitation, and questioning the recommendation for implementing all learner-centered practices. The contributions follow.

This study contributes and advances previous literature in nursing education, as it broadens what is known about clinical facilitation, a topic not often researched. The development of the Innovative Clinical Facilitation Model adds to the body as it builds the academic knowledge base, including: providing clarity on current practice, identification of facilitation style and strategies in the clinical context, and identifying what contributes to an optimal learning environment. In addition, it provides a detailed and specific conceptual model which may be useful for future education, practice and research, making this study more robust than those conducted in the last decade.

This study creates a bridge for further research. This is because the findings of this study have created a model based on the nurse educator perspective. However, in light of the fact that little research has been conducted, explanation and implementation could not be conducted in this study. As we know, when little research is conducted it only allows for exploration, which is what this study has done. This leaves room for completion of further research on this topic.

This study contradicts previous research that argued nurse educators were teacher-centered. On the contrary, this study indicated nurse educators display a propensity towards learner-centered teaching, a style which has been highly recommended by national nursing organizations and researchers for decades. However, there were still educators who utilized teacher-centered practices as well, thereby questioning if the recommendations towards a transition towards implementation of learner-centered practices is the only option.

These findings influence further investigation regarding the overall goal of curriculum in nursing education programs. Is it to prepare the students for the national licensing exam by
delivering content through a teacher-centered approach or to prepare undergraduate RN students for practice through implementation of learner-centered practices based on adult learning theory? This remains a question for future research.

Summary

At the onset of this study there were two primary concerns placing nursing education under the microscope, educational delivery and the learning environment. National nursing organizations as well as nursing researchers assert that there is a lack of innovative teaching in nursing education and indicate that undergraduate RNs are underprepared upon program completion, thereby questioning the style and the strategies utilized to prepare the undergraduate RN student for practice. In addition, over the past few decades, there has been controversy about the learning environment and the difficulty RN students experience in the clinical learning environment. Nursing education consists of classroom, laboratory/simulated, and clinical learning. Because clinical is where undergraduate RN students are exposed to the realities of practice, and the majority of time is spent this study focused on facilitation in the clinical component of undergraduate RN student education.

Literature has been written and research conducted on various topics in nursing education. Previous literature has described the ideal teaching style of nurse educators, the needs of the undergraduate RN student, has highlighted the importance of learner-centered teaching, and described the difficulties students encounter in the clinical learning environment. However, the majority of previous studies have attained the student’s perspective, often overlooking the nurse educator’s perspective. This omission leaves a gap in the literature, as none explored style, described specific strategies, or considered the optimal learning environment from the nurse educators’ perspective concomitantly.
A mixed-methods research design was utilized in this study: specifically, the convergent mixed-methods design, which allowed the convergence of quantitative and qualitative data. The objective was to explore the nurse educators’ teaching style and attain their perspective regarding the optimal clinical learning environment. Qualitative content analysis was utilized to analyze the data with the possibility of model development. The findings resulted in four themes, which influenced the development of the Innovative Clinical Facilitation Model. The results from this study indicate several key factors important to the preparedness of the undergraduate RN student, practice, policy and the profession. First, nurse educators have a propensity towards being learner-centered, which dispels previous accusations regarding teaching style. Second, nurse educators are implementing a variety of approaches to meet the diverse needs of students. Third, nurse educators are utilizing multiple innovative strategies that encourage critical thinking, and link theory to practice. Finally, it was noted that nurse educators are working diligently to create an optimal learning environment by establishing partnerships and enhancing collaboration between academia and practice. The findings when compared to previous research suggest that a shift has occurred in educational delivery to better prepare the undergraduate RN student.

It is the primary investigator’s desire that the results of this study, which include the Innovative Clinical Facilitation Model, be used as a catalyst to move nursing education toward more intentional and purposeful facilitation in the clinical environment. The themes developed within the model which attempted to explore and understand facilitation in nursing education represent a first step toward identifying the ways in which to best prepare the undergraduate RN student. However, if undergraduate RN students are to become better prepared upon program completion, then facilitation must be executed properly. Therefore, it is incumbent upon nursing
faculty, nurse educators, and nursing researchers to continue to explore facilitation and seek ways to continually improve it.

The preparedness of the undergraduate RN student is significant. There is a need to better prepare students upon program completion. Evaluation of curriculum delivery, the institution of practice models, taking steps to enhance collaboration between academia and practice, and development of policies in support of enhancing facilitation are needed as these are first steps to reform nursing education in the clinical context. RNs have a critical role in society and adequate preparation in undergraduate RN programs is imperative. RNs make important decisions and are entrusted to care for the public in multiple complex healthcare environments. If the preparedness of the undergraduate RN student is essential, then so must be the facilitation efforts of those who are preparing them to enter the practice of nursing, and the leaders in both academia and practice.
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clinical reasoning in simulation. *Journal of Nursing Education* 51(6), 326-333.


APPENDIX A

COVER LETTER OF TRANSMITTAL
DEAN, DIRECTOR, CHAIR OF NURSING PROGRAM
ADDRESS
CITY, STATE ZIP

RE: SOLICITATION OF RESEARCH PARTICIPATION (CLINICAL NURSING EDUCATION)

DEAR MR/MRS/DR. X,

I am currently in the process of completing my dissertation at Northern Illinois University, in the Curriculum & Instruction department. The study is entitled: Exploring teaching styles and strategies in clinical: The nurse educator’s perspective. I am writing to request that you share this solicitation for research with eligible nurse educators.

Eligibility: Licensed RN in the United States who has taught the undergraduate registered nursing student in the clinical learning environment in the last two years.

Purpose: The purpose of this research is to assess the teaching styles and strategies utilized by nurse educators in the clinical learning environment.

Expectations of Participants: Completion of the following: 1) a screening questionnaire, 2) a demographic data sheet, a 44-item survey, and answer a few open-ended questions. All items may be completed electronically via a computer, IPad, tablet, or smart phone. The entire process is estimated at 20-30 minutes.

As a licensed practicing RN and nurse educator, I recognize the importance of identifying individual teaching style as well as helpful strategies in an effort to enhance clinical learning in nursing education. I am hoping that you as nursing leader can assist in recruiting nurse educators willing to participate.

No costs to either your college/university, or the individuals who participate will be incurred. Confidentiality will be maintained. Your assistance in sharing this research study with the faculty is invaluable.

I am happy to answer any questions you may have. You may contact me at: tonya@teachingstyleprofile.com. You may also simply provide the nurse educator with the following link: teachingstyleprofile.com and the survey may be completed anonymously.

Sincerely,

Tonya Dixon RN, MSN, MBA, MPH, Ed. D (c)
APPENDIX B

SCREENING TOOL
Screening Tool

1. Are you a licensed RN in the United States?
   Yes □       No □

2. Are you a licensed RN who has facilitated the learning of an undergraduate RN student in the clinical learning environment in the last two years?
   Yes □       No □

If you meet the criteria for this research study, you will be asked to provide consent. Once consent is obtained you will be permissioned to move forward by completing a demographic survey, the 44-item survey, and a few open-ended questions.

Thank you!
APPENDIX C

DEMOGRAPHIC QUESTIONNAIRE
Demographic Questionnaire

1. Which gender do you identify with?
   Male □          Female □          Other □

2. Race/Ethnicity:
   African American □   Asian/Pacific Islander □   Caucasian □   Hispanic □
   Native American □   Other □ Please specify ________________________________

3. Please indicate your age.
   ________________________________

4. What is the highest level of nursing education you have attained/completed?
   RN/Diploma/Associate □   RN/BSN □   RN/MSN/APN □
   RN/Doctorate □   Other □

5. Have you received any special certifications?
   Yes □          No □
   If Yes: Please specify ________________________________

6. How many years of classroom teaching experience do you have?
   ________________________________

7. How many years of clinical teaching experience do you have?
   ________________________________

8. Which geographical setting do you teach in?
   Rural □          Urban □
   Please indicate state __________________

9. Did you receive any preparation for your role as nurse educator?
   Yes □          No □

10. Which undergraduate RN program do you teach clinical?
    Diploma Program □   Associate’s Program □   Bachelor’s Program □

11. Which capacity best describes your work as a nurse educator?
    Full Time Faculty □   Part Time/Adjunct Faculty □   Staff Nurse Preceptor □

Thank You!
APPENDIX D

PRINCIPLES OF ADULT LEARNING SCALE – ORIGINAL
### PRINCIPLES OF ADULT LEARNING SCALE (PALS) – Original by Gary J. Conti

#### DIRECTIONS

The following survey contains several things a teacher of adults might do. For each item please respond to the way you most frequently practice the action described in the item. Your choices are Always, Almost Always, Often, Seldom, Almost Never, and Never. If the item does not apply to you, select number 5 for never.

<table>
<thead>
<tr>
<th>Question/Item</th>
<th>Response Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I allow students to participate in developing the criteria for evaluating their performance in class.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>2. I use disciplinary action when it is needed.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>3. I allow older students more time to complete assignments when they need it.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>4. I encourage students to adopt middle class values.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>5. I help students diagnose the gaps between their goals and their present level of performance.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>6. I provide knowledge rather than serve as a resource person.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>7. I stick to the instructional objectives that I write at the beginning of a program.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>8. I participate in the informal counseling of students.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>9. I use lecturing as the best method for presenting my subject material to adult students.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>10. I arrange the classroom so that it is easy for students to interact.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>11. I determine the educational objectives for each of my students.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>12. I plan units which differ widely as possible from my students’ socio-economic backgrounds.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>13. I get a student to motivate himself/herself by confronting him/her in the presence of classmates during group discussions.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>14. I plan learning episodes to take into account my students’ prior experiences.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>15. I allow students to participate in making decisions about the topics that will be covered in class.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>16. I use one basic teaching method because I have found that most adults have a similar style of learning.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>17. I use different techniques depending on the students being taught.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>18. I encourage dialogue among my students.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>19. I use written tests to assess the degree of academic growth rather than to indicate new directions for learning.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>20. I utilize the many competencies that most adults already possess to achieve educational objectives.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>21. I use what history has proven that adults need to learn as my chief criteria for planning learning episodes.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>22. I accept errors as a natural part of the learning process.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>23. I have individual conferences to help students identify their educational needs.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>24. I let each student work at his/her own rate regardless of the amount of time it takes him/her to learn a new concept.</td>
<td>A AA O S AN N</td>
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<tr>
<td>25. I help my students develop short-range as well as long-range objectives.</td>
<td>A</td>
<td>AA</td>
</tr>
<tr>
<td>26. I maintain a well-disciplined classroom to reduce interference to learning.</td>
<td>A</td>
<td>AA</td>
</tr>
<tr>
<td>27. I avoid discussion of controversial subjects that involve value judgments.</td>
<td>A</td>
<td>AA</td>
</tr>
<tr>
<td>28. I allow my students to take periodic breaks during class.</td>
<td>A</td>
<td>AA</td>
</tr>
<tr>
<td>29. I use methods that foster quiet, productive desk work.</td>
<td>A</td>
<td>AA</td>
</tr>
<tr>
<td>30. I use tests as my chief method of evaluating students.</td>
<td>A</td>
<td>AA</td>
</tr>
<tr>
<td>31. I plan activities that will encourage each student's growth from dependence on others to greater independence.</td>
<td>A</td>
<td>AA</td>
</tr>
<tr>
<td>32. I gear my instructional objectives to match the individual abilities and needs of the students.</td>
<td>A</td>
<td>AA</td>
</tr>
<tr>
<td>33. I avoid issues that relate to the student's concept of himself/herself.</td>
<td>A</td>
<td>AA</td>
</tr>
<tr>
<td>34. I encourage my students to ask questions about the nature of their society.</td>
<td>A</td>
<td>AA</td>
</tr>
<tr>
<td>35. I allow a student's motives for participating in continuing education to be a major determinant in the planning of learning objectives.</td>
<td>A</td>
<td>AA</td>
</tr>
<tr>
<td>36. I have my students identify their own problems that need to be solved.</td>
<td>A</td>
<td>AA</td>
</tr>
<tr>
<td>37. I give all my students in my class the same assignment on a given topic.</td>
<td>A</td>
<td>AA</td>
</tr>
<tr>
<td>38. I use materials that were originally designed for students in elementary and secondary schools.</td>
<td>A</td>
<td>AA</td>
</tr>
<tr>
<td>39. I organize adult learning episodes according to the problems that my students encounter in everyday life.</td>
<td>A</td>
<td>AA</td>
</tr>
<tr>
<td>40. I measure a student's long term educational growth by comparing his/her total achievement in class to his/her expected performance as measured by national norms from standardized tests.</td>
<td>A</td>
<td>AA</td>
</tr>
<tr>
<td>41. I encourage competition among my students.</td>
<td>A</td>
<td>AA</td>
</tr>
<tr>
<td>42. I use different materials with different students.</td>
<td>A</td>
<td>AA</td>
</tr>
<tr>
<td>43. I help students relate new learning to their prior experiences.</td>
<td>A</td>
<td>AA</td>
</tr>
<tr>
<td>44. I teach units about problems of everyday living.</td>
<td>A</td>
<td>AA</td>
</tr>
</tbody>
</table>
Scoring the Principles of Adult Learning Scale (PALS)

**Positive Questions**
Question numbers 1, 3, 5, 8, 10, 14, 15, 17, 18, 20, 22, 23, 24, 25, 28, 31, 32, 34, 35, 36, 39, 42, 43, and 44 are positive items. For positive questions, assign the following values: Always=5, Almost Always=4, Often=3, Seldom=2, Almost Never=1, and Never=0.

**Negative Questions**
Question numbers 2, 4, 6, 7, 9, 11, 12, 13, 16, 19, 21, 26, 27, 29, 30, 33, 37, 38, 40, and 41 are negative items. For negative questions, assign the following values: Always=0, Almost Always=1, Often=2, Seldom=3, Almost Never=4, and Never=5.

**Missing Questions**
Omitted questions are assigned a neutral value of 2.5.

### Factor 1: Learner-Centered Activities

<table>
<thead>
<tr>
<th>Question #</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
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<td>4</td>
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<td>11</td>
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</tr>
<tr>
<td>40</td>
<td></td>
</tr>
<tr>
<td>Total Score</td>
<td></td>
</tr>
</tbody>
</table>

### Factor 2: Personalizing Instruction

<table>
<thead>
<tr>
<th>Question #</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
</tr>
<tr>
<td>17</td>
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<td>32</td>
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<td>42</td>
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<tr>
<td>Total Score</td>
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</tr>
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</table>

### Factor 3: Relating to Experience

<table>
<thead>
<tr>
<th>Question #</th>
<th>Score</th>
</tr>
</thead>
<tbody>
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<td>14</td>
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<td>31</td>
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<td>34</td>
<td></td>
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<td>39</td>
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<tr>
<td>43</td>
<td></td>
</tr>
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<td>44</td>
<td></td>
</tr>
<tr>
<td>Total Score</td>
<td></td>
</tr>
</tbody>
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### Factor 4: Assessing Student Needs

<table>
<thead>
<tr>
<th>Question #</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
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</tr>
<tr>
<td>8</td>
<td></td>
</tr>
<tr>
<td>23</td>
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<td>25</td>
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<tr>
<td>Total Score</td>
<td></td>
</tr>
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</table>

### Factor 5: Climate Building

<table>
<thead>
<tr>
<th>Question #</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
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<td>20</td>
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<tr>
<td>22</td>
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<td>28</td>
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</tr>
<tr>
<td>Total Score</td>
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</table>

### Factor 6: Participation in the Learning Process

<table>
<thead>
<tr>
<th>Question #</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td></td>
</tr>
<tr>
<td>Total Score</td>
<td></td>
</tr>
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</table>

### Factor 7: Flexibility for Personal Development

<table>
<thead>
<tr>
<th>Question #</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td></td>
</tr>
<tr>
<td>Total Score</td>
<td></td>
</tr>
</tbody>
</table>
Computing and Interpreting Your Scores

Factor scores are calculated by summing the value of the responses for each item/question in the factor. Compare your factor score values to their respective means (see table below). If your score is equal to or greater than each respective mean, then this suggests that such factors are indicative of your teaching style. Those scores that are less than the mean indicate possible areas for improving a more learner-centered approach to teaching.

An individual’s total score on the instrument is calculated by summing the value of each of the seven factors (see table below). Scores between 0-145 indicate your style is “teacher-centered.” Scores between 146-220 indicate your style as being “learner-centered.”

<table>
<thead>
<tr>
<th>Factor</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Your Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>38</td>
<td>8.3</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>31</td>
<td>6.8</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>21</td>
<td>4.9</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>14</td>
<td>3.6</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>16</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>13</td>
<td>3.5</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>13</td>
<td>3.9</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>146</td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX E

PALS FACTOR SCALES DESCRIPTORS
# PALS Individual Factors

<table>
<thead>
<tr>
<th>PALS Factor</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PALS Factor 1: Learner-Centered Activities</strong></td>
<td>Teaching behaviors that “focus on the learner and allow initiating action by the student and encourages students to take responsibility for their own learning” (Conti, 2004, p. 80).</td>
</tr>
<tr>
<td><strong>PALS Factor 2: Personalized Instruction</strong></td>
<td>Teaching behaviors that “personalize learning to meet the unique needs of each student. Objectives are based on individual motives and abilities. Instruction is self-paced. Various methods, materials, and assignments are utilized, Cooperation is encouraged” (Conti, 2004, p. 80).</td>
</tr>
<tr>
<td><strong>PALS Factor 3: Relating to Experience</strong></td>
<td>Teaching behaviors that take into account students’ prior experiences and encourages students to relate their new learning to experiences. To make learning relevant, learning episodes are organized according to the problems that the students encounter in everyday living. Students are encouraged to ask basic questions about the nature of their society. (Conti, 2004, p. 81).</td>
</tr>
<tr>
<td><strong>PALS Factor 4: Assessing Student Needs</strong></td>
<td>Teaching behaviors that view treating students as an adult by finding out what each student wants and needs to know. This is accomplished through a heavy reliance on individual conferences and informal counseling. Existing gaps between a student’s goals and the present levels of performance are diagnosed. Then students are assigned to developing short-range as well as long-range objectives. (Conti, 2004, p. 81).</td>
</tr>
<tr>
<td><strong>PALS Factor 5: Climate Building</strong></td>
<td>Teaching behaviors that set a friendly and informal climate as an initial step in the learning process. Dialogue and interaction with other students are encouraged. Periodic breaks are taken. Attempt to eliminate learning barriers by utilizing the numerous competencies that students already possess as building blocks for educational objectives. Risk taking is encouraged, and errors are accepted as a natural part of the learning process. In the classroom, students can experiment and explore elements related to their self-concept, practice problem-solving skills, and develop interpersonal skills. Student failures serve as a feedback device to direct future positive learning. (Conti, 2004, p. 81).</td>
</tr>
<tr>
<td><strong>PALS Factor 6: Participating in Learning</strong></td>
<td>Teachers have a preference for having students identify the problems that they wish to solve, and allowing them to participate in making decisions about the topics that will be covered in class. Encouraging an adult-to-adult relationship between teacher and students, involving students in developing the criteria for evaluating classroom performance. (Conti, 2004, p. 81).</td>
</tr>
<tr>
<td><strong>PALS Factor 7: Flexibility for Development</strong></td>
<td>Teachers view personal fulfillment as a central aim to education. To accomplish this, flexibility is maintained by adjusting the classroom environment and curricular content to meet the changing needs of students. Issues that relate to values are addressed in order to stimulate understanding and future personal growth. (Conti, 2004, p. 82).</td>
</tr>
</tbody>
</table>
APPENDIX F

PRINCIPLES OF ADULT LEARNING SCALE – MODIFIED
**DIRECTIONS**

The following survey contains several things that a teacher of adults might do in the clinical learning environment. You may personally find some of them desirable and find others undesirable. For each item please respond to the way you most frequently practice the action described in the item. Your choices are Always, Almost Always, Often, Seldom, Almost Never, and Never. If the item does not apply to you, select never.

<table>
<thead>
<tr>
<th>Always</th>
<th>Almost Always</th>
<th>Often</th>
<th>Seldom</th>
<th>Almost Never</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>AA</td>
<td>O</td>
<td>S</td>
<td>AN</td>
<td>N</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question/Item</th>
<th>Response Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I allow students to participate in developing the criteria for evaluating their performance in the clinical learning environment.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>2. I use disciplinary action when it is needed.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>3. I allow older students more time to complete assignments when they need it.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>4. I encourage students to adopt middle class values.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>5. I help students diagnose the gaps between their goals and their present level of performance.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>6. I provide knowledge rather than serve as a resource person.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>7. I stick to the instructional objectives that are written or discussed at the beginning of a program.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>8. I participate in the informal counseling of students.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>9. I use lecturing as the best method for presenting my subject material to adult students.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>10. I arrange the clinical learning environment so that it is easy for students to interact.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>11. I determine the educational objectives for each of my students.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>12. I plan units, which differ widely as possible from my students' socio-economic backgrounds.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>13. I get a student to motivate himself/herself by confronting him/her in the presence of colleagues during group discussions.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>14. I plan learning episodes to take into account my students' prior experiences.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>15. I allow students to participate in making decisions about the topics that will be covered in clinical.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>16. I use one basic teaching method because I have found that most adults have a similar style of learning.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>17. I use different techniques depending on the students being taught.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>18. I encourage dialogue among my students.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>19. I use some form of a test to assess the degree of academic growth rather than to indicate new directions for learning.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>20. I utilize the many competencies that most adults already possess to achieve educational objectives.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>21. I use what history has proven that adults need to learn as my chief criteria for planning learning episodes.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>22. I accept errors as a natural part of the learning process.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>23. I have individual conferences to help students identify their educational needs.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
<tr>
<td>24. I let each student work at his/her own rate regardless of the amount of time it takes him/her to learn a new concept.</td>
<td>A AA O S AN N</td>
<td></td>
</tr>
</tbody>
</table>
25. I help my students develop short-range as well as long-range objectives.   A AA O S AN N
26. I maintain a well-disciplined learning environment to reduce interference to learning.   A AA O S AN N
27. I avoid discussion of controversial subjects that involve value judgments.   A AA O S AN N
28. I allow my students to take periodic breaks during clinical.   A AA O S AN N
29. I use methods that foster quiet, productive work.   A AA O S AN N
30. I use some form of a test as my chief method of evaluating students.   A AA O S AN N
31. I plan activities that will encourage each student's growth from dependence on others to greater independence.   A AA O S AN N
32. I gear my instructional objectives to match the individual abilities and needs of the students.   A AA O S AN N
33. I avoid issues that relate to the student's concept of himself/herself.   A AA O S AN N
34. I encourage my students to ask questions about the nature of their society.   A AA O S AN N
35. I allow a student's motives for participating in continuing education to be a major determinant in the planning of learning objectives.   A AA O S AN N
36. I have my students identify their own problems that need to be solved.   A AA O S AN N
37. I give all my students the same assignment on a given topic.   A AA O S AN N
38. I use materials that were originally designed for students in elementary and secondary schools.   A AA O S AN N
39. I organize adult learning episodes according to the problems that my students encounter in everyday life.   A AA O S AN N
40. I measure a student's long-term educational growth by comparing his/her total achievement to his/her expected performance as measured by national norms.   A AA S AN N
41. I encourage competition among my students.   A AA O S AN N
42. I use different materials with different students.   A AA O S AN N
43. I help students relate new learning to their prior experiences.   A AA O S AN N
44. I teach about problems of everyday living.   A AA O S AN N

**Always** | **Almost Always** | **Often** | **Seldom** | **Almost Never** | **Never**
---|---|---|---|---|---
A | AA | O | S | AN | N
APPENDIX G

PERSONAL COMMUNICATION

PERMISSION TO MODIFY AND UTILIZE THE

PRINCIPLES OF ADULT LEARNING SCALE (PALS)
Re: Question Regarding PALS

1 message

Linda D. Conti <idont@earthlink.net>
To: Tonya Dixon <tonya.dixon@rosalindfranklin.edu>

Tonya:

You have an interesting research topic. PALS measures how participants relate to the adult education literature. Therefore, it is measuring what you want. However, PALS was developed and originally use with an Adult Basic Education population, and the language in it reflects that setting and the times. If you look at the PALS's page on my website (www.conti-creations.com), you will see some examples of where we changed words like "student!" to trainee. There should be an example that we used for the business setting and an example for nurses to include both the classroom and clinical settings. Check these out and see if they will work for you.

If these don't work for you, I think that it is safe to change some of the wording to fit your situation. Here I am thinking of words like "student!" and "teacher". By making minor changes like this, you are not tampering with the construct validity of the items; the theory behind the item is still the same. However, these changes may affect the content validity. To check for this, collect your data and then run a Cronbach's Alpha on your data set. Research textbook authors like L. R. Gay say that you should check the validity of your own data set anyhow. Cronbach's Alpha is simple to run in SPSS once you have your data entered for your other analyses. My guess is that it will come out at about .9 or above (hint: it always does for PALS!).

This is your chance to be creative in your research and add lots of information to the teaching style literature. Go for it! Let us know your results. Good luck...

--Gary

From: Tonya Dixon
Sent: Friday, March 4, 2016 10:00 AM
To: GJConti@conti-creations.com
Subject: Question Regarding PALS

Good afternoon,

I am interested in using the PALS survey you developed. However, my interest is to survey staff nurse preceptors, (those who teach nurses at the bedside) to learn of their teaching style. Could this survey be adapted for the clinical arena?

Any insight you could provide would be awesome. Thank you in advance.
APPENDIX H

CONSENT FOR PARTICIPATION
Nurse Educator Consent

Thank you for considering participating in this research study. The following lays out the elements of the study and provides a consent to participate.

Study Title: An exploration of clinical nursing education: The nurse educator’s perspective.

University/Department: Northern Illinois University, Department of Curriculum & Instruction

Eligibility: Licensed RN in the United States who has taught the Associate or Bachelor’s Degree nursing student in the clinical learning environment in the last two years.

Purpose: The purpose of this research is to learn more about the teaching styles and strategies utilized by nurse educators in the clinical learning environment.

Expectations of Participants: Completion of 1) a screening questionnaire, 2) a demographic data sheet, a 44-item survey, and answer three open-ended questions. The entire process is estimated at 20-30 minutes. All items may be completed electronically via a computer, IPad, tablet, or smart phone.

*Participant's Agreement: I am aware that my participation in this study is voluntary. I understand the intent and purpose of this research. If, for any reason, at any time, I wish to not complete the survey, I may withdraw without an explanation, and there is no penalty. I am aware the data will be used in a dissertation that will be publicly available at Northern Illinois University. I have the right to review, comment on, and/or withdraw information prior to the dissertation’s submission. The data gathered in this study is confidential with respect to my personal identity.

If I have any questions about this study, I can contact the primary investigator, Tonya Dixon, by phone at: (847) 445-2595, by email at: tonya@teachingstyleprofile.com, or the Dissertation Committee Chair, Dr. Joseph Flynn, (jeflynn@niu.edu). I understand I may contact the NIU Office of Research Compliance, (815) 753-8588, if I wish, for further information regarding my rights as a research participant. I have been offered a copy of this consent form that I may keep for my own reference. I have read the above form and, with the understanding that I can withdraw at any time and for whatever reason. My signature below provides my consent to participate in this study.

☐ YES, I AGREE/I GIVE CONSENT  ☐ NO/I DO NOT AGREE/I DO NOT CONSENT

Signature and Date: ________________________________

Northern Illinois University

12/7/2018

Approved by NIU IRB
Void one year from above date
This letter provides a brief overview about the study and participant expectations.

Study Title: An exploration of clinical nursing education: The nurse educator’s perspective.

University/Department: Northern Illinois University, Department of Curriculum & Instruction

Eligibility: Licensed RN in the United States who has taught the undergraduate registered nursing student in the clinical learning environment in the last two years.

Purpose: The purpose of this research is to assess the teaching styles and strategies utilized by nurse educators that contributes to learning in the clinical environment.

Expectations of Participants: Completion of the following: 1) an eligibility screening, 2) a demographic questionnaire, a 44-item survey, and answer three open-ended questions. All survey items may be completed electronically via computer, IPad, tablet, or smart phone. The entire process is estimated at 30 minutes and will be open for 30 days.

Demographic Questionnaire: The questions will require answering simple Yes/No, multiple choice, or fill in the blank questions. Demographic information such as gender, age, race, education, years of clinical and classroom teaching experience is included, and preparedness is assessed.

The Survey: The modified Principles of Adult Learning Survey (PALS) is a 44-item survey on a Likert scale.

Open-Ended Questions: Open-ended questions to assess the specific strategies the nurse educator utilizes in the clinical learning environment may be answered via an open text box.

Optional Interview: If a nurse educator should opt in for an interview, the estimated interview time is 30 minutes. A mutually agreed upon time will be set for individual interviews to further elaborate on teaching styles and strategies.

If interested in participating you may contact the primary researcher directly at Tonya@teachingstyleprofile.com via email to request a link be sent directly to you, or you may log directly on to teachingstyleprofile.com, click on the link to the survey and complete the survey.

** Please note this letter is a solicitation for research participation.

Tonya Dixon RN, MSN, MBA, MPH, Ed. D (c)
APPENDIX J

FACTORS SCORES IN PRINCIPLES OF

ADULT LEARNING SURVEY
Factors of Adult Learning Survey (PALS)

The overall PALS score can be broken down into seven different factors.

Factor one: Learner-Centered Activities is considered the main factor. This factor is made up of 12 negative items (2, 4, 11, 12, 13, 16, 19, 21, 29, 30, 38, and 40) and has a maximum possible score of 60. Those who support a TC mode of instruction favor formal testing over informal evaluation techniques, whereas those who support the collaborative mode practice behaviors which encourage students to take responsibility for their own learning (Conti, 1989).

Factor two: Personalizing Instruction. This factor contains six positive items (3, 17, 24, 32, 35, and 42) and three negative items (9, 37, and 41). The maximum score is 45 and instructors who score high on this factor employ a number of techniques that personalize learning to meet the unique needs of each student.

Factor three: Relating to Experience consists of six positive items (14, 31, 34, 39, 43, and 44) with a total possible score of 30. Teachers who support Factor 3 plan learning activities, which take into account prior experience and encourage students to make learning relevant to current experiences.

Factor four: Assessing Student Needs and is comprised of four positive items (5, 8, 23, and 25). The maximum score is 20 and instructors who score high in this area, find out what each student wants and needs to know. This is accomplished through individual conferences and informal counseling.

Factor five: Climate Building contains four positive items (18, 20, 22, and 28) with a maximum score of 20. Teachers who score high on Factor 5 set a friendly and favorable climate, and dialogue and interaction with other students are encouraged. Taking risks is also encouraged and errors are seen as part of the learning process.

Factor six: Participation in the Learning Process contains four positive items (1, 10, 15, and 36). The maximum score possible is 20 and instructors who score high on Factor 6 have the students identify the problems that they wish to solve and allow students to participate in making decisions about the topics that will be covered in class.

Factor seven: Flexibility for Personal Development contains five negative items (6, 7, 26, 27, and 23). The maximum score is 25 and those who score high on Factor 7 view themselves as facilitators rather than providers of knowledge. Flexibility is maintained by adjusting the classroom environment and curricular content to meet the changing needs of the students.

APPENDIX K

POSTER/BULLETIN ADVERTISEMENT

FULL SIZE
RN Participants Invited

Participant Eligibility Requirements:
- Licensed RN in the United States.
- RN Degree must be Associates or Higher
- Has taught either the Associate Degree or Bachelor’s degree RN student in the clinical environment within the last two years.

RN Nurse Educators, You Are Invited

Study Title: An exploration of clinical nursing education: The nurse educator’s perspective

University/Department: Northern Illinois University, Department of Curriculum & Instruction

The purpose of the research study is to learn about the teaching styles and strategies utilized by nurse educators in the clinical learning environment.

Expectations of participants: complete consent, demographic survey, teaching style survey, and answer a few open-ended questions. The entire process is estimated at 20-30 minutes.

Primary Researcher & Contact: Tonya @ Tonya@TeachingStyleProfile.com

The survey is available electronically via computer, IPad, tablet, or smart phone.

Log onto the following link via the web @: TeachingStyleProfile.com

** This document is a solicitation for research participation.
APPENDIX L

POSTER WITH TEAR-OFFS - MINI
Registered Nurse Educators Invited to Participate

“An exploration of Clinical Nursing Education: The Nurse Educator’s Perspective”

Purpose: The purpose of this study is to explore the teaching styles and strategies utilized by nurse educators teaching the undergraduate registered nursing student in the clinical learning environment.

Eligibility to Participate: RN licensure in the United States. Experience teaching the undergraduate registered nursing student in the clinical environment within the past two years. Associate’s degree or higher in nursing.

Expectancies of Participants: Complete a consent, a demographic survey, the teaching style survey, and answer a few open-ended questions. The estimated completion time is 20-30 minutes.

Data Collection: Data is collected electronically. Participants may access the surveys electronically via a computer, IPAD, tablet or smartphone.

To learn more, contact the principle investigator of the study, Tonya Dixon RN, MSN, MBA, MPH Ed. D(c) at Tonya@Teachingstyleprofile.com
Or to access the surveys log on to: TeachingStyleProfile.Com

This research is conducted by Tonya Dixon, under the instruction of Dr. Joseph Flynn, Curriculum & Instruction Department @ Northern Illinois University (NIU), and has been reviewed and approved by the NIU Institutional Review Board.

*** This document is considered solicitation for research.
APPENDIX M

INDEX CARD INVITATIONS
Registered Nursing Educators Have You Ever Wondered About Your Teaching Style?

You are invited to participate in a clinical nursing education research study which explores your teaching style.

This document is a solicitation for research participation

Interested? Know someone who is? See Reverse for details.

Tonya Dixon RN, MSN
Email: Tonya@TeachingStyleProfile.com

Are you Teacher-Centered, Learner-Centered, or somewhere in the middle? Find out by participating in this clinical nursing education research study.

Qualified participants include: licensed Registered Nursing faculty (full time and adjunct), adjunct clinical instructors, or staff nurse preceptors who have taught the undergraduate registered nursing student in the past two years.

The survey takes approximately 20-30 minutes to complete. Log onto TeachingStyleProfile.com and Follow the link to the survey!
APPENDIX N

WEBSITE SCREENSHOTS
Teaching Style Profile

WELCOME TO
TEACHING STYLE PROFILE

CLICK HERE FOR SURVEY WHEN ACTIVE

Why Teaching Style Matters

Teaching Style Is Defining
Teaching style in many ways defines one's philosophy of teaching.

Teaching Style Impacts
Teaching style impacts the teacher, the student, and the outcomes according to researchers.

Teaching Style Changes
Teaching style has been known to change based on a number of factors.
APPENDIX O

AUDIOTAPED INTERVIEW CONSENT
Audiotaped Interview Consent

Study Title: An exploration of clinical nursing education: The nurse educator’s perspective.

University/Department: Northern Illinois University, Department of Curriculum & Instruction

Eligibility: A registered nurse (RN) who has attained an associate’s degree or higher in nursing, is licensed in the United States, and who has taught the Associate or Bachelor’s Degree nursing student in the clinical learning environment within the last two years.

Thank you for agreeing to be interviewed as part of the above research project. This consent form is necessary to ensure that you understand the purpose of your involvement and that you agree to the conditions of your participation. Ethical procedures for academic research undertaken through Northern Illinois University require that consents contain purpose, description, benefits/risks, confidentiality, contact information, and an indication that participation is voluntary.

Purpose/Description: The purpose of this research is to learn more about the teaching styles and strategies utilized by nurse educators in the clinical learning environment. The interview will take approximately 20-30 minutes.

Benefits/Risks: Benefits include contribution to nursing education research. There are no perceived risks associated with your participation.

Confidentiality: Confidentiality of personal information will be maintained.

Participation and/or Withdrawal: You have the right to stop the interview or withdraw from the research study at any time without penalty.

Please read the accompanying information and sign to certify approval of the items listed.

Information Sheet:
- This interview will be recorded and a transcript will be produced.
- You will be sent the transcript and be given the opportunity to correct any factual errors.
- The transcript of the interview will be analyzed by Tonya Dixon (primary investigator).
- Access to the interview will be limited to Tonya Dixon, academic colleagues and researchers who collaborate as part of the research process.
- Any summary interview content, or direct quotations from the interview, that are made available through the academic publication or other academic outlets will be anonymized so that you cannot be identified, and care will be taken to ensure that other information in the interview that could identify you is not revealed.
- The actual recordings will be kept for a minimum of three years after publication.
- Any variation of the conditions above will only occur with your approval.
All or part of the content of your interview may be used:
- In academic papers, presentations, policy papers, journals, or news articles
- On other feedback events, healthcare education events
- As an archive of the project as noted above

By signing this form, I agree to the following and my signature below provides my consent to participate in this research study.
- I am voluntarily taking part in this research project. I understand that I don’t have to take part, and I can stop the interview anytime.
- The transcribed interview or extracts from it may be used as described above
- I have read and agree with the contents within the information sheet
- I don’t expect to receive any benefit or payment for my participation
- I can request a copy of the transcript of my interview and may make edits I feel necessary to ensure the effectiveness of any agreement made about confidentiality
- I have been able to ask any questions I might have, and understand that I am free to contact the primary researcher with any questions I may have in the future.
- I am aware the data will be used in a dissertation that will be publicly available at Northern Illinois University.
- I have the right to review, comment on, and/or withdraw information prior to the dissertation’s submission.
- The data gathered in this study is confidential with respect to my personal identity.
- I have been offered a copy of this consent form that I may keep for my own reference.
- I have read the above form and, with the understanding that I can withdraw at any time and for whatever reason.

Participant’s Printed Name: ____________________________

Participant’s Signature to participate: ____________________________ Date: __________

Participant’s Signature providing consent to be recorded by audio: ____________________________ Date: __________

Primary Researcher’s Signature: ____________________________ Date: __________

Contact Information: If I have any questions about this study, I can contact the primary researcher, Tonya Dixon, by phone at: (847) 445-2595, by email at: tonya@teachingstyleprofile.com, or the Dissertation Committee Chair, Dr. Joseph Flynn, (jflynn@niu.edu). I understand I may contact the NIU Office of Research Compliance, (815)-753-8588, if I wish, for further information regarding my rights as a research participant.
APPENDIX P

INTERVIEW PROTOCOL
<table>
<thead>
<tr>
<th>Questions</th>
<th>Responses</th>
<th>Theoretical Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction, consent, and completion of demographic questions.</td>
<td></td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Tell me what a typical day is like when you are facilitating learning in the clinical environment.</td>
<td></td>
<td>Principles of Adult Learning Scale (PALS)-Teaching Andragogy Moos</td>
</tr>
<tr>
<td>Provide a description</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What do you believe helps students learn in the clinical learning environment?</td>
<td></td>
<td>Principles of Adult Learning Scale (PALS)-Teaching Andragogy Moos</td>
</tr>
<tr>
<td>Provide examples</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What specific teaching strategies do you utilize in the clinical learning environment to enhance learning?</td>
<td></td>
<td>Principles of Adult Learning Scale (PALS)-Teaching Andragogy Moos</td>
</tr>
<tr>
<td>Provide examples</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What strategies do you utilize that contributes to an optimal clinical learning environment?</td>
<td></td>
<td>Principles of Adult Learning Scale (PALS)-Teaching Andragogy Moos</td>
</tr>
<tr>
<td>Provide examples</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there anything you would like to add?</td>
<td></td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>
APPENDIX Q

PARTICIPANT DEMOGRAPHIC INFORMATION
Table 1
Participant Demographic Information

<table>
<thead>
<tr>
<th>Question</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
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<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>67</td>
<td>94.4</td>
</tr>
<tr>
<td>Male</td>
<td>4</td>
<td>5.6</td>
</tr>
<tr>
<td>Total</td>
<td>71</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Race/Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>9</td>
<td>12.7</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>2</td>
<td>2.8</td>
</tr>
<tr>
<td>Caucasian</td>
<td>55</td>
<td>77.5</td>
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<tr>
<td>Hispanic</td>
<td>2</td>
<td>2.8</td>
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<tr>
<td>Other</td>
<td>3</td>
<td>4.2</td>
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<tr>
<td>Total</td>
<td>71</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RN/BSN</td>
<td>8</td>
<td>11.3</td>
</tr>
<tr>
<td>RN/Doctorate</td>
<td>16</td>
<td>22.5</td>
</tr>
<tr>
<td>RN/MSN/APN</td>
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<td>66.2</td>
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<td><strong>Geographic Setting</strong></td>
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<td></td>
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<td>Urban</td>
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<tr>
<td>Total</td>
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<td>100.0</td>
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<tr>
<td><strong>State</strong></td>
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<td></td>
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<tr>
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<tr>
<td>Arizona</td>
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<td>1.4</td>
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<tr>
<td>Florida</td>
<td>5</td>
<td>7.0</td>
</tr>
<tr>
<td>*Florida and Illinois</td>
<td>1</td>
<td>1.4</td>
</tr>
<tr>
<td>*Florida and New Jersey</td>
<td>1</td>
<td>1.4</td>
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(Continued on the following page)
(Table 1 continued)

<table>
<thead>
<tr>
<th>State</th>
<th>Number</th>
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<tbody>
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<td>Florida, Kansas, New Hampshire, and Georgia</td>
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<tr>
<td>Illinois</td>
<td>12</td>
<td>16.9</td>
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<tr>
<td>*Illinois and Wisconsin</td>
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<td>2.8</td>
</tr>
<tr>
<td>Michigan</td>
<td>3</td>
<td>4.2</td>
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<tr>
<td>Missouri</td>
<td>1</td>
<td>1.4</td>
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<td>New York</td>
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<td>1.4</td>
</tr>
<tr>
<td>Oregon</td>
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<td>1.4</td>
</tr>
<tr>
<td>Texas</td>
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<td>1.4</td>
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<tr>
<td>Vermont</td>
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<td>1.4</td>
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<tr>
<td>Wisconsin</td>
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<td>12.7</td>
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<td>Total</td>
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Preparation

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<td>31.0</td>
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<tr>
<td>Yes</td>
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<td>69.0</td>
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<tr>
<td>Total</td>
<td>71</td>
<td>100.0</td>
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</tbody>
</table>

Undergraduate Program Taught

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<tr>
<th>Program</th>
<th>Number</th>
<th>Percentage</th>
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</thead>
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<tr>
<td>Associate Degree Nursing Program</td>
<td>16</td>
<td>22.5</td>
</tr>
<tr>
<td>Bachelor’s Degree Nursing Program</td>
<td>53</td>
<td>74.6</td>
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<tr>
<td>Diploma Nursing Program</td>
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<td>2.8</td>
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<td>Total</td>
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<td>100.0</td>
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</table>

Capacity as an Educator

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<tr>
<th>Category</th>
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<th>Percentage</th>
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<tbody>
<tr>
<td>Full Time Faculty</td>
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<td>59.2</td>
</tr>
<tr>
<td>Part Time Adjunct Faculty</td>
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<td>40.8</td>
</tr>
<tr>
<td>Total</td>
<td>71</td>
<td>100.0</td>
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</table>

*Indicates licensure in multiple states, attained through the Compact Act, or traveled and worked as a nurse educator in multiple states.
APPENDIX R

SEVEN-FACTOR SCALE AVERAGE
Table 2

Seven-Factor Scale Average Scores

<table>
<thead>
<tr>
<th>Factor</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Score</th>
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<tbody>
<tr>
<td>1</td>
<td>38</td>
<td>8.3</td>
<td>31</td>
</tr>
<tr>
<td>2</td>
<td>31</td>
<td>6.8</td>
<td>25</td>
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<tr>
<td>3</td>
<td>21</td>
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<td>23.5</td>
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<td>4</td>
<td>14</td>
<td>3.6</td>
<td>16</td>
</tr>
<tr>
<td>5</td>
<td>16</td>
<td>3.0</td>
<td>16</td>
</tr>
<tr>
<td>6</td>
<td>13</td>
<td>3.5</td>
<td>13</td>
</tr>
<tr>
<td>7</td>
<td>13</td>
<td>3.9</td>
<td>10</td>
</tr>
<tr>
<td>TOTAL</td>
<td>146</td>
<td>20</td>
<td>150.5</td>
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APPENDIX S

INTERVIEW PARTICIPANT DEMOGRAPHICS
Table 3

Interview Participant Demographics

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Gender</th>
<th>Ethnicity</th>
<th>Age</th>
<th>Faculty Status</th>
<th>Program Taught</th>
<th>Years of Clinical Teaching Experience</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adele</td>
<td>Female</td>
<td>Caucasian</td>
<td>45</td>
<td>Full Time</td>
<td>BSN</td>
<td>3 Years</td>
<td>Masters</td>
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<td>Denzel</td>
<td>Male</td>
<td>Caucasian</td>
<td>43</td>
<td>Full Time</td>
<td>BSN</td>
<td>7 Years</td>
<td>Doctorate</td>
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<td>Misty</td>
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<td>Caucasian</td>
<td>37</td>
<td>Adjunct</td>
<td>BSN</td>
<td>3 Years</td>
<td>Masters</td>
</tr>
<tr>
<td>Thomas</td>
<td>Male</td>
<td>Indian</td>
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<td>Full Time</td>
<td>BSN</td>
<td>2 Years</td>
<td>Masters</td>
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<tr>
<td>Trinity</td>
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<td>Adjunct</td>
<td>BSN</td>
<td>10 Years</td>
<td>Doctorate</td>
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APPENDIX T

OPEN-ENDED SURVEY RESPONSES: RESEARCH QUESTION 1
Table 4

Open-Ended Survey Responses (RQ1)

<table>
<thead>
<tr>
<th>Planning Strategies</th>
<th>Teaching Strategies</th>
<th>Educator Characteristics</th>
<th>Miscellaneous</th>
<th>Environmental Structure</th>
<th>Goals for Teaching</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exploration</td>
<td>Reflection</td>
<td>Competent educator</td>
<td>Supporting the student</td>
<td>Supportive environment</td>
<td>Encourage deep Thinking</td>
</tr>
<tr>
<td>Providing guidance</td>
<td>Socratic questioning</td>
<td>Supportive educator</td>
<td>Being open to questions</td>
<td>Providing a safe environment</td>
<td>Develop critical thinking</td>
</tr>
<tr>
<td>Hands on</td>
<td>Role Modeling</td>
<td>Non-punitive educator</td>
<td>Allowing autonomy</td>
<td>Welcoming nursing staff</td>
<td>Holistic thinking</td>
</tr>
<tr>
<td>Engagement</td>
<td>Simulation</td>
<td>Experienced clinical faculty</td>
<td>Diverse experiences</td>
<td>Collaboration among the team</td>
<td>Encourage creative thinking</td>
</tr>
<tr>
<td>Off unit experiences</td>
<td>Aligning theory to practice</td>
<td>Non-judgmental educator</td>
<td>Exposure to real patients</td>
<td>Open and enquiring environment</td>
<td>Teach intuition</td>
</tr>
<tr>
<td>Developing skills</td>
<td>Active participation</td>
<td>Approachable educator</td>
<td>Structure</td>
<td>Engaging with the patient</td>
<td>Preparation for role</td>
</tr>
<tr>
<td>Orientation</td>
<td>Multiple approaches</td>
<td>Clear expectations</td>
<td>Planning</td>
<td></td>
<td></td>
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</tbody>
</table>
APPENDIX U

OPEN-ENDED SURVEY RESPONSES: RESEARCH QUESTION 2
Table 5

Open-Ended Survey Responses (RQ2)

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Strategy</th>
<th>Strategy</th>
<th>Planning</th>
<th>Communicating</th>
<th>Motivating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concept Mapping</td>
<td>See One, Do One, Teach One</td>
<td>Verbal Journaling</td>
<td>Guided Observations</td>
<td>Story Telling</td>
<td>Encouraging Collegiality</td>
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<tr>
<td></td>
<td>Case Studies/Case Reviews</td>
<td>Integrating Theory to Practice</td>
<td>Self-Directed Activities</td>
<td>Pathophysiology Review</td>
<td>Providing Support</td>
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<tr>
<td></td>
<td>Care Plans</td>
<td>Written Assignments</td>
<td>Real Life Patient Cases</td>
<td>Diminishing Student Fear</td>
<td>Peer Leadership</td>
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<td>Role Play</td>
<td>Unfolding Case Studies</td>
<td>Shadowing Experiences</td>
<td>1:1 Discussions</td>
<td>Positive Reinforcement</td>
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<tr>
<td></td>
<td>Demonstration</td>
<td>Pre-Conference</td>
<td>Observation</td>
<td>Open Educator</td>
<td>Team Building</td>
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<td>Simulation</td>
<td>Feedback</td>
<td>Games</td>
<td>Interaction</td>
<td>Feedback</td>
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<td>Case Reviews</td>
<td>Participation</td>
<td>Pushing Students</td>
<td>Active Learning</td>
<td>Review of Current Topics</td>
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<td>Groupwork</td>
<td>Pop Quiz</td>
<td>Hands on Activities</td>
<td>Collaborative Environment</td>
<td>Support</td>
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<td>Nursing Report</td>
<td>Providing Self-Directed Learning</td>
<td>Reading Materials</td>
<td>Learning from Mistakes</td>
<td>Reporting</td>
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<td>Cueing</td>
<td>NCLEX Questions</td>
<td>Written Journaling</td>
<td>Presentations</td>
<td>Feedback</td>
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<td></td>
<td>Monitoring Interventions</td>
<td>Service Learning</td>
<td>Strategies that Connect the Dots</td>
<td>Flexibility in Planning</td>
<td>Providing Leadership Opportunities</td>
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<td></td>
<td>Case Scenarios</td>
<td>Handoff Practice</td>
<td>Socratic Questioning</td>
<td>Decreasing Stress</td>
<td>Role Modeling</td>
</tr>
<tr>
<td></td>
<td>Patient Rounding</td>
<td>Peer to Peer Mentoring</td>
<td>Role Modeling</td>
<td>Engagement</td>
<td>Collaboration</td>
</tr>
<tr>
<td></td>
<td>Videos</td>
<td>Post-Conference</td>
<td>Policy Review</td>
<td>Frequent Rounding</td>
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</tr>
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<td>Evidence Based Practice Activities</td>
<td>Assessment of Current Curriculum</td>
<td>Pharm Review</td>
<td>Clear Objectives</td>
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APPENDIX V

OPEN-ENDED SURVEY RESPONSES: RESEARCH QUESTION 3
Table 6

*Open-Ended Survey Responses (RQ6)*

<table>
<thead>
<tr>
<th>Expected Behavior</th>
<th>Environment</th>
<th>Teaching Strategies</th>
<th>Planning</th>
<th>Communication</th>
<th>Facilitation</th>
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<tr>
<td>Networking with Other Professionals</td>
<td>Open Atmosphere</td>
<td>EBP Activities</td>
<td>Off Unit Rotations</td>
<td>Individualized Learning</td>
<td>Rounding with Students</td>
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<tr>
<td>Active Participation</td>
<td>Welcoming Environment</td>
<td>Socratic Questioning</td>
<td>Proper Planning</td>
<td>Establishing a Rapport</td>
<td>Trying new Things</td>
</tr>
<tr>
<td>Engagement</td>
<td>Positive Environment</td>
<td>Critical Thinking</td>
<td>Pre-Conference</td>
<td>Feedback</td>
<td>Guidance</td>
</tr>
<tr>
<td>Peer Mentorship (Tutoring)</td>
<td>A Collegial Environment</td>
<td>Case Studies</td>
<td>Post-Conference</td>
<td>Open Communication</td>
<td>Time and Attention</td>
</tr>
<tr>
<td>Kindness</td>
<td>Collaborative Environment</td>
<td>Written Activities</td>
<td>Orientation</td>
<td>Comfortable Asking Questions</td>
<td>Integrating Theory to Practice</td>
</tr>
<tr>
<td>Work as Partners with Nurses</td>
<td>No Judgement</td>
<td>Reflection</td>
<td>Diverse Experiences</td>
<td>Being an Approachable Instructor</td>
<td>Encourage Independence</td>
</tr>
<tr>
<td>Professional Behaviors</td>
<td>Supportive Environment</td>
<td>Variety of Methods</td>
<td>Be Flexible in Planning</td>
<td>Being Encouraging</td>
<td>Role Modeling</td>
</tr>
<tr>
<td>Punctual</td>
<td>Safe Zone/ Environment</td>
<td>Allow to Learn from Mistakes</td>
<td>Plans with Staff/ Manager</td>
<td>Motivate and build student confidence</td>
<td>Encourage Independent Thinking</td>
</tr>
<tr>
<td>Compliance</td>
<td>No Fear Environment</td>
<td>Assessments</td>
<td>Selection of Preceptors</td>
<td>Clear Grading</td>
<td>Assess Student Needs</td>
</tr>
<tr>
<td>Displaying a Questioning Attitude</td>
<td>Accepting Learning Environment</td>
<td>Journaling</td>
<td>Faculty Clinical Expertise</td>
<td>Individual Attention</td>
<td>Account for Life Experiences</td>
</tr>
<tr>
<td>Learner as Educator</td>
<td>Teamwork</td>
<td>Faculty Preparation</td>
<td>1:1 Discussions</td>
<td>Time &amp; Resources</td>
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<tr>
<td>Perform Nursing Tasks</td>
<td></td>
<td>Thoughtful Selection of Preceptors</td>
<td>Group Discussions</td>
<td>Monitor Student Abilities</td>
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<td></td>
<td>Organized</td>
<td>Encourage Self - Reflection</td>
<td>Instructor Presence</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Set High Expectations</td>
<td>Clear Expectations</td>
<td>Being Available</td>
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</tbody>
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