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# An Initial Investigation of the Applicability of the Dreyfus Skill Acquisition Model to the Professional Development of Nurse Educators

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# AN INITIAL INVESTIGATION OF THE APPLICABILITY OF THE DREYFUS SKILL ACQUISITION MODEL TO THE PROFESSIONAL DEVELOPMENT OF NURSE EDUCATORS

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## ABSTRACT

### An Initial Investigation of the Applicability of the Dreyfus Skill Acquisition Model to the Professional Development of Nurse Educators

Little is known about the skill and knowledge acquisition of nurses in the educator role. This investigation represents an attempt to design and validate a skill acquisition model for the nurse educator role. While nurse educators often have strong clinical backgrounds, they face a significant role transition as nurse educators. Dreyfus and Dreyfus provided a model for studying skill acquisition in several fields and Benner applied the model to clinical nursing. To investigate skill acquisition among nurse educators, the Dreyfus Model of Skill Acquisition along with the National League for Nursing (NLN) Nurse Educator Competencies provided a framework for the development of the Nurse Educator Skill Acquisition Model; and a 48 item survey instrument was designed to assess study participants' level of skill acquisition. Survey items reflect the novice to expert skill acquisition levels. Differences in skill acquisition were investigated based on demographic data such as educational preparation, work setting, program type, teaching and clinical experience, professional development, and professional development focused on curriculum and instruction. The practical application of nurse educator skill was investigated using vignettes based on each of the 8 nurse educator competencies. The study population included 339 nurse educators teaching in graduate and undergraduate nursing programs in North Carolina and West Virginia.

Results of this study show the survey instrument discriminated between 5 levels of skill acquisition – novice, advanced beginner, competent, proficient, and expert, indicating that the skill acquisition model for the nurse educator role mirrors the Dreyfus Model. Participants reported a proficient level of total skill acquisition as well as a proficient level for each of the 8 NLN Nurse Educator Competencies. Nurse educators with postmaster's certificates or doctoral degrees, who teach in graduate programs in public universities, and who have more than 10 years of teaching experience report the highest levels of skill acquisition. Reliability data show high internal consistency for the survey tool with Cronbach's alpha coefficient at .977. Study findings indicate the Nurse Educator Skill Acquisition Model describes skill acquisition within the nurse educator role.

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## CHAPTER ONE: INTRODUCTION

The nursing profession is facing a significant shortage of nurses and contributing to the shortage is the additional lack of nurse educators (Brendtro & Hegge, 2000; National League for Nursing [NLN], 2005b). This shortage of qualified nursing faculty places schools of nursing in the position of filling faculty vacancies with clinical experts such as clinical nurse specialists (CNSs) and nurse practitioners (NPs). As educators, individuals face a work-role transition from mastery of the clinical environment to a novice nurse educator role. Novice educators must demonstrate an understanding of the content they are teaching as well as the pedagogical issues related to teaching a practice discipline (Halstead, 2007).

Effective nurse educators must acquire the knowledge and skills to facilitate learning. The complex process of skill acquisition includes the integration of cognitive, affective, and behavioral components (Dumas, Villeneuve, & Chevrier, 2000). Although skill acquisition has been investigated in other disciplines (chess players, airline pilots, clinical nurses), the skill acquisition of nurse educators has not. It is vitally important that the nursing profession explore the current level of skill acquisition among nurse educators to plan for and support their current and future professional development (Halstead, 2007).

## Background

### *Nurse Educator Shortage*

The nursing profession is facing a serious shortage of nurse educators. In 2005, the NLN reported disturbing trends in nursing education such as the aging population of nursing faculty, increased use of part-time faculty, and the relatively high number of nurse educators who are not doctorally – prepared (NLN, 2005b). In addition, there are few graduate programs specifically designed to prepare nurse educators for this challenging role. As a result, there are too few nurses preparing to assume the educator role. This situation is of great concern given the fact that a large number of nurse educators are scheduled to retire over the next decade (Brendtro & Hegge, 2000; Halstead, 2007; Kelly, 2002; Knight, 2004).

The impending shortage of nurse educators negatively affects the nursing profession. According to the NLN, (2005b) schools of nursing are denying admission to qualified candidates because of the lack of nurse educators. In addition, there is significant concern about the loss of nursing education expertise that will occur as faculty in all types of nursing programs retire over the next decade (Brendtro & Hegge, 2000; Halstead, 2007; Kelly, 2002; NLN, 2005b). The profession is now focused on the development of the next generation of nurse educators. Those who teach nursing must be well-prepared to do so and their practice must be evidence-based. It is imperative that the educators of the future are effective and have the competencies needed to facilitate learning in an increasingly complex health care environment (Halstead, 2007; Knight, 2004).

### *Role Preparation*

Just as nursing is a practice, so too is teaching. The problem today is not only that faculty shortages exist, but that there are too few faculty who are educated as teachers, let

alone experienced as teachers of nursing (Halstead, 2007; Kelly, 2002). The transition from clinical nursing to nursing education necessitates learning an entirely different body of knowledge. Understanding the theories associated with teaching and learning is necessary to provide a background of knowledge to facilitate the learning process. Guiding students to their highest level of independent thinking and competence can best be achieved through teaching methods that stimulate thinking, emphasize problem-solving, and affect motivation to learn (Kelly, 2002).

The nurse educator shortage has necessitated the use of advanced practice nurses such as nurse practitioners and clinical nurse specialists for the faculty role (Halstead, 2007; Kelly, 2002; Millis, 1994). These nurses are expert clinicians certainly; but they frequently do not have the skill set required to successfully implement the educator role. Educational programs designed to prepare nurse faculty are necessary to alleviate the growing shortage and adequately prepare faculty for a demanding role (Kelly, 2002). These programs, however, are scarce and many faculty are entering the role with minimal preparation as educators (Millis, 1994).

Nurse educators practice in the dynamic, ever-changing environments of health care and higher education. Magnussen (1997) stated that the multiple expectations of teaching, scholarship, and service, in addition to maintaining clinical competence are heavy burdens. In addition, the requirements for nurse educators may vary depending on the academic setting or program. For example, associate degree programs in a community college setting may value clinical expertise and teaching over scholarship while baccalaureate or graduate programs in research based universities often place greater value on scholarship and tenure activities (Halstead, 2007). These differences

notwithstanding, a basic set of requirements seems to remain constant and includes nurse educators' competence in nursing (both theoretical and practical), teaching, evaluation, service, scholarship, and interpersonal relationships, as well as the teachers' personal traits (Choudhry, 1992; Davis, Dearman, Schwab, & Kitchens, 1992; Halstead, 2007; Johnsen, Aasgaard, Wahl, & Salminen, 2002).

***Competence***

In order to impact the preparation of nurse educators, the NLN published a set of core competencies in 2007. The competencies are specifically designed to provide direction for the development of graduate programs that prepare nurse educators. These competencies provide a framework for curriculum development and program design by identifying the essential knowledge, skills, and attitudes relevant to the educator role. The competencies are spread across eight domains, each highlighting essential activities required of the nurse educator role. These domains include: (a) to facilitate learning; (b) to facilitate learner development and socialization; (c) assessment and evaluation strategies; (d) to participate in curriculum design and program evaluation; (e) to function as a change agent and leader; (f) to pursue continuous quality improvement in the nurse educator role; (g) to engage in scholarship; and (h) to function within the educational environment (Halstead, 2007).

Competency-based nurse faculty education will significantly impact the nursing profession. According to Halstead (2007),

> nurse educators who understand the educational process and embrace it as a scholarly endeavor will be the profession's leaders in building a

> science of nursing education. Nurse educators who are well prepared for the role will influence undergraduate and graduate curricula and program development to produce strong graduates prepared to engage in clinical practice, pursue advanced education, and engage in scholarship that builds upon the existing body of nursing knowledge (p. 13).

The root of competence is knowledge and skill acquisition. Competence is defined as the ability to perform a task with desirable outcomes (Benner, 1982), as the effective application of knowledge and skills (Del Bueno, 1990), and as something that a person should be able to do (Mansfield & Mitchell, 1996). It is the interplay of interpersonal and technical skills with critical thinking, and it integrates the cognitive, affective, and psychomotor domains (Gurvis & Grey, 1995; Jeska, 1998). Devising a means to assess the competence of practicing nurse educators is essential for identifying areas for professional development. Additionally, competent nurse educators will ensure the adequate education of nursing students.

Competence in both the clinical nursing and nurse educator roles has been investigated using self-report methods (Meretoja, Isoaho, & Leino-Kilpi, 2004), observation (Phillips, Shafer, Ross, Cox, & Shadrick (2006), and vignettes or problem-based scenarios (Azzarello, 2003; Ludwick & Zeller, 2001; Van Eerden, 2001). Self-report questionnaires are useful in gaining information about participants' feelings. Vignettes allow participants to consider a situation in a nonthreatening environment; then

make practice decisions based on their knowledge and experience in similar situations. According to Polit and Hungler (1999), vignettes allow researchers to ascertain how people might behave in situations, especially those that may be difficult to observe in daily life. The combination of self-report feelings along with the more objective assessment of the practical application of skills measured by vignette responses may provide a comprehensive judgment about the level of competence an individual has achieved.

***Skill Acquisition Model***

Dreyfus and Dreyfus (1980a) studied the skill-acquisition process of airplane pilots, automobile drivers, chess players, and adults learning a second language. They found that skill-acquisition occurs for adults by written or verbal instruction, and experience. In addition, the individual passes through five developmental stages designated as novice, competent, proficient, expert and master. According to Dreyfus and Dreyfus (1986), as the individual becomes skilled he depends less on abstract principles and more on concrete experience. The novice stage is characterized by the level of skilled performance typically learned in a classroom, generally theory and principles; however, higher levels of skill acquisition are characterized by decision-making and skill that can be acquired only through practice in real situations (Dreyfus & Dreyfus, 1986).

Each stage of the Dreyfus Model of Skill Acquisition involves qualitatively different perceptions of the skill and/or mode of decision-making. Skill training must be based on a model of skill acquisition, so that it can address the appropriate issues involved in facilitating advancement at each stage of training (Dreyfus & Dreyfus, 1986).

In her application of the Dreyfus Model to clinical nursing, Benner (1984) showed that as clinical nurses advance in experience, they become more proficient in the clinical environment. Benner identified five levels of clinical nursing proficiency: novice, advanced beginner, competent, proficient, and expert. According to Benner (1984), novices are new to the environment and have had no experience with situations in which they are expected to perform. Novices use rules to guide their performance, but as Benner (1984) notes "following rules works against successful performance because rules cannot tell them the most relevant tasks to perform in an actual situation" (p. 21).

Advanced beginners demonstrate marginally acceptable performances. They have enough experience with real situations to notice the recurring meaningful situational components that are termed "aspects of the situation" (p. 22) in the Dreyfus Model (Benner, 1984). Competent performers are aware of long-range goals or plans and begin to see their own actions as contributions to those goals. Awareness of the goal dictates the plan; competent performers can discern the most salient attributes of the current and future situation allowing them to work toward the goal. Most importantly, competent performers understand enough of the situation to filter situational attributes – working with some and ignoring others as the situation unfolds (Benner, 1984). Proficient nurses have enough experience to see the whole of a situation, rather than a set of situational aspects. According to Dreyfus and Dreyfus (1980a; 1980b) and Benner (1984), the proficient performance is guided by maxims. This perspective does not require thought, it simply presents itself.

Expert nurses have an intuitive grasp of a situation. They do not rely on analytic principles (rules, guidelines, or maxims) to guide actions. When confronted with

a problem for which they have no experience, however, they are likely to use analytic principles. Experts rely on their intuitive grasp of situations. They analyze situations quickly and accurately, deciding on a course of action without wasting time on thinking, researching, or needless actions (Benner, 1984). As clinical nurses become more experienced and knowledgeable, their decision-making ability (Benner, 1984) and diagnostic reasoning (Tanner, Padrick, Westfall, & Putzier, 1987) grow. In addition, their skill sets improve (Zarett, 1980) and they can demonstrate an increase in critical thinking skills (Martin, 2002; Maynard, 1996).

Nursing educators have long known that novice clinicians have much different learning needs than experienced nurses. These differences must be acknowledged and valued when educators develop teaching curricula (Tomey & Alligood, 2002). The professional development of nurse educators during pre-service programs and after entry into practice is essential to continue producing quality nurses.

***Professional Development***

The National League for Nursing's position statement on *Lifelong Learning for Nursing Faculty* encourages all educators to participate in ongoing development activities connected to their educator role (NLN, 2001). Nurse educators must value lifelong learning and acknowledge that, as they evolve from novice to expert in their role as educators, professional development needs will vary (Halstead, 2007).

Characteristics of effective teachers have been identified by many authors and include: (a) being committed to teaching and intellectual inquiry; (b) demonstrating knowledge and love of the subject; (c) enjoying interactions with students; (d) being available to students; (e) being conscientious when evaluating students' work; (f)

demonstrating fairness; (g) exhibiting professional competence; (h) being well prepared; (i) using innovative teaching practices; and (j) role modeling excellent communication skills (Choudhry, 1992; Dienemann & Shaffer, 1992; Fairbrother, 1996; Halstead, 2007). Beginning nurse educators may find developing these characteristics overwhelming while teaching a full-time load, advising students, staying professionally current, participating in scholarly activities, and providing service to the institution and the profession. Novice nurse educators will have different professional development needs compared to the experienced nurse educator who copes easily with these expectations (Halstead, 2007).

The preparation and role development of nurse educators has become a significant focus for the profession (Halstead, 2007). All educators benefit from an assessment of their skill acquisition and a corresponding plan for professional development. While Benner's application of the Dreyfus Model articulates the skill acquisition model for clinical nurses, the model may also be useful in assessing the skill acquisition of nurse educators. In addition, the NLN core competencies provide a basis for identifying the desired activities that nurse educators must develop to be effective in an educational environment.

## Statement of the Problem

In view of the nursing shortage, recruiting and supporting nurse educators is vital to continue producing adequate numbers of new nurses (Halstead, 2007). The nurse educator role is complex and success requires a commitment to developing a continuum of skill acquisition. New nurse educators who often have strong clinical backgrounds (Halstead, 2007) face a significant role transition while experienced nurse educators have different developmental needs (Anderson, 2008; Zambroski & Freeman, 2004). Dreyfus

and Dreyfus (1986) provided a model for studying skill acquisition in several fields and Benner (1984) applied the model to clinical nursing. Little, however, is known about the skill and knowledge acquisition of nurses in the educator role. In addition, the NLN has provided a comprehensive set of Nurse Educator Competencies. Designing and validating a method to assess the total level of skill acquisition among nurse educators is necessary to determine current levels of expertise as well as guide nurse educator curricula and professional development activities. Assessing skill acquisition levels in each of the eight NLN competency domains may also assist nurse educators in designing personal professional development plans. Supporting the development of nurse educators is an essential strategy in alleviating the nursing shortage.

## Purpose of the Study

This investigation represented an initial attempt to design and validate a skill acquisition model for the nurse educator role. Dependent variables for this study were skill acquisition scores, both total and for individual competency domains. Additionally, the practical application of nurse educator skill was investigated using vignette situations common to the nurse educator role. The Dreyfus Model of Skill Acquisition and the NLN Nurse Educator Competencies provided a framework for conceptualizing this skill acquisition continuum. Potential differences in skill acquisition among nurse educators based on variables such as clinical experience, certification, professional development, practice arena, and educational background were explored as independent variables.

## Research Questions

The research questions were:

RQ1 What is the total perceived level of skill acquisition related to the NLN Nurse Educator Competencies?

RQ2 What is the perceived level of skill acquisition for each of the eight NLN Nurse Educator Competency domains?

RQ3 What differences, if any, exist between the total perceived level of skill acquisition and selected demographics?

RQ4 What differences, if any, exist between the perceived level of skill acquisition for each of the eight NLN Nurse Educator Competency domains and selected demographics?

RQ5 What is the relationship, if any, between the total perceived level of skill acquisition and the practical application of nurse educator skills?

RQ6 What is the relationship, if any, between the perceived level of skill acquisition for each of the eight NLN Nurse Educator Competency domains and the practical application of nurse educator skills?

RQ7 What differences, if any, exist in the relationship between the total perceived level of skill acquisition and the practical application of nurse educator skills based on selected demographics?

RQ8 What differences, if any, exist in the relationship between the perceived level of skill acquisition for each of the eight NLN Nurse Educator Competency domains and the practical application of nurse educator skills based on selected demographics?

## Definition of Terms

For the purpose of this study, the following definitions were used:

**Skill acquisition** – identified as the knowledge and experiences related to the nurse educator role.

**Level of skill acquisition** – identified by the total score on the Nurse Educator Skill Acquisition Assessment Tool.

**Level of skill acquisition related to the practical application of nurse educator skills –** identified by the vignette scores, both individual and total.

**NLN competency domain score** – identified by the NLN competency domain score on the Nurse Educator Skill Acquisition Assessment Tool.

**Educational practice vignettes** – Researcher developed action scenarios designed to identify the practical application of nurse educator skills and validate the nurse educator skill acquisition level identified on the *Nurse Educator Skill Acquisition Assessment Tool.*

**Clinical experience** – measured in years and defined as years employed as a nurse outside of the teaching role as reported by participants.

**Faculty experience** – measured in years and defined as years employed as a nurse educator as reported by participants.

**Educational preparation** – defined as the highest degree held in nursing or education as reported by participants.

**Professional development** – defined as seminars, professional development activities, conventions, and / or courses focusing on nursing topics and as reported by participants.

**Professional development focused on curriculum and development** – defined as seminars, professional development activities, conventions, and / or courses focusing on curriculum and development and as reported by participants.

**Nurse Educator Certification** – defined as nurse educator successful completion of the National League for Nursing Nurse Educator Certification examination.

## Significance of the Study

The results of this study will provide data useful to administrators of schools of nursing in planning and implementing the recruitment and development of nurse educators. In addition, this study will be of interest to higher education administrators and curriculum developers as they design graduate curricula that prepare nurse educators. This study will also provide guidance to those who design professional development activities to provide programs that coordinate with skill levels. In addition, the framework for skill acquisition designed for this study will aid in peer or supervisor evaluation of nurse educators by providing information about skill acquisition and competence in the role.

This study will provide data useful to faculty as they progress from the novice to expert level in the nurse educator role. Novice educators and mentors may use the framework as a model for assessing development and professional education needs. Data from this study may also be of interest to researchers interested in skill acquisition, role development and role transition.

No other study has been identified in the literature that, like this study, collected quantitative data from nurse educators about their progress along the novice to

expert continuum. Therefore, the results of this study will add to the body of knowledge related to the skill acquisition of nurse educators by filling a gap in the literature.

## Delimitations of the Study

This study was delimited to nurse educators teaching in undergraduate and graduate registered nurse programs. Additionally, this study was delimited to nurse educators teaching in either North Carolina or West Virginia.

## Summary

In 2005, nursing schools reported turning away 88,000 prospective students, or one in three applicants for admission to undergraduate nursing programs due to a critical shortage of nurse educators (NLN, 2005b). This trend is likely to continue. In fact, it has been estimated that by 2019, a full 75% of nursing faculty will retire. At the present time, the profession needs 15% of the 10,000 master's level nurses who graduate each year to become nurse educators in order to maintain current needs. As nurse educators retire, those needs will become even more critical. We must concern ourselves now about replenishing and supporting our supply of nurse educators.

This study represented the first attempt to apply the Dreyfus Model of Skill Acquisition to the nurse educator role in an effort to investigate skill acquisition among nurse educators. The NLN Nurse Educator Competencies provide a comprehensive set of standards necessary for the effective nurse educator and in so doing, provide a basis for investigating the continuum of skill acquisition necessary for achieving competence as a nurse educator. This investigation will assist curriculum designers as they develop programs for the education and development of new educators. In addition, individuals may use this information to plan professional development and mentoring activities for

practicing nurse educators. Developing and supporting nurse educators is essential to alleviate the shortage of nurses and nurse educators.

# CHAPTER TWO: REVIEW OF RELATED LITERATURE

This chapter expands the discussion of skill acquisition, nurse educator role preparation, competence, professional development and the NLN Nurse Educator Competencies. In addition, this study's theoretical background and the application of the Dreyfus Model to clinical nursing are described. A review of the available literature supporting the NLN Nurse Educator Competencies is also provided.

## Skill Acquisition

Skill acquisition was initially studied by Dreyfus and Dreyfus (1979) when they investigated the nature of knowledge and expertise. Their original study focused on training emergency-response behaviors by aircraft pilots by either rules or simulations. Dreyfus and Dreyfus (1979) concluded that only a situational or simulation model of instruction could produce highly skilled emergency response behavior because experience (gained in simulation exercises) most effectively leads to knowledge acquisition.

In this original work, Dreyfus and Dreyfus (1979) proposed three models of skill acquisition: (a) non-situational, (b) intermediate, and (c) situational. The non-situational model is characterized by context-free cues. Rank beginners start with this model by checking a list of groups or categories to deconstruct each feature noted in a situation. Then, they select a rule for determining the appropriate category, check for specific context information, and a predetermined response rule to select the appropriate action in a given situation. In the case of teaching emergency-response procedures, the instructor pilot informs the student of rules for determining the context and selecting the appropriate action (Dreyfus and Dreyfus, 1979).

The intermediate model requires several skills the student needs to recognize situations and characteristics that seem to stand out from previous experiences. They must also have a sizeable set of typical scenarios and maxims stored in memory. Dreyfus and Dreyfus (1979) define maxims as "procedures which, given aspects of the situation, specify an action…" (p. 7).

With experience, the student pilot has amassed the vast number of paradigms or contexts necessary for the situational model. This model includes a set of five concrete holistic abilities associated with the right hemisphere of the brain: "the ability to (1) remember a sizeable set of typical specific situations, (2) perceive the current situation as similar to one of the remembered situations, (3) notice when the current situation has changed, (4) experience the current situation as similar to a different and more appropriate remembered paradigm, and (5) remember, along with each paradigm situation, an appropriate purposeful action" (Dreyfus and Dreyfus, 1979, pg 3).

Based on these conclusions, Dreyfus and Dreyfus (1979) advised instructor-designed simulation experiences that allow the learner to experience context. This type of learning experience provides the student pilot with an array of situations that may be synthesized, stored in memory, and recalled later.

According to Dreyfus and Dreyfus (1979), skill acquisition follows an expected course. For example, a beginner may display a halting, rigid, and mediocre performance by following rules. With experience, a two-stage transformation takes place. First, features and rules are no longer used and the learner becomes aware of aspects and maxims for appropriate actions. Finally, situations are recognized from previous experiences and the learner acts appropriately. For example, in the case of an airline pilot,

he initially concentrates attention on features and rules, then gives up thinking and begins to feel that he is flying the plane. With more experience, he comes to feel that he is flying.

In 1980, Dreyfus and Dreyfus elaborated on the original three stages of skill acquisition first identified in 1979, with a discussion of the learners' striking dependence on everyday, concrete experience in problem solving (1980a). This need for experience, however, disputes the basic premise of the information processing model of mental activity, which relies on the basic assumption that all cognitive processes are produced by formal manipulation of independent bits of information abstracted from the problem domain (Woolfolk, 2007).

Dreyfus and Dreyfus (1980a) theorized that intelligent behavior by humans relies on everyday familiarity in problem solving. In contrast to the Piagetian view that proficiency increases as one moves from the concrete to the abstract, Dreyfus and Dreyfus (1980a) argue that skill in its minimal form is produced by following abstract formal rules, but that only experience with concrete situations produces higher levels of performance. In fact, requiring proficient or expert performers to rely on rules, guidelines or structured instructions may slow and obstruct rather than improve problem solving ability.

With their work on the importance of experience, Dreyfus and Dreyfus (1980a) renamed the stages of skill acquisition as follows: novice, competent, proficient, expert, and mastery. The novice stage replaces the original non-situational model and remains characterized by context-free features that novices can recognize without benefit of experience. Novices require rules for decision-making based on aspects found in the

situation. To grow, the novice needs assessment and monitoring, either by self-observation or instructional feedback, to improve decision-making and performance.

The competent performer has had the benefit of considerable experience coping with real situations in which the instructor, mentor, or preceptor points out recurrent meaningful component patterns. These situational components, in terms of which a competent student understands his environment, are no longer the context-free features used by the novice. These recurrent patterns are called aspects. Aspect recognition cannot be produced by calling attention to recurrent sets of features, but only by singling out clear examples. The brain state correlated with the example being pointed out is organized and stored in such a way as to provide a basis for future recognition of similar aspects (Dreyfus & Dreyfus, 1980a).

The proficient (previously called the intermediate level) performer has had experience with a wide variety of typical whole situations. Each whole situation has a meaning that the performer relates to the long term goal. Aspects of the situation can be judged to have more or less relevance in relation to goal achievement. According to Dreyfus and Dreyfus (1980a),

> the brain state correlated with the performer's experiencing a whole situation from a particular perspective is organized and stored in such a way as to provide a basis for future recognition of similar situations viewed from similar perspectives. A specific objective situation, confronted at two different times,

> each time from a different perspective, would be treated as two different situations. Given a set of aspects and their saliences, the performer uses a memorized principle which we call a maxim to determine the appropriate actions (p. 10).

The expert (previously termed the situational level) performer has a vast repertoire of experienced situations so that normally each specific situation immediately dictates an intuitively appropriate action. This intuition is possible because each type of situation has a specific response associated with it. Experts have moved from analytic thought to intuitive response and if the expert suddenly reverts to analysis, his performance degrades to a competent or proficient level (Dreyfus & Dreyfus, 1980a).

Mastery occurs when the expert is intensely absorbed in a given activity. At those moments his performance transcends even his usual high level of skill. This masterful performance only takes place when the expert, who no longer needs principles, can cease to pay conscious attention to his performance and can let all the mental energy previously used in monitoring his performance go into producing almost instantaneously the appropriate perspective and its associated action (Dreyfus & Dreyfus, 1980a).

By 1986, Dreyfus and Dreyfus refined their work with skill acquisition by reconceptualizing the skill levels as follows: (a) novice, (b) advanced beginner, (c) competent, (d) proficient and, (e) expert. The novice level is again defined as a "knowing that" stage where the individual learns to recognize various cues or objective facts and

features relevant to the skill and acquires rules for determining actions based upon those facts and features. The overall situation is not clearly recognized.

The advanced beginner's experience with situations allows recognition of situational cues or elements that he has experienced before. The competent individual has enough experience with situations to have a goal in mind, to choose a plan for setting priorities, and problem solving. This individual makes choices while problem solving in a detached manner but is intensely involved in the consequences of his actions. Successful outcomes are deeply satisfying and lead to improved problem solving ability in the future. Poor outcomes may be devastating (Dreyfus & Dreyfus, 1986).

Proficient individuals are deeply involved in tasks. Certain features of the situation will stand out, because of past experiences, while others recede into the background and are ignored. Rather than consciously making choices or deliberating, the course of action simply appears due apparently to vast experience with similar situations and memory cues that trigger plans similar to those that worked in the past (Dreyfus & Dreyfus, 1986).

Expert individuals have know-how. They know what to do and knowing is based on mature and practiced understanding. Experts do not see problems in a detached manner, then work at solving them; nor do they worry about devising plans for the future. The expert's skill is intuitive; it has become so much a part of him that he need be no more aware of it than he is of his own body (Dreyfus & Dreyfus, 1986).

The Dreyfus' original work with skill acquisition was part of an overall investigation into the possibility of artificial intelligence. They reasoned that a thorough understanding of how people solve problems would provide a basis for programming

computers to solve problems in a similar fashion. Skill acquisition of airline pilots, chess players, individuals learning jazz and individuals learning to speak a second language was explored. They concluded that computers may be able to problem solve at a low level – novice or advanced beginner. Computers, however, would require experience and intuition to progress toward a proficient and expert level, and that humans have the capacity to learn from successes and failures, whereas computers could only follow a problem solving algorithm (Dreyfus & Dreyfus, 1979; 1980b; 1986; Gordon, 1986). Though Dreyfus and Dreyfus (1979) began with questions about the optimal training program for emergency response pilots, the model they describe has served to define human skill acquisition for a variety of fields.

### *Formal Testing of the Dreyfus Model*

Testing of the Dreyfus Model has been limited to a comparison of the cue recognition and utilization between novices and experts working in critical care cardiovascular nursing by Reischman and Yarandi (2002). This study objectively compared recognition of cues and conclusions between sets of participants with different levels of experience. Researchers designed five written simulations within the field of cardiovascular nursing (left ventricular dysfunction, cardiac tamponade, sepsis, right ventricular failure, and hypovolemia related to internal abdominal hemorrhage) and asked a small sample of novice (N=23) and expert (N=23) nurses to read and respond to each scenario. The nurses responded with an impression of the predominant problem, and gave a diagnostic explanation. Researchers determined that experts identified more highly relevant cues and had greater diagnostic accuracy than novices.

### *Skill Acquisition Model Applied to Clinical Nursing*

Patricia Benner explored the Dreyfus Model and its application to clinical nursing in three studies that spanned two decades between 1978 and 1997. Benner's application of the model is based on studying practice situation by situation, and determining the level of practice evident in the situation. According to Benner (1984), the Dreyfus Model focuses on strengths rather than deficits, and describes practice capacities rather than traits or talents.

According to Benner (1984), at each stage of experiential learning, clinicians can perform at their best. What they cannot do is practice beyond their own experience, or be responsible for what has not yet been encountered in practice. For example, one can memorize facts or characteristics from a textbook but this knowledge is not the same as being able to recognize characteristics as they manifest themselves within unfamiliar practice situations. Clinical discernment is learned by experience in practice.

Benner's first study (1978-1981) included paired interviews with novice nurses and their preceptors (Benner, 1984). Preceptors, selected by staff development coordinators, had at least five years of clinical experience, were currently engaged in direct patient care, and were recognized by their peers as having expertise in the clinical environment. Novice nurses had recently graduated from nursing programs and were just beginning clinical practice. This study was specifically designed to discover if there were distinguishable, characteristic differences in the novice and expert's description of the same clinical incident. Additional group interviews and observations with expert nurses, newly graduated nurses, and senior nursing students were conducted to more fully

describe clinical performance at different stages of skill acquisition. The data were interpreted to identify meaning and content.

Benner's second study of skill acquisition, conducted between 1988 and 1994, focused on describing the nature of skill acquisition in critical care nursing practice and delineating the practical knowledge embedded in expert practice. Her third study completed in 1997 extended the research to include other clinical areas of practice – emergency departments, flight nursing, post anesthesia care units, operating rooms, and home health; and to enlarge the sample of advanced practice nurses. All three studies were conducted in the same manner – paired interviews with novices and preceptors; and interviews and observations of clinical nurses at different points along the skill acquisition continuum (Benner, 1984; 2004).

Like Dreyfus and Dreyfus (1980a), Benner (1984; 2004) asserts that novices are new to situations in which they are expected to perform. They have learned abstract theory in terms of objective attributes such as weight, intake and output, temperature, blood pressure, pulse, and other such objective, measureable parameters of a patient's condition. These attributes or features of the situation can be recognized without situational experience. Novices are taught context-free rules to guide action in respect to different attributes and often operate from to-do lists generated by a more experienced colleague.

According to Benner (1984), advanced beginners have experience with enough real or simulated situations to note or have pointed out to them, the recurring meaningful situational components that are termed "aspects of the situation" (p. 8) in the Dreyfus and Dreyfus (1980a) model. Aspects include overall, global characteristics that can be

identified only through prior experience. For example, assessing a patient attribute such as pain tolerance requires the advanced beginner to have been involved in previous experiences with patients in pain to respond adequately and intervene appropriately. Advanced beginners are focused on learning to discern subtle aspects of each situation.

Benner (2004) reports that advanced beginners experience a global anxiety and excitement about the nursing role. They have yet to discern the more subtle aspects of a situation which leads to the inability to focus anxiety. In fact, anxiety may be eased somewhat because beginners have not been involved in enough similar situations to know what to expect in a given situation. In addition, advanced beginners express excitement in their new role and the rapid rate at which they are learning. According to Benner (2004), advanced beginners have a level of trust in their environment and coworkers that allows for them to learn at a rapid rate. This trust allows for a "freedom and exhilaration in learning" (p. 192) that is probably only available to those who do not fully understand the situation and what is known about it (Benner, 2004).

Competent performers begin to see their performance in terms of long-range goals or plans. At this point, the competent performer plans for and prioritizes care; considering what is most important and what may be ignored. The plan establishes a direction, and is based on "considerable conscious, abstract, analytic contemplation of the problem" (Benner, 1984, p. 26). For example, the following excerpt describes the progression from advanced beginner to competent:

> [Before]… I would just walk in there and get caught up with all their complaints, with no organization at all to what was going on. So

> now I come out of report and I know what their I.V.s are basically [supposed to be], and I have a couple of things that I know that I have to do. Before I go into the room, I write down what med I'm supposed to give for that day, and then I'll walk in there and make sure that everybody's I.V. is fine. You go from bed to bed and just say hi, just introduce yourself. But I give them the message that I'm just attending to business. I check their I.V.s, I check their dressings. And then I feel fine. I know they're not going to bleed to death; I know that their urine output is OK; I know that their I.V.s are fine…then I have the whole morning set out and I can go ahead and do things. I am much more organized. I know what I have to do, and I arrange with them and find out what they want to do (Benner, 1984, p. 26-27).

As clinical nurses become proficient they experience situations as wholes rather than in terms of aspects. At this point, performance is based on maxims or rules learned for a given situation. According to Benner (1984; 2004), this perspective simply presents itself based upon experience rather than thinking through situational aspects.

Proficient nurses understand a situation as a whole because they are focused on long-term goals. By the time a nurse is proficient, they have learned from experience what to expect in a variety of situations and how to modify actions to appropriately care for a patient. For example, this excerpt describes a proficient nurse's decision making skill:

> Well, you look at their vital signs to see if there is anything significant…But even here you need to do a little guessing, in terms of whether the patient is just anxious because he's so used to the machine breathing for him…If they get a little anxious, you don't really want to medicate them, because you are afraid they will quit breathing, but on the other hand they may really need to calm down a bit, so it just depends on the situation…You have your groundwork from what you have done in the past, and you know when you are going to get into trouble (Benner, 1984, p. 29-30).

Expert performers have intuition that allows them to focus on the problem without considering a plethora of ineffective solutions. Expert performance is difficult to pinpoint because experts have a thorough understanding of the whole situation and react without conscious problem solving. The following excerpt describes expert performance:

> When I say to a doctor, "the patient is psychotic," I don't always know how to legitimize that statement. But I am never wrong. Because I know psychosis from inside out…I feel that, and I know it, and I trust it (Benner, 1984, p. 32).

Benner (1984), however, cautioned that experts are wrong at times and use analytic tools to solve problems or face unfamiliar situations. This situation occurs when experts act intuitively then notice unexpected results. Analytic tools must at this point be used to problem solve and adjust actions for the given situation.

***Further Application of the Dreyfus Model***

The Dreyfus Model has been useful in assessing knowledge (Phillips et al., 2006) and professional development activities (McElroy, Greiner & de Chesnay, 1991; Greene, Lemieux & McGregor, 1993; Marble, 2009). In each case the model was effective in describing skill acquisition, assessing knowledge, and providing a road map of professional development activities for an individual seeking to reach a new level of knowledge and skill.

Phillips et al. (2006) generated an assessment tool containing four scales that represent tactical thinking mental models for Army officers with a range of operational experience. The mental models include (a) Know and Use All Assets Available; (b) Consider the Mission and Higher's Intent; (c) Model a Thinking Enemy; and (d) Consider Effects of Terrain. The five levels of cognitive performance as identified by Dreyfus and Dreyfus (1986) are accounted for within each scale – novice, advanced

beginner, competent, proficient, and expert. Phillips et al. (2006) designed a set of behavioral descriptors that correspond with each level of performance. Observers may then associate actions during training sessions with the performer's cognitive proficiency. In addition, the assessment tool may be used to assess verbal or written measures of performance. The researchers recommended using assessment results to (a) assess the need for additional training, (b) provide summative assessment data following training interventions and, (c) measure the potential impact of technology on cognitive performance to assess the value of the technology.

Professional development activities based on the Dreyfus Model of Skill Acquisition and the Benner Model have been reported in nursing literature and involve a variety of health related fields (McElroy et al., 1991; Greene et al., 2003; Marble, 2009). Each application of the Benner Model involves several key theory components such as attributes, perspective, decision-making, and follow-through or commitment.

Attributes or components of the situation may be context free or situational depending on the level of expertise participants have attained. For example, in the case of nurses involved in psychotherapy situations, context free statements included, "I know it's important to reduce anxiety," or situational, "I think her anxiety increases when I try to talk about things she doesn't want to talk about" (McElroy et al., 1991). Managers developing a business plan (Greene et al., 1993) respond based on context. For example, the novice manager approaches writing a business plan for a Cardiac Services department in a non-discriminate way, unable to relate situational elements. Expert managers have a situational perspective allowing them to use previous knowledge of business plans, timeline integration and so on to intuitively recognize the appropriate action.

Decision-making and knowledge are related (Dreyfus & Dreyfus, 1986; Benner, 1984; McElroy et al., 1991). When individuals (novice or advanced beginner) do not have perspective or prior knowledge in a given situation, they are unable to keep or discard information based on relevance which often leads to information overload and difficulty making a decision about how to proceed. More experienced individuals functioning at a higher level of skill acquisition easily discern the more salient aspects of a situation and seamlessly act appropriately and without conscious decision-making (Greene et al., 1993).

Recognizing that individuals may reach a competent level of skill acquisition and stagnate, Marble (2009) used Benner's (1984) Novice to Expert Model to design a five step professional development model at the Banner Good Samaritan Medical Center. The Benner Model recognizes and rewards nurses who demonstrate expertise with patients. According to Marble (2009), competent or proficient nurses may find fulfillment through adherence to rules. Experts, however, are creative and rules may stifle creativity. The five step model relies on education, motivation, and mentoring to provide an organized plan for professional development. Components of the program include (a) the Compass Program for recognition and celebration of nurses as they move from through the levels of skill acquisition, (b) the Journal Club whereby participants convene to discuss journal articles and modify practice based on the evidence presented, (c) shared leadership whereby employees closest to patient care are given the opportunity to participate in the decision-making process as it effects their work environment, (d) Mentor Program which provides an opportunity to positively impact professional development, and nurse retention and turnover rates, and (e) educational opportunities

provided by the Oncology Nursing Education Steering Committee to enhance professional development. Banner Good Samaritan Medical Center tracked the progress of individuals through the program and found that the availability of additional expert nurses increased and improved morale. In addition, the program was cited for helping to foster a culture of staff and leadership development; and creating an engaged, motivated, and high-performing workforce (Marble, 2009).

In conclusion, formal testing of the Dreyfus Model has been limited to a comparison of the cue recognition and utilization between novices and experts working in critical care cardiovascular nursing by Reischman and Yarandi (2002), who determined that experts identified more highly relevant cues and had greater diagnostic accuracy than novices. Patricia Benner applied the Dreyfus Model to clinical nursing and found the novice to expert model described the skill acquisition of clinical nurses. Further application of the Dreyfus Model has been used to assess knowledge (Phillips et al., 2006) and professional development activities (McElroy et al., 1991; Greene et al., 1993; Marble, 2009). In each case the model was effective in describing skill acquisition, assessing knowledge, and providing a road map of professional development activities for an individual seeking to reach a new level of knowledge and skill.

## Role Preparation

Individuals teaching at the primary or secondary levels of education are required to complete a program that prepares them both in the methods and theories of teaching, learning, and curriculum as well as in their content area. These teacher preparation programs also require students to complete a supervised practicum where they are immersed in the teaching environment but have guidance and direction from a

practicing teacher, as well as their college professor. But no such expectations exist for those contemplating a career in nursing education (Valiga, 2007).

During the 1980s and 1990s, nurse educator preparation received only minor attention in master's programs. The focus for most graduate programs was clinical knowledge and skill as promoted by the core guidelines for master's education published by the American Association of Colleges of Nursing (AACN). In fact, the AACN reported in 1997 that 75 percent of master's students were enrolled in advanced practice programs, while 4 percent were enrolled in educator tracks. This situation contributed heavily to the nurse educator shortage the profession is faced with today (Davis & Williams, 1985; Kelly, 2002). By the late 1990s, educators and administrators of nursing programs were calling for advanced degree programs to increase their number of graduates competent to assume the full faculty role; contributing to the science and practice of the discipline, and to the educational preparation of new generations of nurses (Bartels, 2007; Kelly, 2002).

Associate, diploma, and baccalaureate education are designed to prepare the generalist nurse to practice in complex healthcare systems, assuming the role of designer/manager/coordinator of care. This education includes practice-focused outcomes that integrate the knowledge, skills, and attitudes necessary to practice in the clinical environment. In addition, the NLN maintains that nurses, regardless of basic educational background, should be prepared to work in community based programs as well as acute care settings (NLN, 1993). These basic programs typically do not include any courses or experiences designed to prepare the graduate for a nurse faculty position (AACN, 2008), although, basic programs do provide information and experiences pertaining to

communication and patient teaching. The lack of training notwithstanding, and due in part to a shortage of qualified faculty, nurses prepared at these basic levels are teaching in nursing programs.

Oermann and Jamison (1989) conducted an exploratory, descriptive study, in part, to describe outcomes, content, and structure of master's programs in nursing in the functional area of teaching; and to identify trends in graduate nursing education in preparing students for the role of teacher. A self report questionnaire was designed to identify the characteristics of the master's program and the respondent, and to describe the nursing education functional area. Ninety two questionnaires were returned for a response rate of 66.2%.

Results indicated that the primary purpose of the master's programs in the study group was to prepare clinical nurse specialists (82%). This result is consistent with information gathered in 1979 and 1984 (McKevitt, 1986). Only 10 of the programs offered a major in nursing education; more common were minors (N = 34), elective courses (N = 18), and tracks in nursing education (N = 3). In more than half the programs, the courses in nursing education included content on teaching methods, curriculum development theory, learning theory, clinical teaching, instructional design, clinical evaluation, testing, evaluation theory, and grading. Respondents reported a variety of required learning experiences such as classroom and clinical teaching, clinical evaluation of students, curriculum and course development, and test construction (Oermann & Jamison, 1989). The authors concluded that while the shift away from functional role preparation toward advanced nursing practice has been valuable in

developing nursing's role in the health-care system, there remained a need for educator preparation in nursing.

Graduate education is generally the expected preparation for a full time faculty role; and by 2000, master's programs began including courses focusing on curriculum and instruction in education tracks or as electives (AACN, 2008). In addition, faculty are expected to have advanced clinical expertise for the content areas they teach. This expectation is consistent with most nursing programs offered at colleges and universities as well as community colleges (National Council of State Boards of Nursing, 2007). Concurrently, individual school standards, State Boards of Nursing, and professional organizations also influence the nature of academic preparation required of faculty in a given situation. Some faculty positions may require differing levels of academic preparation but a master's degree in nursing or progress toward the master's degree within six years is required by Boards of Nursing in most states (AACN, 2008).

The AACN (2008) supports the doctoral degree as the preferred preparation for the faculty role stating:

> Consistent with academy expectations, faculty with primary responsibility for the oversight of courses in baccalaureate, master's, and doctoral nursing programs will have doctoral preparation. Doctoral graduates who will be involved in an academic role will have preparation in educational methods and pedagogies (p. 1).

The AACN (2008) also recognizes that a full-time faculty appointment may not initially require a doctoral degree, but non-doctorally prepared faculty may be expected to obtain a doctorate within a certain period of time while maintaining their academic responsibilities. It must be recognized that without doctoral preparation, faculty are less competitive for academic promotion and attainment of tenure. Because this is an acceptable trade-off for many educators, schools of nursing are developing clinical tracks and other mechanisms for hiring and retaining excellent clinicians who are not doctorally prepared (AACN, 2008; NLN, 2005a).

Bartels (2007) also makes a case for doctoral preparation for all educators by asserting that master's programs typically graduate faculty with an undergraduate level understanding of, and preparation in, the science and practice of nursing, thus missing the development of researcher/scholar and advanced nursing science expertise. According to Bartels (2007), this development, achieved through doctoral preparation, is critically necessary for a career in the academy.

In conclusion, educators and administrators are advocating for advanced degree programs to increase their number of graduates competent to assume the full faculty role (Bartels, 2007; Kelly, 2002). Oermann and Jamison (1989) conducted an exploratory study to describe outcomes, content, and structure of master's programs in nursing in the functional area of teaching; and to identify trends in graduate nursing education in preparing students for the role of teacher. They concluded that there remained a need for educator preparation in nursing; and in fact, some faculty positions may require differing levels of academic preparation but a master's degree in nursing or progress toward the master's degree within six years is required by Boards of Nursing in

most states (AACN, 2008). Bartels (2007) advocated for doctoral education for faculty and asserted that master's programs typically graduate faculty with an undergraduate level understanding of, and preparation in, the science and practice of nursing, thus missing the development of researcher/scholar and advanced nursing science expertise.

## Competence

The importance of nurse educator competence cannot be overstated; it directly impacts the skill and ability of future nurses. According to Whelan (2006), competency is the assessment of an individuals' ability to perform the skills and tasks expected or required in a given situation. A competent individual has the knowledge, skills, ability, and behaviors to perform required tasks correctly (Davis, Stullenbarger, Dearman, & Kelley, 2005; Choudhry, 1992; Johnsen et al., 2002).

The nurse educator role has evolved from hospital-based occupational training to professional practice; educators are practicing in university and community colleges rather than traditional hospital-based programs (Choudhry, 1992). In addition, the role itself has evolved to encompass a variety of competencies in order to adequately prepare new nurses for the challenges of the current healthcare environment. Achieving these competencies can be challenging for expert nurse educators and overwhelming for novices (Davis et al., 1992).

The nurse educator role has been conceptualized as multidimensional. Faculty members must be adept within the academic community, focusing on teaching (Davis et al., 1992; Felton, 2000; Halstead, 2007; Little & Milliken, 2007), service (ASHE-ERIC Higher Education Report, 2003), and scholarship (Hill, Lomas, & MacGregor, 2003). In general, teaching is considered the major role with priority activities including such

functions as selecting learning objectives, using appropriate teaching and learning strategies, evaluating student achievement, and advising or counseling students (Chickering & Gamson, 1999). More recently, service and scholarship have also become vital roles within the academic environment (Davis et al., 1992; Halstead, 2007; Hill et al., 2003).

In the early and mid 1900s, nurse educators, often prepared at a baccalaureate level, were expected to prepare graduates for a clinical role. In fact, a position paper issued by the American Nurses Association (ANA) in 1978 urged master's level programs to focus on advancing knowledge and skill in the clinical environment, and to prepare graduates for leadership roles in clinical practice rather than education. The typical master's level program included dual preparation in a clinical specialty and teaching; with the idea that one must be an expert in clinical practice in order to transmit that knowledge to others. Education courses were almost an afterthought with the norm being the inclusion of only one or two classes on curriculum design and teaching strategies along with a practicum (Donley & Flaherty, 2008). Research focusing on novice nurse educators, professional development, and nurse educator competencies ensued as master's level graduates entered classrooms with perhaps less than adequate preparation to teach (Davis et al., 1992).

Davis et al. (1992) identified three dimensions of the nurse educator role – teaching, service, and research. They conducted a descriptive study to (a) identify the perceptions of novice nurse faculty concerning the competencies, (b) identify the extent to which novice nurse faculty could demonstrate the competencies, and (c) determine mechanisms by which novice nurse faculty obtained the competencies. Novice nurse

educator participants from associate, baccalaureate, and higher degree programs in the Southern Regional Educational Board (SREB) and Western Intercollegiate Council of Higher Education (WICHE) areas provided demographic information and completed the Nurse Faculty Competency Questionnaire.

According to Davis et al. (1992), the Nurse Faculty Competency Questionnaire is comprised of 43 competency statements related to teaching, service, and scholarship, and was developed following an extensive review of the literature on the nurse faculty role. Though the questionnaire has not been published, it was validated by a panel of expert administrators of nursing programs and graduate level faculty. Participants answered each of the 43 competency statements as to whether or not they agreed that the statement was an expected competency. Participants then rated each statement on a three-point Likert-type scale (not at all, somewhat, well) as to the extent they could demonstrate the competency in their own practice.

Davis et al. (1992) found that many novice nurse faculty were not educationally prepared for the nurse educator role with 23.4% of respondents indicating their highest degree held was the baccalaureate. Of the master's prepared novices (68.3%), only two thirds reported taking courses for academic credit to prepare them for the educator role. Of those who had taken courses for credit, one half reported that the courses were not required for the degree.

Novice nurse educators in this study tended to agree with the competencies related to the teaching dimension and felt most confident in their role as clinical instructor; perhaps because they felt comfortable with their own clinical skills. Most of the participants disagreed with the competency statements related to the service and

research roles and indicated they felt less confident in conducting nursing education research. They also reported having difficulty with service – influencing political action, developing strategies for obtaining resources needed for implementing educational programs, and participating in the development of a master plan for cooperative utilization of clinical, technological, and educational resources (Davis et al., 1992).

Davis et al. (1992) concluded that graduate nursing programs may need to reexamine their course offerings to include more practical experiences throughout the curriculum that allow students to practice the teacher, researcher, and service roles. In addition, employing institutions must assist novice nurse educators with opportunities to be involved in committee work, group planning, decision making, professional development activities, and mentoring programs.

In an effort to define the minimum and ideal core competencies that nurse educators require, Choudhry (1992) investigated nurse educators' opinions regarding the competencies needed for the role. A survey questionnaire was designed to include specific activities within four sub roles identified in the literature: teaching, clinical practice, research, and service. To emphasize the importance of professional development, activities related to personal and professional growth were added within a fifth competency. The questionnaire also included demographic data including educational background, teaching experience, professional role, and institution type.

Respondents from community colleges and universities along with administrators from each institution identified the degree of desirability for each competency statement. In an effort to delineate novice and experienced performance, respondents identified beginning and ideal levels of competency. Cronbach's alpha was

greater than .88 for all sub roles and factor analysis reduced the original 96 competencies to a total of 14; six teaching, two practice, two research, two service, and two personal and professional growth competencies (Choudhry, 1992).

Results of this investigation revealed all respondents valued each competency though they rated each at different levels. Community college respondents rated competencies for evaluating students' performance, facilitating students' clinical practice, and acting as an advocate, advisor, and a resource higher than university educator respondents rated them. This result may be due to the fact that educators from community colleges have different role requirements than do university educators. For example, educators from community colleges have a greater focus on clinical practice and as a result, student evaluations, than educators employed by universities who are typically required to participate in research and scholarship. University-based educators gave student advising a lower rating than community college-based educators, perhaps due to the university-based educators' focus on research rather than students. Both groups of educators were in agreement on the remaining three teaching competencies, (a) facilitating student development, (b) curriculum development, and (c) demonstrating comprehensive knowledge of subjects, theories of teaching and learning, and appropriate classroom strategies; rating each as important for beginning and ideal levels of competence. Not surprisingly, the two sets of faculty demonstrated significant differences on the ratings for research and scholarship (Choudhry, 1992).

The results of this study indicate that new nurse educators in Canada should be able to participate fully in the employing institutions' structure, policies, and procedures. They must be knowledgeable about their own responsibilities and participate in

professional and community activities. As in other studies, faculty in this study agreed that nurse educators should share knowledge, participate in program development, implement change to keep up with complex healthcare environments, and participate in their own professional development (Choudhry, 1992; Davis et al., 1992).

Johnsen et al. (2002) conducted a study to determine Norwegian nurse educators' opinions of the importance and application of nurse educator competence domains. The Ideal Nursing Teacher Questionnaire, developed by Leino-Kilpi, Salminen, Leinonen, and Hupli (1994), was based on the questionnaire developed by Morgan and Knox in 1985. The results of this study indicate that both teaching and clinical skills were valued more than evaluation skills, personality traits, and relationships with students. Johnsen et al. (2002) interpreted this finding as a response to the relatively new shift from hospital-based nursing programs to university settings where nurse educators are now required to participate in research activities rather than building relationships with students. In fact, these participants indicated they had little time, heavy workloads, and too many students to teach since the move to academia. In addition, nurse educators were conflicted regarding the competence needed to integrate theory and practice. Some believed practical skill was important while others felt that nurse educators are educators who do not need to keep their clinical skills updated. There was agreement on the value of encouraging students to develop critical thinking skills (Johnsen et al., 2002).

Johnsen et al. (2002) concluded that nurse educators experience conflict as they strive for academic and clinical competence. In fact, their study indicated both teacher and clinical competence were ranked higher in importance than evaluation skills, personality factors, or relationships with students.

As a guide for curriculum development and improvement, the Southern Regional Educational Board's (SREB's) Council on Collegiate Education in Nursing (CCEN) convened an ad hoc committee to identify and validate essential nurse educator competencies. Using the competencies originally developed by Kitchens et al. (1986), the group reviewed and revised the list into 35 Nurse Educator Competencies and categorized them into three domains – 20 teacher-role competencies, 9 scholar competencies, and 6 collaborator competencies.

The ad hoc committee validated the competencies by surveying nursing education administrators of undergraduate and graduate programs in all 499 institutions in the SREB states and District of Columbia. The survey requested participants rank the importance of each competency and identify the most important. Respondents were asked to make additions or deletions and in this process, identified two more competencies (one in the teacher-role domain and one in the collaborator domain) for a total of 37.

Consistent with other studies (Choudhry, 1992; Davis et al., 1992; Johnsen et al., 2002), respondents from 2-year institutions ranked competencies related to clinical expectations of the faculty role higher, while 4-year institutions ranked competencies related to scholar expectations higher. The authors reiterated that graduate programs must review and revise their curricula to incorporate these competencies and work to shape public policy related not only to nursing education but also for regulation of nursing programs (Davis et al., 2005).

Between 2002 and 2004, the NLN convened the Task Group on Nurse Educator Competencies to review and synthesize the literature and develop a comprehensive set of nurse educator competencies. The task group reviewed literature in

nursing, higher education, medicine, allied health, social work, psychology, and sociology published between 1992 and 2004 with the goal of producing an evidence-based report on educator competencies. The resulting competency statements were revised based on review and feedback from nurse educators across the country (Halstead, 2007). The NLN Core Competencies characterize the knowledge, skills, and attitudes required of the nurse educator role and include: (a) facilitate learning, (b) facilitate learner development and socialization, (c) use assessment and evaluation strategies, (d) pursue personal development in the academic nurse educator role, (e) participate in curriculum design and evaluation of program outcomes, (f) function as a change agent and leader, (g) engage in scholarship of teaching, and (h) function effectively within the institutional environment and the academic community. Task statements for each competency domain were added to form a complete picture of the nurse educator role (NLN, 2005a).

In conclusion, the nurse educator role has been conceptualized as multidimensional by several authors who assert that faculty members must be adept within the academic community, focusing on teaching (Davis et al., 1992; Felton, 2000; Halstead, 2007; Little & Milliken, 2007), service (ASHE-ERIC Higher Education Report, 2003), and scholarship (Hill et al., 2003). Three dimensions of the nurse educator role (teaching, service, and research) were identified by Davis et al. (1992) who also concluded that graduate nursing programs may need to reexamine their course offerings to include more practical experiences throughout the curriculum that allow student's to practice the teacher, researcher, and service roles. Choudry (1992) agreed reporting that new nurse educators in Canada should be able to participate fully in the employing

institutions' structure, policies, and procedures. Johnsen et al. (2002) asserts that nurse educators experience conflict as they strive for academic and clinical competence; in fact, their study indicated both teacher and clinical competence were ranked higher in importance than evaluation skills, personality factors, or relationships with students.

The Southern Regional Education Board (SREB) Council on Collegiate Education in Nursing (CCEN) as well as the National League for Nursing (NLN) has been instrumental in identifying and validating nurse educator competency statements. Both recommended the competencies be added to curricula at the graduate level and be used by individual nurse educators in the form of professional development activities.

## NLN Nurse Educator Certification

With the intent to establish a Certified Nurse Educator (CNE) credential, the NLN established the Practice Analysis Committee (PAC) in 2005. The PAC collaborated with Applied Measurement Professionals, Inc. (AMP), the NLN manager of nurse educator certification, and the NLN senior director of professional development to design and conduct a practice analysis (Ortelli, 2006).

The practice analysis was accomplished by conducting a survey of NLN members and nonmembers about their professional practice activities. The committee agreed on 143 tasks that describe nurse educator activities then, assigned each to one of the eight NLN Core Competencies identified by the Task Group on Nurse Educator Competencies. The list of tasks formed the basis of the survey instrument and respondents were asked to rate each task statement on a Likert-type scale (0 = not part of my job; 1 = minimal significance; 2 = moderately significant; 3 = significant; 4 = very significant; and 5 = of maximum significance) (Ortelli, 2006).

Results of the survey indicate the task statements were appropriate in defining activities associated with the nurse educator role. For example, 97% of respondents indicated that the practice analysis survey adequately or completely addressed the responsibilities of the academic nurse educator. Reliability between tasks and respondents ($r$ = .919) indicated the scale represented a consistent collection of tasks and intraclass correlation ($r$ = .990) indicated the extent to which respondents agreed on the significance and importance of a task (Ortelli, 2006).

PAC members further refined the list of specific tasks to ensure that each was a part of, and significant to, nurse educator practice in the United States and clearly relevant to the role. This process further refined the list to 119 tasks which were organized into a detailed test blueprint that item writers and reviewers could be assured were linked to valid practice. PAC members reviewed the practice analysis results and made decisions regarding the final CNE exam blueprint. For example, a greater number of questions were assigned to content areas that received higher significance ratings in the practice analysis survey (Ortelli, 2006).

The first job-related certification examination for academic nurse educators was administered by the NLN on September 28, 2005 and by March 31, 2008, 954 nurse educators had earned the CNE credential. According to the NLN, "certification recognizes academic nursing education as a specialty area of practice and an advanced practice role within professional nursing, communicating to students, peers, and the academic and healthcare communities that the highest standards of excellence are being met" (NLN website, August 2008, ¶ 2).

## Professional Development

Nurse educators practice a dual role, that of educator and clinician. Both roles exist in ever-changing environments filled with multiple demands. Several authors recommend a commitment to developing and maintaining competence in order to successfully meet the challenges of the nurse faculty role. According to the NLN's position statement on *Lifelong Learning for Nursing Faculty,* all educators should participate in ongoing development activities connected to their educator role (NLN, 2001).

Watson and Grossman (1994), reporting on a faculty development program at Arizona State University, assert that faculty development may mean different things to different people but in general "…promotes improvement in the academy in large part through helping individuals to evolve, unfold, mature, grow, cultivate, produce, and otherwise develop themselves as individuals and as contributors to the academy's mission" (¶ 3). Watson and Grossman (1994) conducted a needs assessment survey of faculty and established a cohesive Faculty Development Office to address the needs of Arizona State University faculty. An integral piece of the program lies in the appointment of a faculty development liaison. The liaison typically has an interest in faculty development and has experience with the university. Faculty development programs and support activities are communicated to interested faculty through the liaison and perceived needs from faculty are communicated to the Faculty Development Office. Based on needs assessment survey results, the Faculty Development Office provided successful faculty development programs ranging from teaching to technology and faculty support.

Riner and Billings (1999) conducted a needs assessment in relation to faculty development in the teaching role. The assessment asked nurse educator respondents to rate their perceived need for professional development in the following four key areas: (a) teaching in the changing health care environment, (b) using teaching, evaluation, and curriculum strategies, (c) using learning resources and information technologies, and (d) understanding the teaching component of the faculty role.

Riner and Billings (1999) found that faculty perceive many and varied needs in order to meet the demand for excellence in the teaching role. For example, faculty in this study perceived a need for development in preparation for teaching in community-based settings, learning the basics of teaching, curriculum, and evaluation, and developing and refining their role as faculty. The study also indicated needs among educators varied depending on clinical teaching assignment, type of program they were teaching in, appointment and employment status (full or part-time; tenured or nontenured), and academic preparation. The results of this needs assessment confirmed the notion that nurse educators feel the need for ongoing development related to their role.

Sorcinelli (1994) conducted a longitudinal study of new higher education faculty and discovered several important aspects of the novice educator experience. First, new faculty seem to arrive on campus with excitement about their new careers and enthusiasm for the work ahead. Over time, however, they report a lower level of satisfaction with the role and a high level of work-related stress. Second, a sense of loyalty to the university is related to relationships with colleagues and department chairs. Additionally, new faculty members also express a desire for more assistance with the research and teaching roles. Third, new faculty report primary sources of concern are

vague or unrealistic expectations and the lack of feedback. According to Sorcinelli (1994), resources that address these issues are the key to improving the new faculty experience. Sorcinelli (1994) suggested universities provide new faculty orientation, mentoring, and programs for developing teaching and research skills.

Novice nurse educators have perhaps the most pressing need for support and professional development (Anderson, 2006; 2008; Siler & Kleiner, 2001). Many novice educators report the benefit of having a mentor relationship but rarely identify any professional development activities in which they have been engaged. The following research highlights the effectiveness and benefit of mentoring during the first year of practice as a nurse educator but also indicates a need for professional development activities.

Siler and Kleiner (2001) reported on a phenomenological study about the experiences of novice nurse educators during their first year in the role. Not unexpectedly, the novice nurse educators found themselves immersed in an unfamiliar role and an unfamiliar academic environment. While formal mentors were assigned to the novice educators, their relationships did not develop for several reasons, leading to a sense of isolation and anxiety. In addition, the workload was heavier than expected and they had concerns about their performance in the new role. Participants reported that more experienced colleagues were caring but had difficulty articulating the art of effective teaching.

Anderson (2006) conducted interviews with expert clinicians transitioning to the role of novice nurse educator, to gain understanding of the role transition from expert to novice. Nurse educators in this study reported a need for peer mentoring and that

mentors should desire the role, be knowledgeable about the campus and teaching, possess good interpersonal skills, and have sufficient time to dedicate to the role. In addition, this study shows the importance of orienting new nurse educators effectively to provide a smooth transition to the role. About her mentor, one participant stated "…I had one special mentor, really, who made my first year easier, because I would go to her and tell her all my concerns and she would listen and offer advice when appropriate" (p. 152) and from another, "if I didn't have that I'm not sure if I would've survived. I probably would've thrown up my hands and said this isn't for me" (p. 152).

Specific needs for professional development were evident in this study (Anderson, 2006). For example, "And tests, I don't like to see them [the students] do poorly. I can't walk them through a test like I can a procedure. That loss of control is a little difficult I think. And maybe it could have been addressed or if I had some training on it, I might have been better prepared" (p. 125) Academic advising was another area in which participants in this study had difficulty, "yeah we do have advising…yeah and you don't even know how the program runs. So that was another information piece that you sure wished you had…" (Anderson, 2006, p. 125).

Experienced nurse educators have professional development needs as well but minimal research has been conducted with this group. Morin and Ashton (1998) researched the characteristics of orientation programs for experienced faculty primarily teaching in graduate programs. Researchers asked participants about the most helpful aspects of their orientation programs as they transitioned into a new academic position. Most faculty (79%) reported receiving an orientation and indicated the information they received about the faculty role, support systems, and social milieu was most helpful;

faculty role, support systems, and social milieu. Morin and Ashton (1998) concluded that orientation programs are helpful in increasing new faculty satisfaction and productivity, and decreasing role strain.

Magnussen (1997) asserted that the complex nurse educator role is overwhelming for novice educators and recommended a five-year plan for professional development programs be instituted for all novice faculty. According to Magnussen (1997), professional development must include teaching and research expectations, committee and faculty governance responsibilities, as well as responsibilities for community and recruitment events within the college itself. In addition, the professional development plan must address the multiple aspects of the role which includes teaching, research, and service; and how these responsibilities will be evaluated for promotion and tenure.

The qualities of effective educators have been reported extensively in the literature (Chickering & Gamson, 1999; Choudhry, 1992; Fairbrother, 1996; Harvey & Green, 1993) and include (a) a commitment to teaching and demonstrating a love of the subject, (b) demonstrating fairness, (c) professional competence, (d) being well-prepared and making the classroom environment conducive to learning, and (e) engaging in innovative teaching practices. According to Fairbrother (1996), teachers must accept the responsibility for quality in their own practice. Regardless of experience level, nurse educators must assess, plan for, and actively engage in the professional development activities that will ensure a quality education for nursing students (NLN, 2001).

## Summary

The skill acquisition literature originated with Dreyfus and Dreyfus and their investigation of artificial intelligence in 1980. Patricia Benner (1984) investigated skill acquisition as it applied to clinical nursing in several studies spanning two decades. Both Dreyfus and Dreyfus and Benner agreed that there are five levels of skill acquisition including novice, advanced beginner, competent, proficient, and expert. Phillips et al. (2006) found the Dreyfus Model to be useful in assessing knowledge, while others have used the model to design and implement professional development activities (McElroy et al., 1991; Greene et al., 1993; Marble, 2009).

Role preparation for the nurse educator was limited during the 1980s and 1990s as most graduate programs focused on clinical knowledge and skill. By 2000, master's programs began including courses focusing on curriculum and instruction in education tracks or as electives (AACN, 2008). Despite this minimal level of training, and due in part to a shortage of qualified faculty, nurses prepared at undergraduate levels continue teaching in nursing programs.

The nurse educator role has evolved to encompass a variety of competencies and achieving them can be challenging for expert nurse educators and overwhelming for novices (Davis et al., 1992). Graduate programs are reviewing and revising curricula to incorporate these competencies and the NLN administered the first job-related certification examination for academic nurse educators on September 28, 2005. By March 31, 2008, 954 nurse educators had earned the CNE credential.

Nurse educators are required to practice the familiar role of clinician and the often unfamiliar role of educator. Riner and Billings (1999) found that faculty perceived a

need for development in preparation for teaching in community-based settings, learning the basics of teaching, curriculum, and evaluation, and developing and refining their role as faculty. Sorcinelli (1994) found that new higher education faculty members seem to arrive on campus with excitement about their new careers and enthusiasm for the work ahead. Over time, however, they report a lower level of satisfaction with the role and a higher level of work-related stress which may be alleviated by new faculty orientation, mentoring, and programs for developing teaching and research skills. Magnussen (1997) agreed and recommended a five-year plan be instituted for professional development programs for all novice faculty members. The NLN recommended nurse educators, regardless of experience level, must assess, plan for, and actively engage in the professional development activities that will ensure a quality education for nursing students (NLN, 2001).

# CHAPTER THREE: RESEARCH METHODS

This descriptive study investigated skill acquisition among nurse educators, specifically looking for relationships and differences between nurse educators with varying levels of education, experience, and work environment and their perceived level of skill acquisition. Data from this study also provided an initial assessment of a skill acquisition model for the nurse educator role. This chapter identifies the population, describes the survey instrument developed for the study, and the procedures and methods used to gather and analyze the data.

## Design

This descriptive study used a cross-sectional design to examine the skill acquisition of nurse educators in West Virginia and North Carolina. According to Fink (2003), cross-sectional surveys "gather descriptive data at one fixed point in time" (p. 23). In addition, this study sought to design and implement a quantitative survey instrument to measure skill acquisition among nurse educators. Data were collected through the use of self-report survey procedures using a researcher designed questionnaire.

Surveys are used to collect data from or about people to "describe, compare, or explain their knowledge, attitudes, and behavior" (Fink, 2003, p. 1) and can be used to collect data on a broad range of subjects in diverse fields. The survey design was chosen for this study because it allows the researcher to collect and compare data from a large number of nurse educators licensed in either West Virginia or North Carolina.

## Population

The population for this study included nurse educators licensed in either West Virginia or North Carolina. Inclusion criteria required that the educator practice in a private or public college or university, community college, or hospital-based nursing program. Educators who taught in Licensed Practical Nursing programs, Certified Nursing Assistant programs, Certified Homemaker programs, acute, long term care, or mental health inservice programs, or other allied health programs were excluded from the study. Although some educators resided in one state and practiced in another, only educators who taught in either West Virginia or North Carolina were included in the study.

Nurse educator names and addresses were acquired from the North Carolina Board of Nursing (NCBON) and the West Virginia Board of Examiners for Registered Professional Nurses (WVBOE). Nurse educators were identified by the respective State Board of Nursing in response to self identification by the educator during license renewal procedures. Though educators teaching in undergraduate and graduate registered nurse programs were sought, names and addresses of educators teaching in allied health, licensed practical nursing (LPN), certified nursing assistant (CNA) and homemaker programs as well as those educators teaching in acute, long term or mental health facilities, and those licensed in West Virginia or North Carolina, but teaching in bordering states, were also provided. A total of 2105 prospective respondents (796 from West Virginia and 1309 from North Carolina) were invited to participate in the study and responses to demographic questions were used to either include or exclude respondents from data analysis.

According to Cindy Haynes (email correspondence, October, 8, 2009) of the WVBOE, 796 registered nurses identified themselves as nurse educators during the 2008 licensing period, but West Virginia nursing schools reported that 519 (65 %) were teaching in either a full or part time capacity in graduate or undergraduate nursing programs in the State of West Virginia during the 2008/2009 school year. The remaining educators were teaching in Licensed Practical Nursing programs, Certified Nursing Assistant programs, acute or long term care inservice departments, or allied health programs. Additionally, the 519 educators identified as employed in graduate or undergraduate nursing programs may have been employed by more than one institution; making the total number of educators working in undergraduate or graduate programs an estimate.

The NCBON reported a total of 1309 registered nurses who identified themselves as nurse educators during the 2008/2009 school year, however, a percentage of them were also working in programs other than graduate or undergraduate nursing education. Using the West Virginia percentage (65%) as a basis for projection, it was estimated that 850 registered nurses were working as nurse educators in graduate or undergraduate nursing programs in the State of North Carolina during the 2008/2009 school year. By combining the estimated total from West Virginia and North Carolina, a total of 1369 nurse educators from North Carolina and West Virginia were projected as the study population and this number was used to calculate the response rate.

## Nurse Educator Skill Acquisition Conceptual Framework

The Nurse Educator Skill Acquisition Conceptual Framework (Appendix D) was devised based on skill acquisition originally described by Dreyfus and Dreyfus (1986) and used by Benner (1984) in her work with clinical nurses, the NLN Nurse Educator Competencies, and available literature. The conceptual framework was developed to reflect novice to expert concepts within competency domains as they related to nurse educator skills. Additionally, the Dreyfus Model of Skill Acquisition was applied to the nurse educator role resulting in the Nurse Educator Skill Acquisition Model and reflects skill acquisition concepts for the novice to expert levels (Appendix E). Both the Nurse Educator Skill Acquisition Conceptual Framework and Nurse Educator Skill Acquisition Model were then used to guide the development of a survey tool used for investigating skill acquisition among nurse educators.

## Instrumentation

Data addressing the eight research questions for this study were collected through the use of a researcher designed instrument. The survey instrument asked respondents to identify demographic data and respond to statements identifying their perceived level of confidence with tasks associated with the nurse educator role. These activities correspond with the study's definitions and research questions described in chapter one.

### *The Nurse Educator Skill Acquisition Assessment Tool*

In order to investigate skill acquisition among nurse educators, the *Nurse Educator Skill Acquisition Assessment Tool* (Appendix B) was developed for the study based on the conceptual framework of skill acquisition devised for this study. Items on

the *Nurse Educator Skill Acquisition Assessment Tool* were worded to focus on skill acquisition and the Nurse Educator Competencies identified and published by the NLN. The Nurse Educator Competencies refer to common activities that nurse educators are expected to engage in.

The survey instrument is divided into two parts. The first section (Part 1) contained eight demographic questions asking educators to detail their educational level, professional development activities and those activities specifically associated with curriculum and instruction, the program they currently teach in and current work setting (public or private university, or community college), years of clinical and teaching experience, and whether or not they have passed the NLN Certified Nurse Educator exam. These items were not only designed to gather data about respondents, but were also used to include or exclude respondents from the study.

The second section (Part 2) of the instrument included 40 statements describing nurse educator activities and was based on the NLN competency statements. The statements were worded to include language associated with each level of skill acquisition. For example, novice level statements include words such as identify and determine. Advanced beginner level statements include words such as discriminate and choose. Competent level language includes understand and participate. Proficient level language includes identifiers such as develop, alter, and design. Expert level language includes words such as advocate, disseminate, and lead.

The 40 survey items in Part 2 were designed to collect data using a five-point (1 to 5) scale where 1 indicated low confidence, 2 indicated moderately low confidence, 3 indicated confidence, 4 indicated moderately high confidence, and 5 indicated high

confidence in completing the described nurse educator activities. Additionally, the 40 survey items were divided into five questions for each of the eight competency domains. The *Tool* produced an overall score for each competency domain. Both competency domain and overall scores reflect a ranking in the novice, advanced beginner, competent, proficient, or expert level based on the *Nurse Educator Skill Acquisition Assessment Tool* scoring grid (Appendix C).

The second section also contained eight application questions designed to explore nurse educator actions and to compare confidence levels with actions. These application questions provided a common nurse educator situation and five possible choices for action. Respondents were asked to choose the one action they would do if confronted with the situation. One question was designed for each of the eight nurse educator competency domains and response choices were designed to reflect activities associated with the novice, advanced beginner, competent, proficient, and expert level of skill acquisition.

The survey tool was designed to provide a score related to the individual skill acquisition level. Scores were also obtained for each competency statement, each vignette, total competency domains, total vignettes, and total skill acquisition.

***Validity and Reliability of the Instrument***

The *Nurse Educator Skill Acquisition Assessment Tool* was reviewed by a panel of experts to establish content related validity for its use in answering the research questions posed by this study. According to Polit & Hungler (1999), validity refers to the "degree to which an instrument measures what it is supposed to be measuring" (p. 418). The panel reviewed the researchers' application of the Dreyfus Model of Skill

Acquisition to the nurse educator role (See Appendix E) and the researcher-designed conceptual framework (See Appendix D) as well as survey item content and format. The composition of this panel is described in Appendix F.

After obtaining permission to conduct the study from the Marshall University Institutional Review Board (Appendix G), a pilot study was conducted to validate the accuracy of the *Nurse Educator Skill Acquisition Assessment Tool* in determining skill acquisition levels. Participants for the pilot study were drawn from a small convenience sample of 10 nurse educators in West Virginia. Respondents completing the survey were assured confidentiality. Analysis of the pilot study findings guided final revisions to the Nurse Educator Skill Acquisition Assessment Tool and survey procedures. Final revision included formatting for online delivery of the survey.

The internal consistency of the *Nurse Educator Skill Acquisition Assessment Tool* was tested using Cronbach's alpha coefficient during data analysis. The alpha coefficient for the 40 items in Part 2 of the tool was .977 ($M$ = .519, Range = .711). Alpha coefficients for the five questions related to each of the eight competency domains were calculated and ranged between .85 and .90. The internal consistency for the eight vignette questions was calculated as .57 (M = .157, Range = .346).

## Data Collection Procedures

A relationship between the researcher and the West Virginia Center for Nursing was established whereby the researcher agreed to provide the Center with West Virginia Nurse Educator data and the Center allowed the researcher to use the Center's SurveyMonkey.com subscription. In addition, the Center provided assistive personnel to

aid in establishing the survey online and on the Center's website; and assisted the researcher to monitor the survey during the data collection period.

The Nurse Educator Skill Acquisition Assessment Tool was completed and posted on SurveyMonkey.com. A total of 2105 prospective respondents were mailed a letter of invitation to join the study in April 2009. The letter included: (a) an explanation of the study and proposed intent (Appendix A) indicating the nature of the research, the intent of the survey, and promise of anonymity; (b) a website address for the Nurse Educator Skill Acquisition Assessment Tool and for the West Virginia Center for Nursing (as the respondents could access the Tool from either website); (c) a unique PIN used to track returns; and (d) the researcher's contact information.

To increase the likelihood of accurate responses to the survey, prospective respondents were assured confidentiality and that only aggregate data would be reported. In addition, respondents were assured that neither they nor their institutions would be identified by name in the presentation of the study's findings.

Responses were tracked and coded by PINs in order to send a second letter of invitation to nonresponders. By May 2009, a total of 342 responses had been collected. Second letters were sent approximately five weeks after the first request. An additional, 72 responses were garnered from the second request letters. The survey was closed on June 12, 2009 when responses diminished to zero for three consecutive days and 454 respondents had completed the survey. A total of 339 respondents met inclusion criteria based on demographic data and were included in data analysis.

## Response Rate

The original pool of 2105 prospective respondents was edited based on letters returned to sender for undeliverable mail, messages to the researcher from family members indicating the individual was deceased, and messages from prospective respondents indicating they had retired or were no longer working in nursing education. After editing, the original pool of 2105 shrank to 1876 and was ultimately reduced to 1369 based on information from the WVBOE and estimated for the state of North Carolina regarding the total number of nurse educators teaching in graduate or undergraduate programs during the 2008/2009 school year.

Returns were sorted for inclusion/exclusion criteria. Nurse educators met inclusion criteria if they were currently teaching in an undergraduate or graduate nursing program in either West Virginia or North Carolina. Those who teach in LPN, CNA, or Certified Homemaker programs, acute, long term or mental health facilities, were retired, or were not teaching in either West Virginia or North Carolina were excluded from the study. A total of 454 participants (33%) of the 1369 projected sample population answered the survey. A total of 339 (24.7%) met inclusion criteria and were included in data analysis.

## Data Analysis

The *Nurse Educator Skill Acquisition Assessment Tool* was used to measure the skill acquisition level of nurse educators in North Carolina and West Virginia. Data were sorted and categorized based on participant responses. The data were analyzed to determine the total nurse educator skill acquisition level, skill acquisition levels based on the eight competency domains, and to determine if there were any differences among

participants based on educational background, clinical or teaching experience, professional development activities and those activities associated with curriculum and instruction, type of program and institution the participant is associated with, and whether or not the participant has passed the NLN Nurse Educator exam. A confidence level of .05 was sought for each analysis.

Chi-square values were determined by Kruskal-Wallis analysis to determine the statistical significance of participant responses in relation to their self-reported level of confidence completing nurse educator activities and their projected actions associated with nurse educator dilemmas. Frequency, percentages, mean scores, and standard deviations for all survey items were collected. Analysis by Pearson *r* correlation coefficient testing was used to determine relationships between the total competency domain scores and corresponding practice questions. One sample *t* test was used to determine the statistical significance of the findings related to each competency domain. Spearman Rho analysis was used to determine relationships between total skill acquisition score and total vignette score based on demographic information as well as relationships between competency domain scores and vignette scores based on demographics.

Measures of internal consistency for the instrument were determined by calculating Cronbach's Alpha for each survey item and the total skill acquisition score. Range scores were calculated for the five questions in each domain and for each vignette score.

## Limitations of the Study

This study relied on self-report data, and therefore presents at least two specific limitations including the validity associated with self-reported data and the underlying affect bias of social desirability in responses. Specific measures were taken in the design of the data collection method to limit the effects of social desirability, such as protection of confidentiality (Polit & Hungler, 1999).

This study is also limited by the issues involving non-experimental descriptive research design such as the limited ability to determine causal relationships, convenience sampling, and faulty interpretation of the data. In addition, the concepts to be measured in this study relied on individual perceptions of confidence in activities related to the nurse educator role.

## Summary

The procedures described in this chapter were designed to determine skill acquisition among nurse educators as well as the projected actions that participants may engage in associated with common nurse educator dilemmas. Additionally these procedures were used to validate the *Nurse Educator Skill Acquisition Assessment Tool* and the Nurse Educator Skill Acquisition Model designed for this study. A population of nurse educators from either West Virginia or North Carolina comprised the convenience sample group. Appropriate descriptive statistics were used to describe the sample group, participant skill acquisition level, and significant differences among responses.

# CHAPTER FOUR: PRESENTATION AND ANALYSIS OF THE DATA

The primary purpose of this study was to investigate skill acquisition among nurse educators. Secondarily the study sought to design and validate a skill acquisition model for nurse educators. Another purpose of this study was to determine if selected demographic factors including clinical and teaching experience, work setting, educational background, level and focus of professional development activities, and successfully completing the NLN Certified Nurse Educator Exam made any difference in the level of skill acquisition among nurse educators.

This chapter presents the data collected for this study and provides a statistical analysis of that data. The chapter is divided into the following sections: (a) data collection procedures; (b) respondent characteristics; (c) major findings for each of the eight research questions addressed by this study; (d) ancillary findings; and (e) a summary of the chapter.

## Respondent Characteristics

Part one of the survey requested respondents answer eight demographic questions. Questions were designed to elicit information regarding the respondents educational background, type of program in which they were currently teaching and the type of school in which they were employed, previous clinical and teaching experience, professional development hours and those professional development hours that focused on curriculum and/or instruction, and whether or not the respondent had passed the NLN Certified Nurse Educator exam. Demographic information is summarized in Table 1.

The majority (57.1%) of respondents indicated their highest level of education was the master's degree in nursing ($n$ = 192), while 7.1% reported they had completed a

postmaster's certificate ($n$ = 24) and 26.2% had completed a doctoral degree ($n$ = 88). Respondents were asked to indicate the type of nursing program they were currently teaching in: Associate Degree, Diploma, Bachelor of Science in Nursing, Master of Science in Nursing, or Doctoral Degree. These categories were combined to reflect associate and diploma programs, bachelors programs, and graduate degree programs to provide sufficient cell size for analysis. More than half (51.2%) of the respondents indicated they taught in associate or diploma programs ($n$ = 173), while 46.4% reported teaching in bachelors programs ($n$ = 157) and 22.2% teach in graduate programs ($n$ = 75). Some, however, indicated they were teaching in more than one type of program. Nearly equal numbers of respondents indicated they worked in either the community college ($n$ = 118) or public university ($n$ = 119) setting, while 28.4% reported being employed by a private school or university ($n$ = 96).

Quartiles were devised to group responses regarding years of clinical experience as follows: (a) 1 – 10 years, (b) 11 – 17 years, (c) 18 – 25 years, and (d) 26 – 43 years. Ninety-three respondents indicated they had between 1 and 10 years experience. The remaining participants were split among the remaining three categories as follows: 11 – 17 years (22%), 18 – 25 years (26.2%), and 26 – 43 years (23.0%) of clinical experience. The following quartiles were also devised to group participant responses based on teaching experience: (a) 1 – 5 years, (b) 6 – 11 years, (c) 12 – 20 years, and (d) 21 – 45 years. Ninety-seven respondents indicated they had 1 – 5 years teaching experience. The remaining three categories were split as follows: 6 – 11 years (22.6%), 12 – 20 years (24.7%), and 21 – 45 years (23.5%) of teaching experience.

Participants were asked to report the number of professional development hours they had participated in during the past year. The majority of respondents (54.8%) indicated they participated in greater than 25 hours of professional development ($n$ = 183), while 35.9% reported participating in 15 – 25 hours ($n$ = 120), and 9.3% reported participating in less than 15 hours of professional development ($n$ = 31). Participants were asked to report their professional development hours focused on curriculum and instruction and quartiles were devised to group the responses as follows: (a) 0 – 5 hours, (b) 6 – 10 hours, (c) 11 – 18 hours, and (d) more than 19 hours. Eighty five (26.8%) of the respondents indicated they participated in five or fewer hours of professional development focused on curriculum and instruction, while 24.9% indicated they had participated in 6 – 10 hours, 25.3% indicated they had participated in 11 – 18 hours, and 23% indicated they had participated in 19 or more hours of professional development focused on curriculum and instruction.

Respondents were asked whether or not they had passed the Certified Nurse Educator exam. Thirty three participants indicated they had passed the exam while two hundred and ninety five or 89.9% indicated they had either not passed or had not taken the exam. As the number of respondents indicating they had passed the exam was relatively low, this demographic data were not used as an independent variable for data analysis.

Table 1. *Demographic Characteristics of Participants (n = 339)*

| Characteristic | *n* | % |
|---|---|---|
| Highest education level completed | | |
| Associate Degree | 1 | 0.3 |
| Bachelor of Science in Nursing | 31 | 9.2 |
| Master of Science in Nursing | 192 | 57.1 |
| Post Masters Certificate | 24 | 7.1 |
| Doctoral | 88 | 26.2 |
| *Program type | | |
| ASN/Diploma | 173 | 51.2 |
| BSN | 157 | 46.4 |
| MSN/Doctoral | 75 | 22.2 |
| Work setting | | |
| Community college | 118 | 34.9 |
| Private school or university | 96 | 28.4 |
| Public university | 119 | 35.2 |
| Clinical experience | | |
| 1 – 10 years | 93 | 28.1 |
| 11 – 17 years | 70 | 22.7 |
| 18 – 25 years | 74 | 26.2 |
| 26 – 43 years | 76 | 23 |

Table 1. *Demographic Characteristics of Participants (n = 339)*
(continued)

| Characteristic | *n* | % |
|---|---|---|
| Teaching experience | | |
| 1 – 5 years | 97 | 29.2 |
| 6 – 11 years | 75 | 22.6 |
| 12 – 20 years | 82 | 24.7 |
| 21 – 45 years | 78 | 23.5 |
| Professional development hours | | |
| < 15 | 31 | 9.3 |
| 15 – 25 | 120 | 35.9 |
| > 25 | 183 | 54.8 |
| Professional development hours with a curriculum and instruction focus | | |
| 0 – 5 | 85 | 26.8 |
| 6 – 10 | 79 | 24.9 |
| 11 – 18 | 80 | 25.3 |
| 19 + | 7 | 23.0 |
| Certified Nurse Educator Exam | | |
| Pass | 33 | 10.1 |
| Did not take / did not pass | 295 | 89.9 |

* Duplicated count

## Major Findings

Findings discussed within this section are organized around each of the eight research questions investigated during the study. The last section includes findings ancillary to the research questions.

### RQ1 What is the total perceived level of skill acquisition related to the NLN Nurse Educator Competencies?

The mean total nurse educator skill acquisition scores ranged from 24 to 200. According to the Nurse Educator Skill Acquisition Assessment Tool scoring grid, 0 – 40 indicates novice, 41 – 80 indicates advanced beginner, 81 – 120 indicates competence, 121 – 160 indicates proficiency, and 161 – 200 indicates an expert level of skill acquisition. Data related to the range of nurse educator skill acquisition scores may be found in Table 2. Thus, the mean total score (153.24) and standard deviation (29.04) indicated a proficient level of skill acquisition. Data related to the total nurse educator skill acquisition scores may be found in Table 3.

Table 2. *Nurse Educator Perceived Level of Skill Acquisition Related to the Skill Acquisition Scoring Grid*

| Total Skill Acquisition Scores | | | |
|---|---|---|---|
| | Range of Scores | *n* | % |
| Skill Acquisition Level/Range of Possible Scores | | | |
| Novice | 24 – 39 | 3 | 0.9 |
| 0 - 40 | | | |
| Advanced Beginner | 72 – 80 | 4 | 1.2 |
| 41 – 80 | | | |
| Competent | 84 – 120 | 37 | 11 |
| 81 – 120 | | | |
| Proficient | 121 – 160 | 142 | 44.2 |
| 121 – 160 | | | |
| Expert | 161 – 200 | 149 | 42.7 |
| 161 – 200 | | | |

Table 3. *Mean Total Nurse Educator Perceived Level of Skill Acquisition*

| Mean Total Skill Acquisition Score | | | |
|---|---|---|---|
| | *SD* | *df* | *t* value |
| Mean Total Skill Acquisition Score | | | |
| 153.2 | 29 | 334 | 96.6*** |

*** $p = .000$

Part two of the Nurse Educator Skill Acquisition Assessment Tool consisted of 40 statements regarding the respondents' confidence in completing nurse educator tasks. The 40 statements were divided into five statements for each of the eight competency domains identified in the National League of Nursing (NLN) Nurse Educator Competency. Respondents were asked to rate their level of confidence using the following Likert scale descriptors: 1 = low confidence; 2 = moderately low confidence; 3 = confident; 4 = moderately high confidence; and 5 = high confidence. Frequencies, percentage responses, standard deviation, and mean scores were calculated for each response as well as for the total skill acquisition score. Chi-square values were derived for each of the 40 skill acquisition statements. Data related to confidence in completing nurse educator tasks may be found in Table 4.

Questions one through five of Part 2 dealt with nurse educator confidence in completing tasks associated with competency domain one (facilitate learning). More than 82% of respondents indicated they had either a moderately high (39.4%) or high (43.3%) level of confidence in identifying essential course and clinical content that meets objectives. A chi-square analysis determined that these results were statistically significant, $\chi^2$ (4, $n$ = 173) = 275.5, $p$ = .000. With regard to conducting class and clinical experiences that effectively impart nursing knowledge, nearly 92% of respondents indicated they had moderately high (40.4%) or high (51.4%) levels of confidence. Chi-square analysis determined that these results were statistically significant, $\chi^2$ (4, $n$ = 302) = 383.4, $p$ = .000. Nearly half the respondents indicated they had a high (49.1%) level of understanding with regard to how course content meets curriculum objectives. Chi-square analysis determined these results were statistically significant, $\chi^2$ (4, $n$ = 281) = 314.9, $p$ =

.000. Respondents also indicated they had a moderately high (36.6%) or high (33.2%) level of confidence in developing plans to assist students in academic difficulty while 25.8% indicated they had a moderate level of confidence. Chi-square analysis revealed statistical significance, $\chi^2$ (4, $n$ = 227) = 183, $p$ = .000. More than one third (40.4%) of respondents indicated they had a moderately high level of confidence in developing innovative programs for student success and retention, while 30.6% indicated they had a moderate level, and 21.1% a high level of confidence. Chi-square analysis revealed a statistically significant result, $\chi^2$ (4, $n$ = 301) = 173.4, $p$ = .000.

The next five questions in Part 2 asked respondents to rate their level of confidence with tasks associated with competency domain two (facilitate learner development and socialization). The majority of respondents indicated they had a moderately high (45.9%) or high (36.6%) level of confidence in identifying their personal teaching style. Chi-square analysis determined that these results were statistically significant, $\chi^2$ (4, $n$ = 275) = 158.8, $p$ = .000. Nearly 75% of respondents indicated they had a moderately high (45.3%) or high (29.4%) level of confidence in discriminating between different teaching and learning styles. Chi-square analysis revealed a statistically significant result, $\chi^2$ (4, $n$ = 249) = 129.8, $p$ = .000. With regard to individual teaching styles and their relationship to curricular outcomes, more than 75% of respondents indicated they had a moderately high (45.8%) or high (29.3%) level of confidence in understanding this relationship. Chi-square analysis determined that this result was statistically significant, $\chi^2$ (4, $n$ = 251) = 123.5, $p$ = .000. When asked to rate their level of confidence with altering their own teaching styles to accommodate different learning styles, 28.2% reported a moderate and 43.8% a moderately high level of confidence. A

chi-square analysis revealed that these responses were statistically significant, $\chi^2$ (4, $n$ = 240) = 111.4, $p$ = .000. In addition, more than 70% of respondents reported they had a moderate (30%) or moderately high (40.2%) level of confidence in designing new teaching strategies. Chi-square analysis determined a statistically significant result, $\chi^2$ (4, $n$ = 234) = 193.2, $p$ = .000.

The next five questions in Part 2 were related to competency domain three (use assessment and evaluation strategies). More than 77% of respondents indicated they had a moderately high (41.3%) or high (35.8%) level of confidence in identifying basic assessment and evaluation strategies. Chi-square analysis determined that this result was statistically significant, $\chi^2$ (4, $n$ = 256) = 232.5, $p$ = .000. The majority of respondents (73.2%) reported they had a moderately high (41.3%) or high (31.9%) level of confidence in choosing effective assessment and evaluation strategies. Chi-square analysis revealed that nurse educator responses were statistically significant for this competency, $\chi^2$ (4, $n$ = 243) = 217.2, $p$ = .000. More than six of ten respondents (66.3%) reported a moderate (25.3%) or moderately high (41%) level of confidence in constructing and analyzing multiple choice test items. Chi-square analysis revealed that nurse educator responses were statistically significant for this competency, $\chi^2$ (4, $n$ = 220) = 163.5, $p$ = .000. When asked to rate their level of confidence with altering assessment and evaluation strategies based on test analysis, more than 68% of respondents indicated they had a moderate (28.3%) or moderately high (39.8%) level of confidence. Chi-square analysis revealed a statistically significant result, $\chi^2$ (4, $n$ = 226) = 173.9, $p$ = .000. With regard to designing new assessment and evaluation strategies, 69.3% of respondents indicated they had

moderate (33.4%) or moderately high (35.9%) levels of confidence. This result was also statistically significant by chi-square analysis, $\chi^2$ (4, $n$ = 128) = 147.4, $p$ = .000.

The next five questions related to competency domain four (participate in curriculum design and evaluation of program outcomes). More than 63% of respondents indicated they had a moderately high (34.5%) or high (29%) level of confidence in identifying a curriculum design. Chi-square analysis revealed statistical significance, $\chi^2$ (4, $n$ = 208) = 130.5, $p$ = .000. In addition, 62.7% of respondents indicated they had a moderately high (32.7%) or high level (30%) of confidence in understanding different curricular components. Chi-square analysis determined that this result was statistically significant, $\chi^2$ (4, $n$ = 300) = 143.3, $p$ = .000. Seven of ten respondents (70.5%) reported they had a moderately high (33.7%) or high (36.8%) level of confidence in participating in program evaluation. Chi-square analysis revealed statistical significance in the nurse educator responses regarding this competency, $\chi^2$ (4, $n$ = 232) = 165.5, $p$ = .000. More than one third of the respondents (35.6%) reported a moderately high level of confidence in suggesting changes to the program evaluation process in their schools, while 32.8% indicated a high level of confidence. Chi-square analysis determined a statistically significant result, $\chi^2$ (4, $n$ = 223) = 156.5, $p$ = .000. The majority of respondents (69.1%) indicated they had a moderate (32.7%) or moderately high (36.4%) level of confidence in designing innovative curricula to improve nursing education. Chi-square analysis revealed a statistically significant result, $\chi^2$ (4, $n$ = 228) = 151.5, $p$ = .000.

The next five questions asked respondents to rate their level of confidence with nurse educator tasks related to competency domain five (function as a change agent and leader). Nearly eight of ten respondents reported a moderately high (43.3%) or high

(35.8%) level of confidence in identifying their personal leadership style. Chi-square analysis determined a statistically significant result for this competency, $\chi^2$ (4, $n$ = 261) = 135.2, $p$ = .000. In addition, more than 75% of respondents indicated they had a moderately high (45.3%) or high (30.8%) level of confidence in understanding how their personal style may be used effectively to promote change. Chi-square analysis revealed a statistically significant result, $\chi^2$ (4, $n$ = 252) = 128.3, $p$ = .000. When asked to rate their level of confidence with implementing strategies for organizational change, most respondents (73.2%) indicated they had a moderate (30.5%) or moderately high (42.7%) level of confidence. Nurse educator responses for this competency were statistically significant using chi-square analysis, $\chi^2$ (4, $n$ = 240) = 196.4, $p$ = .000. More than six of ten respondents reported moderately high (38.7%) or high (27.8%) levels of confidence in functioning as a leader in their institutional organizations. Chi-square analysis revealed statistical significance for this competency, $\chi^2$ (4, $n$ = 220) = 162.9, $p$ = .000. The majority (66.5%) of respondents indicated they had a moderate (35.1%) or moderately high (31.4%) level of confidence in leading interdisciplinary efforts to address healthcare and educational needs regionally, nationally, and internationally. The chi-square analysis of these responses was statistically significant, $\chi^2$ (4, $n$ = 216) = 118.9, $p$ = .000.

The next five questions related to competency domain six (pursue continuous quality improvement in the nurse educator role). The majority (82.2%) of nurse educators reported they had a moderately high (36.5%) or high (45.7%) level of confidence in identifying their professional development needs. Chi-square analysis revealed a statistically significant result, $\chi^2$ (4, $n$ = 268) = 154.9, $p$ = .000. More than half (51.7%) of all respondents reported a high level of confidence in participating in professional

development activities to meet personal goals. Chi-square analysis revealed a statistically significant result for this competency, $\chi^2$ (4, $n$ = 167) = 318.2, $p$ = .000. In addition, nearly half (44.2%) of the respondents indicated they had a high level of confidence in demonstrating improvement of their performance based on professional development, self-reflection, and experience. Chi-square analysis determined a statistically significant result, $\chi^2$ (4, $n$ = 144) = 167.4, $p$ = .000. The majority of respondents (74%) indicated a moderate (32.1%) or moderately high (41.9%) level of confidence in balancing teaching, scholarship, and service. Chi-square analysis revealed a statistically significant result, $\chi^2$ (4, $n$ = 242) = 211.9, $p$ = .000. More than 77% of respondents indicated they had a moderately high (38%) or high (39.9%) level of confidence in serving as a mentor. Chi-square analysis also revealed a statistically significant result, $\chi^2$ (4, $n$ = 154) = 220.2, $p$ = .000.

The next five questions asked respondents to rate their level of confidence with tasks associated with competency domain seven (engage in scholarship). The majority of respondents (72.3%) indicated they had a moderate (34.8%) or moderately high (37.5%) level of confidence in using teaching content or strategies passed down from a peer or mentor. Chi-square analysis revealed a statistically significant result, $\chi^2$ (4, $n$ = 235) = 87.3, $p$ = .000. Nearly eight of ten (78%) respondents reported a moderately high (40.7%) or high (37.3%) level of confidence in using literature to plan teaching and learning activities. Chi-square analysis determined a statistically significant result, $\chi^2$ (4, $n$ = 251) = 235.9, $p$ = .000. A third (34.7%) of respondents indicated a moderate level of confidence in participating as a team member in scholarly activities and demonstrating effective proposal writing, while 27.6% indicated a moderately high level of confidence.

Chi-square analysis revealed a statistically significant result, $\chi^2$ (4, $n$ = 203) = 101.9, $p$ = .000. Thirty-five percent of respondents indicated a moderate level of confidence in designing and conducting research, while 26.5% indicated a moderately low level. Chi-square analysis determined a statistically significant result, $\chi^2$ (4, $n$ = 201) = 90.8, $p$ = .000. More than 58% of respondents indicated a moderate (36.4%) or moderately high (22.2%) level of confidence in disseminating information locally, nationally, or internationally to enhance nursing education. Chi-square analysis revealed a statistically significant result, $\chi^2$ (4, $n$ = 190) = 88.2, $p$ = .000.

The last five statements asked respondents to rate their level of confidence with tasks associated with competency domain eight (function within the educational environment). More than half of all respondents (57%) indicated they had a high level of confidence in determining their professional goals, while another 32.4% rated their level of confidence in the moderately high range. Chi-square analysis revealed that these responses were statistically significant, $\chi^2$ (4, $n$ = 287) = 244.7, $p$ = .000. When asked to rate their level of confidence with identifying social, economic, political, and institutional forces that influence higher education, 75.1% reported having moderately high (45%) or high (30.1%) levels of confidence. Chi-square analysis of these responses revealed significance, $\chi^2$ (4, $n$ = 242) = 229.6, $p$ = .000. More than 60% of respondents indicated they had a moderately high (37.9%), or high (25.2%) level of confidence in developing networks, collaborations, and partnerships to enhance nursing's influence within academia. These results were statistically significant by chi-square analysis, $\chi^2$ (4, $n$ = 290) = 141.7, $p$ = .000. Approximately 82% of respondents indicated they had a moderately high (46.1%) or high (36.4%) level of confidence in building organizational

climate using respect, collegiality, professionalism, and caring. Chi-square analysis revealed a statistically significant result, $\chi^2$ (4, $n$ = 265) = 274.2, $p$ = .000. When asked to rate their confidence in advocating for nursing in the political arena, approximately three in ten (34.7%) respondents reported a moderate level of confidence, while one in four (25.7%) reported a moderately high level, and 14.2% reported a high level of confidence. These responses were statistically significant by chi-square analysis, $\chi^2$ (4, $n$ = 241) = 86.9, $p$ = .000.

In summary, the mean total skill acquisition score (153.24) and standard deviation (29.04) indicated that participants in this study had a moderately high level of confidence in completing tasks associated with the nurse educator role. Additionally, the use of chi-square analysis determined participant responses were statistically significant in relation to all 40 competency statements.

Table 4. *Nurse Educator Perceived Level of Skill Acquisition*

| | Level of Skill Acquisition | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Low | | Moderately Low | | Moderate | | Moderately High | | High | | |
| | *n* | % | *n* | % | *n* | % | *n* | % | *n* | % | $\chi(4)$ |
| Competency Domain/Competency | | | | | | | | | | | |
| **Facilitate learning** | | | | | | | | | | | |
| 1. Identify essential course/ clinical content that meets course objectives. | 1 | 0.3 | 5 | 1.5 | 51 | 15.5 | 130 | 39.4 | 143 | 43.3 | 275.7*** |
| 2. Conduct class/clinical experiences that effectively impart nursing knowledge. | 1 | 0.3 | 1 | 0.3 | 25 | 7.6 | 133 | 40.4 | 169 | 51.4 | 383.4*** |
| 3. Understand how course content meets curriculum objectives. | 1 | 0.3 | 5 | 1.5 | 39 | 12 | 121 | 37.1 | 160 | 49.1 | 314.9*** |
| 4. Develop a plan to assist individual students in academic difficulty. | 1 | 0.3 | 13 | 4 | 84 | 25.8 | 119 | 36.6 | 108 | 33.2 | 183.5*** |
| 5. Develop innovative programs for student success and retention. | 1 | 0.3 | 23 | 7 | 100 | 30.6 | 132 | 40.4 | 69 | 21.1 | 173.4*** |

Table 4. *Nurse Educator Perceived Level of Skill Acquisition* (continued)

| | Level of Skill Acquisition | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Low | | Moderately Low | | Moderate | | Moderately High | | High | | |
| | *n* | % | *n* | % | *n* | % | *n* | % | *n* | % | $\chi(4)$ |
| Competency Domain/Competency | | | | | | | | | | | |
| **Facilitate learner development and socialization** | | | | | | | | | | | |
| 6. Identify your own teaching style. | | | 7 | 2.1 | 51 | 15.3 | 153 | 45.9 | 122 | 36.6 | 158.8*** |
| 7. Discriminate between Different teaching and learning styles. | | | 6 | 1.8 | 78 | 23.4 | 151 | 45.3 | 98 | 29.4 | 129.8*** |
| 8. Understand how your own teaching style contributes to curricular outcomes. | | | 12 | 3.6 | 71 | 21.3 | 153 | 45.8 | 98 | 29.3 | 123.5*** |
| 9. Alter teaching style to accommodate learning styles. | | | 11 | 3.3 | 94 | 28.2 | 146 | 43.8 | 82 | 24.6 | 111.4*** |
| 10. Design new teaching strategies. | 2 | 0.6 | 14 | 4.2 | 100 | 30 | 134 | 40.2 | 83 | 24.9 | 193.2*** |

Table 4. *Nurse Educator Perceived Level of Skill Acquisition* (continued)

| | Level of Skill Acquisition | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Low | | Moderately Low | | Moderate | | Moderately High | | High | | |
| | *n* | % | *n* | % | *n* | % | *n* | % | *n* | % | $\chi(4)$ |
| Competency Domain/Competency | | | | | | | | | | | |
| **Use assessment and evaluation strategies** | | | | | | | | | | | |
| 11. Identify basic assessment/ evaluation strategies. | 1 | 0.3 | 8 | 2.4 | 67 | 20.2 | 137 | 41.3 | 119 | 35.8 | 232.5*** |
| 12. Choose effective assessment/evaluation strategies. | 1 | 0.3 | 8 | 2.4 | 80 | 24.1 | 137 | 41.3 | 106 | 31.9 | 217.2*** |
| 13. Construct and analyze multiple choice test items. | 1 | 0.9 | 28 | 8.4 | 84 | 25.3 | 136 | 41 | 81 | 24.4 | 163.5*** |
| 14. Alter assessment/ evaluation strategies based on test analysis. | 2 | 0.6 | 21 | 6.3 | 94 | 28.3 | 132 | 39.8 | 83 | 25 | 173.9*** |
| 15. Design new assessment/evaluation strategies. | 3 | 0.9 | 33 | 10 | 110 | 33.4 | 118 | 35.9 | 65 | 19.8 | 147.4*** |

Table 4. *Nurse Educator Perceived Level of Skill Acquisition* (continued)

| | Level of Skill Acquisition | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Low | | Moderately Low | | Moderate | | Moderately High | | High | | |
| | *n* | % | *n* | % | *n* | % | *n* | % | *n* | % | $\chi(4)$ |
| Competency Domain/Competency | | | | | | | | | | | |
| **Participate in curriculum design and evaluation of program outcomes** | | | | | | | | | | | |
| 16. Identify overall curriculum design. | 1 | 0.3 | 2 | 10.7 | 84 | 25.6 | 113 | 34.5 | 95 | 29 | 130.5*** |
| 17. Understand different curricular components. | 1 | 0.3 | 26 | 8 | 95 | 29.1 | 107 | 32.7 | 98 | 30 | 143.3*** |
| 18. Participate in program evaluation. | 1 | 0.3 | 26 | 7.9 | 70 | 21.3 | 111 | 33.7 | 121 | 36.8 | 165.5*** |
| 19. Suggest changes to your program evaluation process. | 1 | 0.3 | 25 | 7.7 | 77 | 23.6 | 116 | 35.6 | 107 | 32.8 | 156.5*** |
| 20. Design innovative curriculums to improve nursing education. | 1 | 0.3 | 33 | 10 | 108 | 32.7 | 120 | 36.4 | 68 | 20.6 | 151.5*** |

Table 4. *Nurse Educator Perceived Level of Skill Acquisition* (continued)

| | Level of Skill Acquisition | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Low | | Moderately Low | | Moderate | | Moderately High | | High | | |
| | *n* | % | *n* | % | *n* | % | *n* | % | *n* | % | $\chi(4)$ |
| Competency Domain/Competency | | | | | | | | | | | |
| **Function as a change agent and leader** | | | | | | | | | | | |
| 21. Identify your own leadership style. | | | 6 | 1.8 | 63 | 19.1 | 143 | 4.3 | 118 | 35.8 | 135.2*** |
| 22. Understand how your personal style may be used effectively to promote change. | | | 8 | 2.4 | 71 | 21.5 | 150 | 45.3 | 102 | 30.8 | 128.3*** |
| 23. Implement strategies for organizational change. | 1 | 0.3 | 21 | 6.4 | 100 | 30.5 | 140 | 42.7 | 66 | 20.1 | 196.4*** |
| 24. Function as a leader in your parent institution. | 1 | 0.3 | 25 | 7.6 | 85 | 25.7 | 128 | 38.7 | 92 | 27.8 | 162.9*** |
| 25. Lead interdisciplinary efforts to address healthcare and educational needs regionally, nationally, and internationally. | 1 | 2.2 | 61 | 18.8 | 114 | 35.1 | 102 | 31.4 | 41 | 12.6 | 118.9*** |

Table 4. *Nurse Educator Perceived Level of Skill Acquisition* (continued)

| | Level of Skill Acquisition | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Low | | Moderately Low | | Moderate | | Moderately High | | High | | |
| | *n* | % | *n* | % | *n* | % | *n* | % | *n* | % | $\chi(4)$ |
| Competency Domain/Competency | | | | | | | | | | | |
| **Pursue continuous quality improvement in the nurse educator role** | | | | | | | | | | | |
| 26. Identify personal professional development needs. | | | 5 | 1.5 | 53 | 16.3 | 119 | 36.5 | 149 | 45.7 | 154.9*** |
| 27. Participate in professional development activities to meet personal goals. | 1 | 0.3 | 4 | 1.2 | 43 | 13.3 | 108 | 33.4 | 167 | 51.7 | 318.2*** |
| 28. Demonstrate improvement of performance based on professional development, self-reflection, and experience. | | | 5 | 1.5 | 45 | 13.8 | 132 | 40.5 | 144 | 44.2 | 167.4*** |
| 29. Balance teaching, scholarship, and service. | 1 | 0.3 | 11 | 3.4 | 105 | 32.1 | 137 | 41.9 | 73 | 22.3 | 211.9*** |
| 30. Serve as a mentor. | 2 | 0.6 | 14 | 4.3 | 56 | 17.2 | 124 | 38 | 130 | 39.9 | 220.2*** |

Table 4. *Nurse Educator Perceived Level of Skill Acquisition* (continued)

| | Level of Skill Acquisition | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Low | | Moderately Low | | Moderate | | Moderately High | | High | | |
| | *n* | % | *n* | % | *n* | % | *n* | % | *n* | % | $\chi(4)$ |
| Competency Domain/Competency | | | | | | | | | | | |
| **Engage in scholarship** | | | | | | | | | | | |
| 31. Use teaching content/ strategies passed down from a peer or mentor. | | | 15 | 4.6 | 113 | 34.8 | 122 | 37.5 | 75 | 23.1 | 87.3*** |
| 32. Use available literature to plan teaching/learning activities. | 2 | 0.6 | 3 | 0.9 | 66 | 20.5 | 131 | 40.7 | 120 | 37.3 | 235.9*** |
| 33. Participate as a team member in scholarly activities; demonstrate effective proposal writing. | 9 | 2.8 | 42 | 12.9 | 113 | 34.7 | 90 | 27.6 | 72 | 22.1 | 101.9*** |
| 34. Design and conduct research. | 14 | 4.3 | 86 | 26.5 | 115 | 35.4 | 64 | 19.7 | 46 | 14.2 | 90.8*** |
| 35. Disseminate information locally, nationally, and/or internationally to enhance nursing education. | 13 | 4.0 | 68 | 21 | 118 | 36.4 | 72 | 22.2 | 53 | 16.4 | 88.2*** |

Table 4. *Nurse Educator Perceived Level of Skill Acquisition* (continued)

| | Level of Skill Acquisition | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Low | | Moderately Low | | Moderate | | Moderately High | | High | | |
| | *n* | % | *n* | % | *n* | % | *n* | % | *n* | % | $\chi(4)$ |
| Competency Domain/Competency | | | | | | | | | | | |
| **Function within the educational environment** | | | | | | | | | | | |
| 36. Determine your own professional goals. | | | 1 | 0.3 | 33 | 10.3 | 104 | 32.4 | 183 | 57 | 244.7*** |
| 37. Identify social, economic, political, and institutional forces that influence higher education. | 3 | 0.9 | 6 | 1.8 | 71 | 22 | 145 | 45 | 97 | 30.1 | 229.6*** |
| 38. Develop networks, collaborations, and partnerships to enhance nursing's influence within academia. | 3 | 0.9 | 29 | 0.9 | 87 | 27 | 122 | 37.9 | 81 | 25.2 | 141.7*** |
| 39. Build organizational climate using respect, collegiality, professionalism, and caring. | 1 | 0.3 | 4 | 1.2 | 51 | 15.9 | 148 | 46.1 | 117 | 36.4 | 274.2*** |
| 40. Advocate for nursing in the political arena. | 13 | 4 | 69 | 21.4 | 112 | 34.7 | 83 | 25.7 | 46 | 14.2 | 86.9*** |

*** $p = .000$

**RQ2 What is the perceived level of skill acquisition for each of the eight NLN Nurse Educator Competency domains?**

The 40 competency statements in Part 2 of the survey related to the eight NLN competency domains. Each of the eight domains had five statements consisting of common nurse educator tasks associated with the corresponding competency domain. The data were analyzed to ascertain skill acquisition information for each competency domain. Frequencies, means, standard deviations, and the one sample *t*-test were used to determine statistical significance of the findings. Data related to competency domains may be found in Table 5.

The first five questions on Part 2 were associated with Competency Domain One – Facilitate Learning. The mean score ($M = 20.43$) and standard deviation ($SD = 3.66$) indicated that participants had moderately high confidence in completing the tasks associated with facilitating learning. A one sample *t*-test analysis determined that these results were statistically significant, $t\ (330) = 101.3$, $p = .000$.

The next five questions in Part 2 addressed Competency Domain Two – Facilitate Learner Development and Socialization. A mean score of 19.9 with standard deviation of 3.4 indicated that participants had moderately high confidence in completing tasks related to facilitating learner development and socialization. A one sample t-test analysis reveals that these results were statistically significant, $t\ (333) = 106.5$, $p = .000$.

The next five questions in Part 2 addressed Competency Domain Three – Use Assessment and Evaluation Strategies. The mean score (19.34) and standard deviation (3.9) indicated that participants had moderately high confidence in using assessment and evaluation strategies. One sample t-test analysis revealed that these results were statistically significant, $t\ (331) = 90.1$, $p = .000$.

The fourth set of questions in Part 2 was associated with Competency Domain Four – Participate in Curriculum Design and Evaluation of Program Outcomes. A mean score of 19.06 with standard deviation of 4.4 indicated that participants had moderately high confidence in participating in curriculum design and evaluation of program outcomes. A one sample t-test analysis revealed that these results were statistically significant, $t$ (330) = 77.9, $p$ = .000.

The next five questions in Part 2 were associated with Competency Domain Five – Function as a Change Agent and Leader. The mean score (19.02) and standard deviation (3.8) indicated that participants had moderately high confidence in completing tasks associated with functioning as a change agent and leader. A one sample t-test analysis revealed that these results were statistically significant, $t$ (330) = 90.7, $p$ = .000.

The sixth set of questions in Part 2 addressed Competency Domain Six – Pursue Continuous Quality Improvement in the Nurse Educator Role. The mean score (20.68) and standard deviation (3.4) indicated that participants had moderately high confidence in their ability to pursue continuous quality improvement in the nurse educator role. A one sample t-test analysis revealed that these results were statistically significant, $t$ (327) = 108.7, $p$ = .000.

The next set of questions in Part 2 was associated with Competency Domain Seven – Engage in Scholarship. A mean score of 17.75 with standard deviation (4.0) indicated that participants had moderately high confidence in tasks related to engaging in scholarship. A one sample t-test analysis revealed that these results were statistically significant, $t$ (325) = 80.8, $p$ = .000.

The last five questions in Part 2 were associated with Competency Domain Eight – Function within the Educational Environment. The mean score (19.47) and standard deviation (3.5) indicated that participants had moderately high confidence in functioning within the educational environment. A one sample t-test analysis revealed that these results were statistically significant, $t$ (334) = 99.4, $p$ = .000.

In summary, $t$ test analysis determined participant responses were statistically significant in relation to all eight competency domains. Additionally, respondents indicated they had a moderately high level of confidence in completing tasks associated with each competency domain.

Table 5. *Competency Domain Scores*

| | Competency Domain Mean Scores | | | |
|---|---|---|---|---|
| | *M* | *SD* | *df* | *t* value |
| Competency Domain | | | | |
| 1. Facilitate learning | 20.43 | 3.66 | 330 | 101.3*** |
| 2. Facilitate learner development and socialization | 19.9 | 3.4 | 333 | 106.5*** |
| 3. Use assessment and evaluation strategies | 19.34 | 3.9 | 331 | 90.1*** |
| 4. Participate in curriculum design and evaluation of program outcomes | 19.06 | 4.4 | 330 | 77.9*** |
| 5. Function as a change agent and leader | 19.02 | 3.8 | 330 | 90.7*** |
| 6. Pursue continuous quality improvement in the nurse educator role | 20.68 | 3.4 | 327 | 108.7*** |
| 7. Engage in scholarship | 17.75 | 4.0 | 325 | 80.8*** |
| 8. Function within the educational environment | 19.47 | 3.5 | 324 | 99.4*** |

*** $p = .000$

**RQ3 What differences, if any, exist between the total perceived level of skill acquisition and selected demographics?**

Total skill acquisition was analyzed based on nurse educator responses to demographic questions. Demographic questions asked respondents to provide information regarding (a) clinical and teaching experience, (b) professional development and those professional development hours devoted to curriculum and instruction, (c) type of school and program respondents teach in, and (d) educational preparation for the nurse educator role. Kruskal-Wallis testing was conducted for each demographic variable. Data related to total skill acquisition scores and demographic variables along with mean ranks may be found in Tables 6 – 12.

Chi-square values derived from Kruskal-Wallis analysis indicated there was a significant difference between total skill acquisition and the type of school respondents were employed by: community college, private school or university, or public university. Respondents who reported teaching in a public university received the highest mean rank and those who teach in community college received the lowest mean rank. Chi-square analysis revealed that these results were statistically significant, $\chi^2$ (3, $n$ = 330) = 11.966, $p < .01$. Data related to total skill acquisition and school type are included in Table 6.

Skill acquisition was analyzed based on the highest level of educational preparation participants reported. Doctorally prepared nurse educators receive the highest mean rank while those with an associate or bachelors degree received the lowest mean rank. Chi-square analysis revealed that these results were statistically significant, $\chi^2$ (4, $n$ = 333) = 59.882, $p$ = .000. Data related to total skill acquisition and educational preparation reported by participants are included in Table 7.

Skill acquisition was analyzed based on total years of teaching experience reported by participants. Quartiles were devised to group these responses as follows: (a) 5 years or less, (b) 6 – 11 years, (c) 12 – 19 years, and (d) more than 20 years. Educators with 20 or more years of experience received the highest mean rank while those with five years or less received the lowest mean rank. Chi-square analysis revealed that these results were statistically significant, $\chi^2$ (4, $n$ = 329) = 77.024, $p$ = .000. Data related to total skill acquisition and the total amount of teaching experience reported by participants are included in Table 8.

Skill acquisition was analyzed based on years of clinical experience reported by participants. Quartiles were devised to group these responses. Nurse educators with one to 10 years of clinical experience received the highest mean rank while those with 26 to 43 years of experience received the lowest mean rank. Chi-square analysis revealed that these results were not statistically significant. Data related to total skill acquisition and the amount of clinical experience reported by participants are included in Table 9.

Skill acquisition was analyzed based on the number of professional development hours participants reported they had participated in over the past year. Respondents who reported they had participated in less than 15 hours received the highest mean rank while those with 15 – 25 hours received the lowest mean rank. Chi-square analysis revealed these results were not statistically significant. Data related to total skill acquisition and the total amount of professional development that respondents reported are included in Table 10.

Skill acquisition was analyzed based on the number of hours respondents indicated they had participated in professional development focused on curriculum and

instruction over the past year. Quartiles were devised to group these responses. Participants who reported 19 or more hours of professional development focused on curriculum and instruction received the highest mean rank, while those who reported zero to 5 hours received the lowest mean rank. Chi-square analysis revealed that these results were not statistically significant. Data related to total skill acquisition and professional development focused on curriculum and instruction that respondents reported engaging in are reported in Table 11.

Skill acquisition was analyzed based on the type of program respondents worked. Respondents who indicated they taught in associate or diploma programs received the lowest mean rank and those who taught in graduate programs received the highest mean rank. Chi-square analysis revealed that these results were statistically significant, $\chi^2$ (2, $n$ = 332) = 37.54, $p$ = .000. Data related to total skill acquisition and the type of program respondents reported working in are reported in Table 12.

In summary, chi-square analysis determined participant responses were statistically significant in relation to work setting, educational preparation, teaching experience, and program type. Additionally, analysis revealed the highest mean ranks occurred for those respondents with a terminal degree, who worked in a public university setting, with more than 20 years of teaching and less than 10 years of clinical experience, and who reported greater than 25 hours of professional development and more than 19 hours of professional development focused on curriculum and instruction.

Table 6. *Total Skill Acquisition Score Related to Demographics – Work Setting*

| | Work Setting | | | | | | |
|---|---|---|---|---|---|---|---|
| | Community College | | Private School or University | | Public University | | |
| | *n* | Mean Rank | *n* | Mean Rank | *n* | Mean Rank | $\chi(2)$ |
| Total Skill Acquisition | 117 | 144.45 | 95 | 164.15 | 118 | 187.46 | 11.966** |

** $p < .01$

Table 7. *Total Skill Acquisition Related to Demographics - Educational Preparation*

| | Educational Preparation | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | ADN/BSN | | MSN | | Post Masters Certificate | | Doctorate | | |
| | *n* | Mean Rank | *n* | Mean Rank | *n* | Mean Rank | *n* | Mean Rank | $\chi(3)$ |
| Total Skill Acquisition | 32 | 109.94 | 189 | 147.72 | 24 | 154.92 | 88 | 232.45 | 59.882*** |

*** $p = .000$

Table 8. *Total Skill Acquisition Score Related to Demographics – Teaching Experience*

| | Teaching Experience | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 5 years or less | | 6 – 11 years | | 12 – 19 years | | 20 + years | | |
| | *n* | Mean Rank | *n* | Mean Rank | *n* | Mean Rank | *n* | Mean Rank | $\chi(3)$ |
| Total Skill Acquisition | 96 | 106.26 | 75 | 150.46 | 82 | 188.38 | 76 | 228.32 | 77.024*** |

*** $p = .000$

Table 9. *Total Skill Acquisition Score Related to Demographics – Clinical Experience*

| | Clinical Experience | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1 – 10 years | | 11 - 17 years | | 18 – 25 years | | 26 - 43 years | | |
| | *n* | Mean Rank | *n* | Mean Rank | *n* | Mean Rank | *n* | Mean Rank | $\chi(3)$ |
| Total Skill Acquisition | 93 | 165.59 | 74 | 147.73 | 86 | 158.63 | 75 | 146.43 | 6.668 |

Table 10. *Total Skill Acquisition Score Related to Demographics – Total Professional Development Hours*

| | Total Professional Development Hours | | | | | | |
|---|---|---|---|---|---|---|---|
| | Less than 15 hours | | 15 – 25 hours | | Greater than 25 hours | | |
| | *n* | Mean Rank | *n* | Mean Rank | *n* | Mean Rank | $\chi(2)$ |
| Total Skill Acquisition | 30 | 167.48 | 119 | 157.79 | 182 | 171.13 | 1.407 |

Table 11. *Total Skill Acquisition Score Related to Demographics – Professional Development Focused on Curriculum and Instruction*

| | Professional Development Focused on Curriculum and Instruction | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 0 – 5 hours | | 6 - 10 hours | | 11 – 18 hours | | 19 + hours | | |
| | *n* | Mean Rank | *n* | Mean Rank | *n* | Mean Rank | *n* | Mean Rank | $\chi(3)$ |
| Total Skill Acquisition | 83 | 128.75 | 78 | 143.08 | 80 | 129.09 | 29 | 152.12 | 3.210 |

Table 12. *Total Skill Acquisition Score Related to Demographics – Program Type*

| | Program Type | | | | | | |
|---|---|---|---|---|---|---|---|
| | ADN/Diploma | | BSN Degree | | Doctoral Degree | | |
| | *n* | Mean Rank | *n* | Mean Rank | *n* | Mean Rank | $\chi(2)$ |
| Total Skill Acquisition | 158 | 145.75 | 111 | 158.8 | 63 | 232.11 | 37.54*** |

*** $p = .000$

**RQ4 What differences, if any, exist between the perceived level of skill acquisition for each of the eight NLN Nurse Educator Competency domains and selected demographics?**

Skill acquisition for each of the eight competency domains was analyzed based on nurse educator responses to demographic questions. Demographic variables included: (a) clinical and teaching experience, (b) professional development and those professional development hours devoted to curriculum and instruction, (c) type of school and program respondents teach in, and (d) educational preparation for the nurse educator role. Mean ranks and chi-square values for each competency domain were obtained by Kruskal-Wallis testing for each demographic variable.

***Work setting.*** Skill acquisition for each competency domain was analyzed based on the type of school participants reported working in – community college, private school or university, or public school or university. Kruskal-Wallis analysis resulted in statistical significance for the following six competency domains based on work setting: Facilitate learning, $\chi^2$ (2, $n$ = 326) = 6.61, $p < .05$, facilitate learner development and socialization, $\chi^2$ (2, $n$ = 329) = 10.7, $p < .01$, use assessment and evaluation strategies, $\chi^2$ (2, $n$ = 327) = 15.55, $p = .000$, participate in curriculum design and evaluation of program outcomes, $\chi^2$ (2, $n$ = 326) = 6.96, $p < .05$, function as a change agent and leader, $\chi^2$ (2, $n$ = 326) = 15.22, $p = .000$, and engage in scholarship, $\chi^2$ (2, $n$ = 322) = 21.09, $p = .000$ (see Table 12). Nurse educators from public universities received the highest mean rank for all eight competency domains, while teachers from community colleges received the lowest mean rank for seven of the eight competency domains. Data related to skill acquisition for each competency domain in regards to the work setting of education achieved are reported in Table 13.

***Educational preparation.*** Nurse educators were asked to indicate their highest level of education – associate or bachelor's degree, master's degree, or doctoral degree. Kruskal-Wallis testing resulted in statistical significance for all eight competency domains based on the educational preparation of participants: Facilitate learning, $\chi^2$ (3, $n$ = 326) = 47.36, $p$ = .000, facilitate learner development and socialization, $\chi^2$ (3, $n$ = 329) = 38.66, $p$ = .000, use assessment and evaluation strategies, $\chi^2$ (3, $n$ = 327) = 48.40, $p$ = .000, participate in curriculum design and evaluation of program outcomes, $\chi^2$ (3, $n$ = 326) = 59.44, $p$ = .000, function as a change agent and leader, $\chi^2$ (3, $n$ = 326) = 31.06, $p$ = .000, pursue continuous quality improvement in the nurse educator role, $\chi^2$ (3, $n$ = 324) = 38.73, $p$ = .000, engage in scholarship, $\chi^2$ (3, $n$ = 322) = 76.82, $p$ = .000, and function within the educational environment, $\chi^2$ (3, $n$ = 321) = 37.93, $p$ = .000. Doctorally prepared educators received the highest mean rank for each of the eight competency domains, while educators with the associate or bachelor's degree received the lowest mean rank for each of the eight competency domains. Data related to skill acquisition for each competency domain in regards to the highest level of education achieved are reported in Table 14.

***Teaching experience.*** In Part 1 of the data collection instrument, participants were asked to report their years of teaching experience. Following analysis of these responses, quartiles were devised to establish ranges for nurse educator responses. Quartiles were devised as follows: 5 years or less; 6 – 11 years; 12 – 19 years; and 20 years or more.

Kruskal-Wallis testing resulted in statistical significance for all eight competency domains based on teaching experience as reported by participants: Facilitate

learning, $\chi^2$ (3, $n$ = 326) = 63.51, $p$ = .000, facilitate learner development and socialization, $\chi^2$ (3, $n$ = 329) = 66.7, $p$ = .000, use assessment and evaluation strategies, $\chi^2$ (3, $n$ = 327) = 75.12, $p$ = .000, participate in curriculum design and evaluation of program outcomes, $\chi^2$ (3, $n$ = 326) = 98.46, $p$ = .000, function as a change agent and leader, $\chi^2$ (3, $n$ = 326) = 43.4, $p$ = .000, pursue continuous quality improvement in the nurse educator role, $\chi^2$ (3, $n$ = 324) = 56.02, $p$ = .000, engage in scholarship, $\chi^2$ (3, $n$ = 322) = 42.32, $p$ = .000, and function within the educational environment, $\chi^2$ (3, $n$ = 321) = 48.77, $p$ = .000. Nurse educators with 20 or more years of teaching experience received the highest mean rank for each of the eight competency domains, while educators with 5 years or less experience received the lowest mean rank for each of the eight competency domains. Data related to skill acquisition for each competency domain in regards to the teaching experience are reported in Table 15.

***Clinical experience.*** In Part 1 of the data collection instrument, participants were asked to list their years of clinical experience. Following analysis of these responses, quartiles were devised to establish categories. Quartiles were devised are as follows: 1 – 10 years; 11 – 17 years; 18 – 25 years; and 26 – 43 years. Kruskal-Wallis testing resulted in statistical significance for two of the eight competency domains based on clinical experience as reported by participants: Function as a change agent and leader, $\chi^2$ (3, $n$ = 326) = 15.33, $p < .01$ and pursue continuous quality improvement in the nurse educator role, $\chi^2$ (3, $n$ = 324) = 10.263, $p < .05$. Nurse educators with 26 to 43 years of clinical experience received the highest mean rank for competency domains five (function as a change agent and leader) and six (pursue continuous quality improvement in the nurse educator role). Nurse educators with 11 to 17 years of clinical experience

received the lowest mean ranks for competency domains three (use assessment and evaluation strategies), four (participate in curriculum design and evaluation of program outcomes), six (pursue continuous quality improvement in the nurse educator role), seven (engage in scholarship) and eight (function within the educational environment). Nurse educators with 18 to 25 years of clinical experience received the lowest mean ranks for competency domain one (facilitate learning), two (facilitate learner development and socialization), and five (function as a change agent and leader). Data related to skill acquisition for each competency domain in regards to the clinical experience are reported in Table 16.

***Professional development.*** Skill acquisition was analyzed based on the number of professional development hours participants reported having completed during the past year; less than 15 hours, 15 – 25 hours, or greater than 25 hours. Kruskal-Wallis testing was conducted for each of the eight competency domains. Kruskal-Wallis analysis resulted in no statistical significance for any of the eight competency domains based on professional development hours (see Table 17).

***Professional development focused on curriculum and instruction.*** In Part 1 of the data collection instrument, participants were asked to list their hours of professional development that focused on curriculum and instruction during the past year. Quartiles were devised to establish categories. Quartiles were devised as follows: 0 – 5 hours; 6 – 10 hours; 11 – 18 hours; and 19 or more hours. Kruskal-Wallis testing was conducted for each of the eight competency domains and revealed no statistical significance for any of the eight competency domains based on the number of hours of

professional development focused on curriculum and instruction that had been completed in the past year (see Table 18).

***Program type.*** Nurse educators were asked to indicate the type of program they taught. Kruskal-Wallis testing was conducted for each of the eight competency domains and revealed statistical significance for all eight domains (see Table 18); facilitating learning, $\chi^2$ (2, $n$ = 328) = 20.08, $p$ = .000, facilitating learner development and socialization, $\chi^2$ (2, $n$ = 331) = 23.26, $p$ = .000, using assessment and evaluation strategies, $\chi^2$ (2, $n$ = 329) = 32.33, $p$ = .000, participating in curriculum design and evaluation of program outcomes, $\chi^2$ (2, $n$ = 328) = 32.83, $p$ = .000, functioning as a change agent and leader, $\chi^2$ (2, $n$ = 328) = 25.4, $p$ = .000, pursuing continuous quality improvement in the nurse educator role, $\chi^2$ (2, $n$ = 326) = 24.3, $p$ = .000, engaging in scholarship, $\chi^2$ (2, $n$ = 324) = 56.4, $p$ = .000, and functioning within the educational environment, $\chi^2$ (2, $n$ = 323) = 26.5, $p$ = .000. Participants who taught in graduate programs received the highest mean rank while educators who taught in associate or diploma programs received the lowest mean rank for each of the eight competency domains. Data related to skill acquisition for each competency domain in regards to the program type are reported in Table 19.

In summary, Kruskal-Wallis testing resulted in statistical significance for six of the eight competency domains based on work setting. Additionally, nurse educators working in public universities received the highest mean rank for all eight competency domains while those working in community colleges received the lowest mean rank for seven of the eight competency domains. Kruskal-Wallis testing resulted in statistical significance for all eight competency domains based on the highest level of education

reported by participants. Additionally, nurse educators reporting a terminal degree received the highest mean rank and those reporting an undergraduate degree received the lowest mean rank for each of the eight competency domains.

Kruskal-Wallis testing revealed statistical significance for all eight competency domains based on years of teaching experience. Additionally, nurse educators reporting more than 20 years of teaching experience received the highest mean rank while those reporting less than five years received the lowest mean rank for all eight competency domains. Kruskal-Wallis testing revealed statistical significance for two competency domains based on years of clinical experience. Nurse educators with 26 to 43 years of clinical experience received the highest mean rank for two competency domains and those reporting 11 to 17 years of clinical experience received the lowest mean ranks for five competency domains. Nurse educators with 18 to 25 years of clinical experience received the lowest mean ranks for three competency domains.

Kruskal-Wallis testing revealed no statistical significance for any of the eight competency domains based on either hours of professional development or hours of professional development focused on curriculum and instruction. Statistical significance was found for all eight competency domains based on program type. Additionally, nurse educators teaching in graduate programs received the highest mean rank while those teaching in associate or diploma programs received the lowest mean rank for all eight competency domains.

Table 13. *Competency Domain Score Related to Demographics – Work Setting*

| | Work Setting | | | | | | |
|---|---|---|---|---|---|---|---|
| | Community College | | Private School or University | | Public University | | |
| | *n* | Mean Rank | *n* | Mean Rank | *n* | Mean Rank | $\chi(2)$ |
| Competency Domain | | | | | | | |
| 1. Facilitate Learning | 115 | 148.91 | 94 | 160.49 | 117 | 180.26 | 6.61* |
| 2. Facilitate learner development and socialization | 116 | 155.06 | 95 | 149 | 118 | 187.65 | 10.7** |
| 3. Use assessment and evaluation strategies | 116 | 140.91 | 94 | 160.99 | 117 | 189.3 | 15.55*** |
| 4. Participate in curriculum design and evaluation of program outcomes | 116 | 147.75 | 94 | 162.31 | 116 | 180.22 | 6.96* |
| 5. Function as a change agent and leader | 116 | 137.15 | 94 | 170.69 | 116 | 184.03 | 15.22*** |
| 6. Pursue continuous quality improvement in the nurse educator role | 114 | 149.26 | 94 | 159.43 | 116 | 178 | 5.62 |
| 7. Engage in scholarship | 114 | 134.94 | 93 | 157.61 | 115 | 190.98 | 21.09*** |
| 8. Function within the educational environment | 114 | 147.22 | 93 | 166.86 | 114 | 170 | 3.98 |

* $p < .05$ ** $p < .01$ *** $p = .000$

Table 14. *Competency Domain Score Related to Demographics –Educational Preparation*

| | Educational Preparation | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | ADN/BSN | | MSN | | Post Masters Certificate | | Doctorate | | |
| | *n* | Mean Rank | *n* | Mean Rank | *n* | Mean Rank | *n* | Mean Rank | $\chi(3)$ |
| Competency Domain | | | | | | | | | |
| 1. Facilitate Learning | 31 | 123.61 | 187 | 144.55 | 24 | 167.44 | 87 | 223 | 47.36*** |
| 2. Facilitate learner development and socialization | 32 | 113.39 | 188 | 151.93 | 24 | 167.15 | 88 | 216.77 | 38.66*** |
| 3. Use assessment evaluation strategies | 32 | 109.81 | 187 | 148.48 | 24 | 165.75 | 87 | 222.49 | 48.40*** |
| 4. Participate in curriculum design and evaluation of program outcomes | 32 | 109.38 | 187 | 144.02 | 24 | 173.96 | 86 | 228.81 | 59.44*** |
| 5. Function as a change agent and leader | 32 | 121.16 | 187 | 151.28 | 24 | 169.38 | 86 | 211.05 | 31.06*** |
| 6. Pursue continuous quality improvement in the nurse educator role | 32 | 123.75 | 186 | 146.57 | 23 | 166.15 | 86 | 216.10 | 38.73*** |
| 7. Engage in scholarship | 31 | 110.18 | 186 | 140.02 | 22 | 140.18 | 86 | 237.58 | 76.82*** |
| 8. Function within the educational environment | 31 | 110.27 | 185 | 148.08 | 22 | 165.52 | 86 | 211.57 | 37.93*** |

*** $p = .000$

Table 15. *Competency Domain Score Related to Demographics – Teaching Experience*

| | Teaching Experience | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 5 years or less | | 6 – 11 years | | 12 – 19 years | | 20 + years | | |
| | *n* | Mean Rank | *n* | Mean Rank | *n* | Mean Rank | *n* | Mean Rank | $\chi(3)$ |
| Competency Domain | | | | | | | | | |
| 1. Facilitate Learning | 93 | 108.47 | 75 | 148.99 | 82 | 189.84 | 75 | 215.29 | 63.51*** |
| 2. Facilitate learner development and socialization | 96 | 113.76 | 75 | 146.55 | 81 | 182.81 | 76 | 226.80 | 66.7*** |
| 3. Use assessment evaluation strategies | 95 | 108.27 | 75 | 143.87 | 80 | 188.67 | 76 | 225.39 | 75.12*** |
| 4. Participate in curriculum design and evaluation of program outcomes | 95 | 103.17 | 75 | 134.33 | 80 | 193.82 | 75 | 234.59 | 98.46*** |
| 5. Function as a change agent and leader | 95 | 122.12 | 75 | 151.99 | 80 | 172.84 | 75 | 215.27 | 43.4*** |
| 6. Pursue continuous quality improvement in the nurse educator role | 95 | 111.29 | 74 | 151.65 | 79 | 185.11 | 75 | 212.11 | 56.02*** |
| 7. Engage in scholarship | 94 | 119.52 | 74 | 147.95 | 79 | 178.48 | 74 | 208.07 | 42.32*** |
| 8. Function within the educational environment | 93 | 110.26 | 74 | 158.95 | 79 | 178.30 | 74 | 206.18 | 48.77*** |

*** $p = .000$

Table 16. *Competency Domain Score Related to Demographics – Clinical Experience*

| | Clinical Experience | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1 – 10 years | | 11 - 17 years | | 18 – 25 years | | 26 - 43 years | | |
| | *n* | Mean Rank | *n* | Mean Rank | *n* | Mean Rank | *n* | Mean Rank | $\chi(3)$ |
| Competency Domain | | | | | | | | | |
| 1. Facilitate Learning | 92 | 172 | 73 | 151 | 85 | 150.9 | 74 | 179.32 | 4.787 |
| 2. Facilitate learner development and socialization | 92 | 164.27 | 74 | 157.57 | 86 | 153.45 | 75 | 182.12 | 4.213 |
| 3. Use assessment evaluation strategies | 92 | 171.67 | 73 | 145.9 | 85 | 159.03 | 75 | 173.91 | 4.377 |
| 4. Participate in curriculum design and evaluation of program outcomes | 91 | 177.86 | 73 | 145.48 | 85 | 157.84 | 75 | 165.67 | 5.165 |
| 5. Function as a change agent and leader | 91 | 158.25 | 73 | 148.54 | 85 | 147.18 | 75 | 198.61 | 15.33** |
| 6. Pursue continuous quality improvement in the nurse educator role | 91 | 164.60 | 73 | 138.74 | 84 | 155.85 | 74 | 186.561 | 10.263* |
| 7. Engage in scholarship | 89 | 160.15 | 73 | 139.97 | 84 | 162.81 | 74 | 178.55 | 6.5 |
| 8. Function within the educational environment | 88 | 151.99 | 73 | 144.52 | 84 | 164.05 | 74 | 180.19 | 6.478 |

* $p < .05$ ** $p < .01$

Table 17. *Competency Domain Score Related to Demographics – Total Professional Development Hours*

| | Total Professional Development Hours | | | | | | |
|---|---|---|---|---|---|---|---|
| | Less than 15 hours | | 15 – 25 hours | | Greater than 25 hours | | |
| | *n* | Mean Rank | *n* | Mean Rank | *n* | Mean Rank | $\chi(2)$ |
| Competency Domain | | | | | | | |
| 1. Facilitate Learning | 30 | 149.55 | 117 | 160.58 | 180 | 168.63 | 1.298 |
| 2. Facilitate learner development and socialization | 30 | 172.48 | 119 | 154.88 | 181 | 171.33 | 2.335 |
| 3. Use assessment evaluation strategies | 30 | 167.32 | 118 | 154.65 | 180 | 170.49 | 20.038 |
| 4. Participate in curriculum design and evaluation of program outcomes | 30 | 181.82 | 117 | 157.11 | 180 | 165.51 | 1.747 |
| 5. Function as a change agent and leader | 30 | 158.43 | 117 | 161.13 | 180 | 166.79 | 0.371 |
| 6. Pursue continuous quality improvement in the nurse educator role | 30 | 138.38 | 116 | 158.72 | 179 | 169.90 | 3.303 |
| 7. Engage in scholarship | 30 | 161.77 | 114 | 157.13 | 179 | 165.14 | 0.516 |
| 8. Function within the educational environment | 30 | 150.18 | 113 | 156.59 | 179 | 166.5 | 1.284 |

Table 18. *Competency Domain Score Related to Demographics – Professional Development Focused on Curriculum and Instruction*

| Professional Development Focused on Curriculum and Instruction | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 0 – 5 hours | | 6 - 10 years | | 11 – 18 years | | 19 + years | | |
| | *n* | Mean Rank | *n* | Mean Rank | *n* | Mean Rank | *n* | Mean Rank | $\chi(3)$ |
| Competency Domain | | | | | | | | | |
| 1. Facilitate Learning | 82 | 120.09 | 78 | 141.34 | 78 | 133.79 | 29 | 154.14 | 0.145 |
| 2. Facilitate learner development and socialization | 83 | 130.67 | 78 | 140.4 | 80 | 129.69 | 29 | 152.16 | 0.491 |
| 3. Use assessment evaluation strategies | 83 | 131.84 | 78 | 134.9 | 79 | 137.41 | 29 | 137.76 | 0.969 |
| 4. Participate in curriculum design and evaluation of program outcomes | 82 | 123.43 | 78 | 135.46 | 79 | 139.25 | 29 | 150.28 | 0.361 |
| 5. Function as a change agent and leader | 82 | 130.89 | 78 | 140.14 | 79 | 128.4 | 29 | 146.31 | 0.620 |
| 6. Pursue continuous quality improvement in the nurse educator role | 82 | 125.99 | 77 | 144.43 | 78 | 130.47 | 29 | 133.86 | 0.478 |
| 7. Engage in scholarship | 82 | 132.66 | 77 | 142.7 | 76 | 118.38 | 29 | 141.97 | 0.217 |
| 8. Function within the educational environment | 82 | 127.32 | 77 | 136.23 | 75 | 126.41 | 29 | 148.47 | 0.506 |

Table 19. *Competency Domain Score Related to Demographics – Program Type*

| | Program Type | | | | | | |
|---|---|---|---|---|---|---|---|
| | ADN/BSN | | Masters Degree | | Doctoral Degree | | |
| | *n* | Mean Rank | *n* | Mean Rank | *n* | Mean Rank | $\chi(2)$ |
| Competency Domain | | | | | | | |
| 1. Facilitate Learning | 156 | 151.57 | 110 | 155.66 | 62 | 212.73 | 20.08*** |
| 2. Facilitate learner development and socialization | 157 | 147.09 | 111 | 164.64 | 63 | 215.52 | 23.26*** |
| 3. Use assessment evaluation strategies | 156 | 144.72 | 111 | 157.68 | 62 | 229.15 | 32.33*** |
| 4. Participate in curriculum design and evaluation of program outcomes | 156 | 151.47 | 111 | 148.5 | 61 | 226.94 | 32.83*** |
| 5. Function as a change agent and leader | 156 | 144.64 | 111 | 163.84 | 61 | 216.5 | 25.4*** |
| 6. Pursue continuous quality improvement in the nurse educator role | 154 | 153.92 | 111 | 147.7 | 61 | 216.5 | 24.3*** |
| 7. Engage in scholarship | 153 | 138.79 | 110 | 151.02 | 61 | 242.6 | 56.4*** |
| 8. Function within the educational environment | 153 | 145.68 | 109 | 154.3 | 61 | 216.7 | 26.5*** |

*** $p = .000$

**RQ5 What is the relationship, if any, between the total perceived level of skill acquisition and the practical application of nurse educator skills?**

Part 2 of the Nurse Educator Skill Acquisition Assessment Tool contained one vignette question that related to each of the eight competency domains. These multiple response questions dealt with the practical application of nurse educator competencies. Each question had five potential responses that provided a choice of proposed actions based on the novice to expert continuum. Respondents were asked to consider the question and select the one action choice that best fit the way they would respond in an application/classroom setting.

A Pearson *r* correlation coefficient was calculated for the total skill acquisition and the total vignette score. There was a statistically significant and moderately positive correlation between total skill acquisition score ($M = 153.24$, $SD = 29.04$, $n = 335$) and total vignette score ($M = 26.59$, $SD = 4.94$, $n = 335$); $r = .565$, $r^2 = .319$, and the explained variance was 31.9%. Data related to correlation coefficients may be found in Table 20.

**RQ6 What is the relationship, if any, between the perceived level of skill acquisition for each of the eight NLN Nurse Educator Competency domains and the practical application of nurse educator skills?**

Part 2 of the Nurse Educator Skill Acquisition Assessment Tool contained one vignette question that related to each of the eight competency domains. The relationship between the each competency domain score and the corresponding vignette score was examined using Pearson *r* analysis. Data related to the relationships between the competency domain score and corresponding vignette score are reported in Table 21.

Vignette question one related to competency domain one (facilitate learning). The correlation between the competency domain one score ($M = 20.43$, $SD = 3.67$, $n =$

331) and the corresponding vignette score ($M$ = 3.19, $SD$ = .867, $n$ = 335) was statistically significant, $r$ = .393, $p$ = .000 and indicated that a moderately positive correlation existed between the competency one domain and corresponding vignette score.

The second vignette question related to competency domain two (facilitate learner development and socialization). The correlation between the competency domain two score ($M$ = 19.9, $SD$ = 3.42, $n$ = 334) and the corresponding vignette score ($M$ = 3.8, $SD$ = .51, $n$ = 333) was not statistically significant, $r$ = .102, $p$ = .06.

The third vignette question related to competency domain three (use assessment and evaluation strategies). The correlation between the competency domain three score ($M$ = 19.3, $SD$ = 3.9, $n$ = 332) and the corresponding vignette score ($M$ = 3.79, $SD$ = .843, $n$ = 330) was statistically significant, $r$ = .197, $p$ = .000 and indicated a slightly positive relationship.

The fourth vignette question related to competency domain four (participate in curriculum design and evaluation of program outcomes). The correlation between the competency domain four score ($M$ = 19.1, $SD$ = 4.44, $n$ = 331) and the corresponding vignette score ($M$ = 3.63, $SD$ = .97, $n$ = 331) was slightly positive and statistically significant, $r$ = .273, $p$ = .000.

Vignette question five related to competency domain five (function as a change agent and leader). The correlation between the competency domain five score ($M$ = 19, $SD$ = 3.81, $n$ = 331) and the corresponding vignette score ($M$ = 3.15, $SD$ = 1.6, $n$ = 330) was not statistically significance, $r$ = .083, $p$ = .134.

The sixth vignette question related to competency domain six (pursue continuous quality improvement in the nurse educator role). The relationship between the competency domain six score ($M = 20.7$, $SD = 3.44$, $n = 328$) and the corresponding vignette score ($M = 4.1$, $SD = 1.1$, $n = 324$) was statistically significant, $r = .125$, $p < .05$ and indicated a slightly positive relationship.

Vignette question seven related to competency domain seven (engage in scholarship). The relationship between competency domain seven score ($M = 17.7$, $SD = 3.9$, $n = 326$) and the corresponding vignette score ($M = 2.79$, $SD = 1.1$, $n = 321$) was statistically significant, $r = .533$, $p = .000$ and indicated a moderately positive relationship.

The last vignette question related to competency domain eight (function within the educational environment). The relationship between the competency domain eight score ($M = 19.5$, $SD = 3.5$, $n = 325$) and the corresponding vignette score ($M = 2.70$, $SD = 1.01$, $n = 325$) was statistically significant, $r = .304$, $p = .000$ and indicated a slightly positive relationship.

In summary, the relationships between each competency domain score and its' corresponding vignette score were all slight or moderately positive. Six of the eight relationships were statistically significant.

Table 20. *Correlation between the Total Skill Acquisition and Total Vignette Score*

| | Correlation Coefficient | | | |
|---|---|---|---|---|
| Measure | TVS | TSAS | *M* | *SD* |
| TSAS | .565** | | 153.24 | 29.04 |
| TVS | | .565** | 26.59 | 4.93 |

TSAS = Total Skill Acquisition Score; TVS = Total Vignette Score.
** $p < .01$

Table 21. *Correlations between Skill Acquisition and Vignettes by Competency Domain*

| | Vignette Scores | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Vignette Scores by Domain | | | | | | | |
| Competency Domain Scores | FL | FLDS | UAES | PCDEPO | FCAL | PCQINER | ES | FEE |
| 1. FL | .393*** | | | | | | | |
| 2. FLDS | | .102 | | | | | | |
| 3. UAES | | | .197*** | | | | | |
| 4. PCDEPO | | | | .273*** | | | | |
| 5. FCAL | | | | | .083 | | | |
| 6. PCQINER | | | | | | .125* | | |
| 7. ES | | | | | | | .533*** | |
| 8. FEE | | | | | | | | .304*** |

CD1 – FL = Competency Domain One - Facilitate Learning; CD2 – FLDS = Competency Domain Two – Facilitate Learner Development and Socialization; CD3 – UAES = Competency Domain Three – Use Assessment and Evaluation Strategies; CD4 – PCDEPO = Competency Domain Four – Participate in Curriculum Development and Evaluation of Program Outcomes; CD5 – FCAL = Competency Domain Five – Function as a Change Agent and Leader; CD6 – PCQINER = Competency Domain Six – Pursue Continuous Quality Improvement in the Nurse Educator Role; CD7 – ES = Competency Domain Seven – Engage in Scholarship; CD8 – FEE = Competency Domain Eight – Function within the Educational Environment.

* $p < .05$

*** $p = .000$

**RQ7 What differences, if any, exist in the relationship between the total perceived level of skill acquisition and the practical application of nurse educator skills based on selected demographics?**

The relationship between total skill acquisition, total vignette scores, and selected demographics was analyzed based on nurse educator responses to demographic questions. Demographic questions included: (a) type of program and school respondents teach in, (b) clinical and teaching experience, (c) professional development and those professional development hours devoted to curriculum and instruction. Spearman Rho values and correlation coefficients were obtained to analyze the differences in the relationship between total skill acquisition and total vignette score based on demographic variables. Differences in the relationship between total skill acquisition, total vignette score, and educational preparation could not be analyzed due to insufficient sample size.

***Program type.*** Spearman Rho analysis resulted in a slightly positive and statistically significant relationship between the total skill acquisition score, the total vignette score, and undergraduate programs (associate and bachelor's degrees) ($r_s$ = .230, $r^2$ = .0529; $p$ = .000). The relationship between total skill acquisition, total vignette score and doctoral programs was moderately positive and statistically significant ($r_s$ = .331, $r^2$ = .109; $p$ = .000). There was also a moderately positive and statistically significant relationship between the total skill acquisition score, total vignette score, and master's degree programs ($r_s$ = .467, $r^2$ = .218; $p$ = .000). Coefficients of determination revealed that the explained variance between the total skill acquisition score, the total vignette score, and undergraduate programs was 5.2%; master's programs was 21.8%; and doctoral programs was 10.9%. Data related to the relationship between total skill acquisition and total vignette score based on program type may be found in Table 22.

***Work setting.*** Spearman Rho analysis resulted in a slightly positive and statistically significant relationship between the total skill acquisition score and the total vignette score in the community college setting ($r_s = .271$, $r^2 = .073$; $p < .01$). The relationship between total skill acquisition score and total vignette score in the private university setting ($r_s = .376$, $r^2 = .141$; $p = .000$) was moderately positive and statistically significant. There was also a moderately positive and statistically significant relationship between the total skill acquisition score and the total vignette score in the public university setting ($r_s = .441$, $r^2 = .194$; $p = .000$). Coefficients of determination revealed that the explained variance between the total skill acquisition score and the total vignette score in the community college setting was 7.3%, in the private university setting was 14.1%, and in the public university setting was 19.4%. Data related to the relationship between total skill acquisition and total vignette score based on work setting may be found in Table 23.

***Teaching experience.*** Spearman Rho analysis resulted in a slightly positive and statistically significant relationship between the total skill acquisition and the total vignette score for those respondents reporting between one and six years of teaching experience ($r_s = .273$, $r^2 = .074$; $p < .01$). With 7 to 16 years of teaching experience, the relationship between total skill acquisition score and total vignette score was slightly positive and statistically significant ($r_s = .331$, $r^2 = .109$; $p = .000$). The relationship between total skill acquisition score and total vignette score for those respondents reporting between 17 and 45 years of teaching experience ($r_s = .377$, $r^2 = .142$; $p = .000$) was moderately positive and statistically significant. Coefficients of determination revealed that the explained variance between the total skill acquisition score and the total

vignette score for those with one to six years of teaching experience was 7.4%; for those with between 7 and 16 years of teaching experience was 10.9%, and for those with between 17 and 45 years of teaching experience was 14.2%. Data related to the relationship between total skill acquisition and total vignette score based on years of teaching experience may be found in Table 24.

***Clinical experience.*** Spearman Rho analysis resulted in a slightly positive and statistically significant relationship between the total skill acquisition and the total vignette score for those respondents reporting between one and 11 years of clinical experience ($r_s$ = .349, $r^2$ = .121; $p$ = .000). The relationship between total skill acquisition score and total vignette score for those with between 12 and 21 years of clinical experience, ($r_s$ = .324, $r^2$ = .104; $p$ = .000) was slightly positive and statistically significant. Spearman Rho analysis revealed a moderately positive and statistically significant relationship between total skill acquisition and total vignette score for those respondents reporting between 22 and 43 years of clinical experience ($r_s$ = .435, $r^2$ = .189; $p$ = .000). Coefficients of determination revealed that the explained variance between the total skill acquisition score and the total vignette score for those with one to 11 years of clinical experience was 12.1%, for those with 12 to 21 years was 10.4%, and for those with 22 to 43 years was 18.9%. Data related to the relationship between total skill acquisition and total vignette score based on years of clinical experience may be found in Table 25.

***Professional development.*** Spearman Rho analysis resulted in a slightly positive and statistically insignificant relationship between the total skill acquisition and the total vignette score for those with less than 15 hours of professional development ($r_s$

= .054, $r^2$ = .002). Spearman Rho analysis resulted in a moderately positive and statistically significant relationship between the total skill acquisition and the total vignette score for those educators reporting both 15 to 25 hours ($r_s$ = .426, $r^2$ = .181; $p$ = .000) and more than 25 hours ($r_s$ = .329, $r^2$ = .108; $p$ = .000) of professional development. Coefficients of determination revealed that the explained variance between the total skill acquisition score and the total vignette score for those reporting less than 15 hours of professional development was 0.2%, for those with 15 to 25 hours was 18.1%, and for those with more than 25 hours was 10.8%. Data related to the relationship between total skill acquisition, total vignette score, and professional development may be found in Table 26.

***Professional development focused on curriculum and instruction.*** Spearman Rho analysis resulted in a moderately positive and statistically insignificant relationship between the total skill acquisition score and the total vignette score for those respondents reporting less than 7 hours of professional development focused on curriculum and instruction ($r_s$ = .393, $r^2$ = .154; $p$ = .000). Spearman Rho analysis resulted in a slightly positive relationship without statistical significance between the total skill acquisition and the total vignette score for those respondents reporting between 8 and 15 hours of professional development focused on curriculum and instruction ($r_s$ = .119, $r^2$ = .014). Spearman Rho analysis resulted in a moderately positive and statistically significant relationship between total skill acquisition and the total vignette score for those respondents reporting between 16 and 90 hours of professional development focused on curriculum and instruction ($r_s$ = .498, $r^2$ = .248; $p$ = .000). Coefficients of determination revealed that the explained variance between the total skill acquisition score and the total

vignette score for those reporting less than 7 hours of professional development focused on curriculum and instruction was 15.4%, for those with between 8 and 15 hours was 1.4%, and for those reporting between 16 and 90 hours was 24.8%. Data related to the relationship between total skill acquisition and total vignette score based on hours of professional development focused on curriculum and instruction may be found in Table 27.

In summary, the relationships between total skill acquisition score and the total vignette score based on program type, work setting, teaching experience, and clinical experience were all statistically significant. The relationship between total skill acquisition score and total vignette score and more than 15 hours of professional development was statistically significant. Additionally, the relationship between total skill acquisition and total vignette score and less than seven and more than 16 hours of professional development focused on curriculum and instruction was statistically significant.

Table 22. *Relationship between Total Skill Acquisition, Total Vignette Score, and Program Type*

| | Program Type | | | | | |
|---|---|---|---|---|---|---|
| | ADN/BSN | | MSN | | Doctoral | |
| Spearman Rho/Coefficient of Determination | $r_s$ | $r^2$ | $r_s$ | $r^2$ | $r_s$ | $r^2$ |
| Correlation between TSA, TVS, PT | .230** | .0529 | .467*** | .218 | .331** | .109 |

TSA = Total Skill Acquisition, TVS = Total Vignette Score, PT = Program Type
** $p < .01$
*** $p = .000$

Table 23. *Relationship between Total Skill Acquisition, Total Vignette Score, and Work Setting*

| | Work Setting | | | | | |
|---|---|---|---|---|---|---|
| | Community College | | Private University | | Public University | |
| Spearman Rho/Coefficient of Determination | $r_s$ | $r^2$ | $r_s$ | $r^2$ | $r_s$ | $r^2$ |
| Correlation between TSA, TVS, WS | .271** | .073 | .376** | .141 | .441** | .194 |

TSA = Total Skill Acquisition, TVS = Total Vignette Score, WS = Work Setting
** $p < .01$

Table 24. *Relationship between Total Skill Acquisition, Total Vignette Score, and Teaching Experience*

| | Teaching Experience | | | | | |
|---|---|---|---|---|---|---|
| | 1 – 6 Years | | 7 – 16 Years | | 17 – 45 Years | |
| Spearman Rho/Coefficient of Determination | $r_s$ | $r^2$ | $r_s$ | $r^2$ | $r_s$ | $r^2$ |
| Correlation between TSA, TVS, TE | .273** | .074 | .331*** | .109 | .377*** | .142 |

TSA = Total Skill Acquisition, TVS = Total Vignette Score, TE = Teaching Experience
** $p < .01$
*** $p = .000$

Table 25. *Relationship between Total Skill Acquisition, Total Vignette Score, and Clinical Experience*

| | Clinical Experience | | | | | |
|---|---|---|---|---|---|---|
| | 1 – 11 years | | 12 - 21 years | | 22 – 43 years | |
| Spearman Rho/Coefficient of Determination | $r_s$ | $r^2$ | $r_s$ | $r^2$ | $r_s$ | $r^2$ |
| Correlation between TSA, TVS, CE | .349*** | .121 | .324*** | .104 | .435*** | .189 |

TSA = Total Skill Acquisition, TVS = Total Vignette Score, CE = Clinical Experience
*** $p = .000$

Table 26. *Relationship between Total Skill Acquisition, Total Vignette Score, and Total Professional Development Hours*

| | Total Professional Development Hours | | | | | |
|---|---|---|---|---|---|---|
| | Less than 15 hours | | 15 – 25 hours | | More than 25 hours | |
| Spearman Rho/Coefficient of Determination | $r_s$ | $r^2$ | $r_s$ | $r^2$ | $r_s$ | $r^2$ |
| Correlation between TSA, TVS, TPDH | .054 | .002 | .426*** | .181 | .329*** | .108 |

TSA = Total Skill Acquisition, TVS = Total Vignette Score, TPDH = Total Professional Development Hours
*** $p = .000$

Table 27. *Relationship between Total Skill Acquisition, Total Vignette Score, and Professional Development Hours Focused on Curriculum and Instruction*

| | Professional Development Hours Focused on Curriculum and Instruction | | | | | |
|---|---|---|---|---|---|---|
| | 0 – 7 hours | | 8 – 15 hours | | 16 – 90 hours | |
| Spearman Rho/Coefficient of Determination | $r_s$ | $r^2$ | $r_s$ | $r^2$ | $r_s$ | $r^2$ |
| Correlation between TSA, TVS, PDHC/I | .393*** | .154 | .119 | .014 | .498*** | .248 |

TSA = Total Skill Acquisition, TVS = Total Vignette Score, PDHC/I = Professional Development Hours Focused on Curriculum and Instruction
*** $p = .000$

**RQ8 What differences, if any, exist in the relationship between the perceived level of skill acquisition for each of the eight NLN Nurse Educator Competency domains and the practical application of nurse educator skills based on selected demographics?**

The relationship between the perceived level of skill acquisition within each of the eight competency domains and the corresponding vignette score based on selected demographics was analyzed based on nurse educator responses to demographic questions. Demographic questions included: (a) work setting respondents are employed by, (b) educational preparation for the nurse educator role, (c) clinical and teaching experience, (d) professional development and those professional development hours devoted to curriculum and instruction. Differences in the relationship between the level of skill acquisition for each of the eight competency domains, total vignette score, and program type could not be analyzed due to insufficient sample size. Spearman Rho values were obtained to analyze the differences in the relationships between each competency domain score and the corresponding vignette score based on demographic variables.

***Educational preparation.*** In order to produce sufficient cell size for analysis, participant level of education was categorized as either undergraduate and master's degree preparation or postmaster's certificate and doctoral degree preparation. Spearman Rho analysis resulted in slight to moderate positive and statistically significant relationships between the competency domain one score ($r_s = .357$, $r^2 = .127$; $p = .000$), the competency domain four score ($r_s = .181$, $r^2 = .032$; $p < .01$), the competency domain seven score ($r_s = .358$, $r^2 = .128$; $p = .000$), the competency domain eight score ($r_s = .136$, $r^2 = .018$; $p < .05$), and the corresponding vignette scores for those respondents reporting an undergraduate or master's degree as the highest level of education achieved.

Spearman Rho analysis resulted in slight to moderately positive and statistically significant relationships between the competency domain one score ($r_s$ = .329, $r^2$ = .108; $p$ = .000), the competency domain two score ($r_s$ = .198, $r^2$ = .039; $p$ < .05), the competency domain three score ($r_s$ = .230, $r^2$ = .052; $p$ < .05), the competency domain six score ($r_s$ = .255, $r^2$ = .065; $p$ < .01), the competency domain seven score ($r_s$ = .512, $r^2$ = .262; $p$ = .000), the competency domain eight score ($r_s$ = .304, $r^2$ = .092; $p$ < .01), and the corresponding vignette scores for those respondents who reported their highest level of education was the postmaster's certificate or doctoral degree.

Coefficients of determination revealed that the explained variance between the competency domain one and seven score and their corresponding vignette score for those reporting an undergraduate or master's degree as the highest level of education completed was 12.7% and 12.8% respectively. Additionally, the coefficient of determination revealed that the explained variance between the competency domain seven score and the corresponding vignette score for those reporting a postmaster's certificate or doctoral degree as the highest level of education completed was 26.2%. Data related to the relationships between each competency domain and the corresponding vignette score based on work setting may be found in Table 29.

***Work setting.*** Spearman Rho analysis resulted in moderately positive and statistically significant relationships between the competency domain one score ($r_s$ = .468, $r^2$ = .219; $p$ = .000), the competency domain seven score ($r_s$ = .385, $r^2$ = .148; $p$ = .000), and the corresponding vignette scores for those respondents working in the community college setting. The relationships between the competency domain three score ($r_s$ = .233, $r^2$ = .054; $p$ < .05), the competency domain four score ($r_s$ = .234, $r^2$ =

.054; $p < .05$), and the corresponding vignette scores resulted in slight positive and statistically significant relationships for those respondents working in the community college setting. The relationships between the competency domains two, six, and eight scores, and the corresponding vignette scores resulted in slight positive and statistically insignificant relationships for those respondents working in the community college setting. The relationship between the competency five score and the corresponding vignette score for those working in the community college setting was slightly negative and without statistical significance.

Spearman Rho analysis resulted in slight or moderately positive and statistically significant relationships between the competency domain one score ($r_s$ = .239, $r^2$ = .057; $p < .05$), the competency six score ($r_s$ = .229, $r^2$ = .052; $p < .05$), the competency seven score ($r_s$ = .456, $r^2$ = .207; $p$ = .000), the competency domain eight score ($r_s$ = .288, $r^2$ = .082; $p < .01$), and the corresponding vignette scores for those respondents working in the private university setting. The relationships between the competency domain two, three, four, and five scores, and the corresponding vignette scores resulted in slightly positive and statistically insignificant relationships for those respondents working in the private university setting.

The relationships between the competency domain one score ($r_s$ = .454, $r^2$ = .206; $p$ = .000), the competency domain three score ($r_s$ = .193, $r^2$ = .037; $p < .05$), the competency four score ($r_s$ = .277, $r^2$ = .076; $p < .05$), the competency six score ($r_s$ = .221, $r^2$ = .048; $p < .05$), the competency seven score ($r_s$ = .580, $r^2$ = .336; $p$ = .000), the competency eight score ($r_s$ = .243, $r^2$ = .059; $p < .01$), and the corresponding vignette scores resulted in slight to moderately positive and statistically significant relationships

for those respondents working in the public university setting. The relationship between the competency two score ($r_s$ = .109, $r^2$ = .011), the competency five score ($r_s$ = .152, $r^2$ = .023), and the corresponding vignette score for those working in the public university setting was slightly positive and without statistical significance.

Coefficients of determination revealed that the explained variance between the competency domain seven score and the corresponding vignette score for those employed by a community college was 21.9%. Additionally, the coefficient of determination revealed that the explained variance between the competency domain seven score and the corresponding vignette score for those working in a private university was 20.7%. The coefficient of determination revealed that the explained variance between the competency domain one and seven score and the corresponding vignette score for those working in a public university was 20.6% and 33.6% respectively. Data related to the relationships between each competency domain and the corresponding vignette score based on work setting may be found in Table 30.

***Teaching experience.*** In order to produce sufficient cell size for analysis, teaching experience reported by participants was categorized as one to 10 years experience and 11 to 45 years experience. Spearman Rho analysis resulted in slight to moderately positive and statistically significant relationships for the competency domain one ($r_s$ = .349, $r^2$ = .121; $p$ = .000), the competency domain six score ($r_s$ = .227, $r^2$ = .051; $p < .05$), the competency domain seven score ($r_s$ = .466, $r^2$ = .217; $p$ = .000), and the corresponding vignette score for those respondents indicating the had between one and 10 years of teaching experience. The relationships between the competency domain two, three, four, five and eight scores and the corresponding vignette scores for those

respondents reporting between one and 10 years of teaching experience were all slightly positive and statistically insignificant.

Spearman Rho analysis resulted in slight to moderately positive and statistically significant relationships for the competency domain one ($r_s = .296$, $r^2 = .087$; $p = .000$), the competency domain three score ($r_s = .196$, $r^2 = .038$; $p < .05$), the competency domain four score ($r_s = .246$, $r^2 = .060$; $p < .01$), the competency domain five score ($r_s = .163$, $r^2 = .026$; $p < .05$), the competency domain six score ($r_s = .233$, $r^2 = .054$; $p < .01$), the competency domain seven score ($r_s = .440$, $r^2 = .193$; $p = .000$), the competency domain eight score ($r_s = .344$, $r^2 = .118$; $p = .000$), and the corresponding vignette scores for those respondents reporting between 11 and 45 years of teaching experience. The relationship between the competency domain two score and the corresponding vignette score for those respondents reporting between 11 and 45 years of teaching experience was slightly positive and statistically insignificant.

The coefficient of determination revealed that the explained variance between the competency domain one score and the corresponding vignette score for those reporting between one and 10 years of teaching experience was 21.7%. Additionally, the coefficient of determination revealed that the explained variance between the competency domain seven score and the corresponding vignette score for those reporting between 11 and 45 years of teaching experience was 19.3%. Data related to the relationships between competency domain scores and the corresponding vignette scores based on years of teaching experience may be found in Table 31.

***Clinical experience.*** In order to produce sufficient cell size for analysis, clinical experience was categorized as one to 17 years and 18 to 43 years. Spearman Rho analysis resulted in a slight to moderately positive and statistically significant relationship between the competency domain one score ($r_s = .259$, $r^2 = .067$; $p < .01$), the competency domain four score ($r_s = .178$, $r^2 = .031$; $p < .05$), the competency domain six score ($r_s = .198$, $r^2 = .039$; $p < .05$), the competency domain seven score ($r_s = .496$, $r^2 = .246$; $p = .000$), the competency domain eight score ($r_s = .289$, $r^2 = .083$; $p = .000$), and the corresponding vignette scores for those respondents indicating the had between one and 17 years of clinical experience. The relationships between the competency domain two, three, and five scores and the corresponding vignette scores were slightly positive and statistically insignificant.

Spearman Rho analysis revealed the relationships between the competency domain one score ($r_s = .512$, $r^2 = .262$; $p = .000$), the competency domain three score ($r_s = .260$, $r^2 = .067$; $p < .01$), the competency domain four score ($r_s = .249$, $r^2 = .062$; $p < .01$), the competency domain six score ($r_s = .227$, $r^2 = .051$; $p < .05$), the competency domain seven score ($r_s = .450$, $r^2 = .202$; $p = .000$), the competency domain eight score ($r_s = .180$, $r^2 = .032$; $p < .05$), and the corresponding vignette scores for those respondents reporting between 18 and 43 years of clinical experience were slight to moderately positive and statistically significant. The relationships between the competency domain two and five scores and the corresponding vignette scores for those respondents reporting between 18 and 43 years of clinical experience were slightly positive and statistically insignificant.

The coefficient of determination revealed that the explained variance between the competency domain seven score and the corresponding vignette score for those

reporting between one and 17 years of clinical experience was 24.6%. Additionally, the coefficient of determination revealed that the explained variance between the competency domain one and seven score and the corresponding vignette score for those reporting between 18 and 43 years of clinical experience was 26.2% and 20.2% respectively. Data related to the relationships between competency domain scores and the corresponding vignette scores based on years of clinical experience may be found in Table 32.

***Professional development.*** In order to produce sufficient cell size, professional development hours were categorized as 0 to 25 hours and more than 25 hours. Spearman Rho analysis revealed the relationships between the competency domain one score ($r_s$ = .399, $r^2$ = .159; $p$ = .000), the competency domain three score ($r_s$ = .182, $r^2$ = .033; $p$ < .05), the competency domain four score ($r_s$ = .279, $r^2$ = .077; $p$ < .01), the competency domain five score ($r_s$ = .185, $r^2$ = .034; $p$ < .05), the competency domain six score ($r_s$ = .182, $r^2$ = .033; $p$ < .05), the competency domain seven score ($r_s$ = .547, $r^2$ = .299; $p$ = .000), the competency domain eight score ($r_s$ = .249, $r^2$ = .062; $p$ < .05), and the corresponding vignette score for those respondents reporting between one and 25 hours of professional development. The relationship between competency domain two and the corresponding vignette score was slightly positive and statistically insignificant.

Spearman Rho analysis resulted in slight to moderately positive and statistically significant relationships between the competency domain one score ($r_s$ = .372, $r^2$ = .138; $p$ = .000), the competency domain three score ($r_s$ = .154, $r^2$ = .023; $p$ < .05), the competency domain four score ($r_s$ = .171, $r^2$ = .029; $p$ < .05), the competency domain six score ($r_s$ = .251, $r^2$ = .063; $p$ < .01), the competency domain seven score ($r_s$ = .407, $r^2$ = .165; $p$ = .000), the competency domain eight score ($r_s$ = .175, $r^2$ = .030; $p$ <

.01), and the corresponding vignette scores for those respondents reporting more than 25 hours of professional development hours. The relationship between the competency domains two and five and their corresponding vignette scores were slightly positive and statistically insignificant.

The coefficient of determination revealed that the explained variance between the competency domain one and seven score and the corresponding vignette score for those reporting between one and 25 hours of professional development was 15.9% and 29.9% respectively. Additionally, the coefficient of determination revealed that the explained variance between the competency domain one and seven score and the corresponding vignette score for those reporting more than 25 hours of professional development was 13.8% and 16.5% respectively. Data related to the relationships between competency domain scores and the corresponding vignette scores based on hours of professional development may be found in Table 33.

***Professional development focused on curriculum and instruction.*** In order to produce sufficient cell size for analysis, professional development hours focused on curriculum and development was categorized as zero to 10 hours, and 11 to 90 hours. Spearman Rho analysis resulted in slight to moderately positive and statistically significant relationships between the competency domain one score ($r_s = .408$, $r^2 = .166$; $p = .000$), the competency domain three score ($r_s = .204$, $r^2 = .041$; $p < .05$), the competency domain four score ($r_s = .335$, $r^2 = .112$; $p = .000$), the competency domain six score ($r_s = .234$, $r^2 = .054$; $p < .01$), the competency domain seven score ($r_s = .507$, $r^2 = .257$; $p = .000$), the competency domain eight score ($r_s = .184$, $r^2 = .033$; $p < .05$), and the corresponding vignette scores for those respondents reporting 10 or fewer hours of

professional development with a curriculum and instruction focus. The relationships between the competency domain two and five scores and the corresponding vignette scores for those respondents reporting 10 or fewer hours of professional development with a curriculum and instruction focus were slightly positive and statistically insignificant.

Spearman Rho analysis revealed slight to moderately positive and statistically significant relationships between the competency domain one score ($r_s = .373$, $r^2 = .139$; $p = .000$), the competency domain three score ($r_s = .207$, $r^2 = .042$; $p < .05$), the competency domain six score ($r_s = .254$, $r^2 = .064$; $p < .01$), the competency domain seven score ($r_s = .408$, $r^2 = .166$; $p = .000$), the competency domain eight score ($r_s = .213$, $r^2 = .045$; $p < .05$), and the corresponding vignette scores for those respondents reporting between 11 and 90 hours of professional development focused on curriculum and instruction. The relationships between the competency domain two, four, and five scores, and the corresponding vignette scores for those respondents reporting between 11 and 90 hours of professional development focused on curriculum and instruction were slightly positive and statistically insignificant.

The coefficient of determination revealed that the explained variance between the competency domain one and seven score and the corresponding vignette score for those reporting 10 or fewer hours of professional development focused on curriculum and instruction was 16.6% and 25.7% respectively. Additionally, the coefficient of determination revealed that the explained variance between the competency domain one and seven score and the corresponding vignette score for those reporting between 11 and 90 hours of professional development focused on curriculum and instruction was 13.9%

and 16.6% respectively. Data related to the relationships between competency domain scores and the corresponding vignette scores based on hours of professional development may be found in Table 34.

In summary, statistically significant relationships were found between competency domains one, two, three, four, six, seven, and eight and their corresponding vignette score based on the level of education that nurse educators reported. Statistical significance was found for the relationships between competency domains one, three, four, six, seven, and eight and their corresponding vignette score based on work setting, years of clinical experience, and hours of professional development focused on curriculum and instruction. Statistical significance was also found for the relationships between competency domains one, three, four, five, six, seven, and eight and their corresponding vignette score based on years of teaching experience and hours of professional development. Additionally, coefficients of determination revealed the explained variance for the relationships between competency domains one and seven and their corresponding vignette scores for each demographic variable accounted for between 10 and 30% of the variance in each case.

Table 28. *Relationships between Competency Domain Score and Corresponding Vignette Score based on Educational Preparation*

| | Educational Preparation | | | |
|---|---|---|---|---|
| | ADN/BSN/MSN | | Post Master's or Doctoral Degree | |
| Spearman Rho/Coefficient of Determination | $r_s$ | $r^2$ | $r_s$ | $r^2$ |
| Competency Domains | | | | |
| 1. Facilitate learning | .357*** | .127 | .329*** | .108 |
| 2. Facilitate learner development and socialization | .064 | .004 | .198* | .039 |
| 3. Use assessment and evaluation strategies | .076 | .005 | .230* | .052 |
| 4. Participate in curriculum development and evaluation of program outcomes | .181** | .032 | .145 | .021 |
| 5. Function as a change agent and leader | - .027 | .0007 | .162 | .026 |
| 6. Pursue continuous quality improvement in the nurse educator role | .078 | .006 | .255** | .065 |
| 7. Engage in scholarship | .358*** | .128 | .512*** | .262 |
| 8. Function within the educational environment | .136* | .018 | .304** | .092 |

*$p < .05$
** $p < .01$
*** $p = .000$

Table 29. *Relationships between Competency Domain Score and Corresponding Vignette Score based on Work Setting*

| | Work Setting | | | | | |
|---|---|---|---|---|---|---|
| | Community College | | Private University | | Public University | |
| Spearman Rho/Coefficient of Determination | $r_s$ | $r^2$ | $r_s$ | $r^2$ | $r_s$ | $r^2$ |
| Competency Domains | | | | | | |
| 1. Facilitate learning | .468*** | .219 | .239* | .057 | .454*** | .206 |
| 2. Facilitate learner development and socialization | .145 | .021 | .037 | .001 | .109 | .011 |
| 3. Use assessment and evaluation strategies | .233* | .054 | .062 | .003 | .193* | .037 |
| 4. Participate in curriculum development and evaluation of program outcomes | .234* | .054 | .172 | .029 | .277* | .076 |
| 5. Function as a change agent and leader | -.057 | .003 | .186 | .034 | .152 | .023 |
| 6. Pursue continuous quality improvement in the nurse educator role | .184 | .033 | .229* | .052 | .221* | .048 |
| 7. Engage in scholarship | .385*** | .148 | .456*** | .207 | .580*** | .336 |
| 8. Function within the educational environment | .097 | .009 | .288** | .082 | .243** | .059 |

*$p < .05$
** $p < .01$
*** $p = .000$

Table 30. *Relationships between Competency Domain Score and Corresponding Vignette Score based on Years of Teaching Experience*

| | Years of Teaching Experience | | | |
|---|---|---|---|---|
| | 1 – 10 years | | 11 – 45 years | |
| Spearman Rho/Coefficient of Determination | $r_s$ | $r^2$ | $r_s$ | $r^2$ |
| Competency Domains | | | | |
| 1. Facilitate learning | .349*** | .121 | .296*** | .087 |
| 2. Facilitate learner development and socialization | .114 | .012 | .019 | .0003 |
| 3. Use assessment and evaluation strategies | .043 | .001 | .196* | .038 |
| 4. Participate in curriculum design and evaluation of program outcomes | .090 | .008 | .246** | .060 |
| 5. Function as a change agent and leader | .035 | .001 | .163* | .026 |
| 6. Pursue continuous quality improvement in the nurse educator role | .227** | .051 | .233** | .054 |
| 7. Engage in scholarship | .466*** | .217 | .440*** | .193 |
| 8. Function within the educational environment | .081 | .006 | .344*** | .118 |

*$p < .05$
** $p < .01$
*** $p = .000$

Table 31. *Relationships between Competency Domain Score and Corresponding Vignette Score based on Years of Clinical Experience*

| | Years of Clinical Experience | | | |
|---|---|---|---|---|
| | 1 – 17 years | | 18 – 43 years | |
| Spearman Rho/Coefficient of Determination | $r_s$ | $r^2$ | $r_s$ | $r^2$ |
| Competency Domains | | | | |
| 1. Facilitate learning | .259** | .067 | .512*** | .262 |
| 2. Facilitate learner development and socialization | .097 | .009 | .116 | .013 |
| 3. Use assessment and evaluation strategies | .107 | .011 | .260** | .067 |
| 4. Participate in curriculum design and evaluation of program outcomes | .178* | .031 | .249** | .062 |
| 5. Function as a change agent and leader | .063 | .003 | .107 | .011 |
| 6. Pursue continuous quality improvement in the nurse educator role | .198* | .039 | .227* | .051 |
| 7. Engage in scholarship | .496*** | .246 | .450*** | .202 |
| 8. Function within the educational environment | .289*** | .083 | .180* | .032 |

*$p < .05$
** $p < .01$
*** $p = .000$

Table 32. *Relationships between Competency Domain Score and Corresponding Vignette Score based on Professional Development Hours*

| | Professional Development Hours | | | |
|---|---|---|---|---|
| | 1 – 25 hours | | More than 25 hours | |
| Spearman Rho/Coefficient of Determination | $r_s$ | $r^2$ | $r_s$ | $r^2$ |
| Competency Domains | | | | |
| 1. Facilitate learning | .399*** | .159 | .372*** | .138 |
| 2. Facilitate learner development and socialization | .159 | .025 | .062 | .003 |
| 3. Use assessment and evaluation strategies | .182* | .033 | .154* | .023 |
| 4. Participate in curriculum design and evaluation of program outcomes | .279** | .077 | .171* | .029 |
| 5. Function as a change agent and leader | .185* | .034 | .020 | .0004 |
| 6. Pursue continuous quality improvement in the nurse educator role | .182* | .033 | .251** | .063 |
| 7. Engage in scholarship | .547*** | .299 | .407*** | .165 |
| 8. Function within the educational environment | .175* | .062 | .249** | .030 |

* $p < .05$
** $p < .01$
*** $p = .000$

Table 33. *Relationship between Competency Domain Score and Corresponding Vignette Score based on Hours of Professional Development with a Curriculum and Instruction Focus*

| Professional development Hours with a Curriculum and Instruction Focus | | | | |
|---|---|---|---|---|
| | 0 – 10 hours | | 11 – 90 hours | |
| Spearman Rho/Coefficient of Determination | $r_s$ | $r^2$ | $r_s$ | $r^2$ |
| Competency Domains | | | | |
| 1. Facilitate learning | .408*** | .166 | .373*** | .139 |
| 2. Facilitate learner development and socialization | .062 | .003 | .122 | .014 |
| 3. Use assessment and evaluation strategies | .204* | .041 | .207* | .042 |
| 4. Participate in curriculum design and evaluation of program outcomes | .335*** | .112 | .114 | .012 |
| 5. Function as a change agent and leader | .084 | .007 | .053 | .002 |
| 6. Pursue continuous quality improvement in the nurse educator role | .234** | .054 | .254** | .064 |
| 7. Engage in scholarship | .507*** | .257 | .408*** | .166 |
| 8. Function within the educational environment | .184* | .033 | .213* | .045 |

*$p < .05$ ** $p < .01$ *** $p = .000$

## Ancillary Findings

The internal consistency of the Nurse Educator Skill Acquisition Assessment Tool Parts 2 and 3 was tested using Cronbach's alpha coefficient. The alpha coefficient for the 40 items in Part 2 of the Nurse Educator Skill Acquisition Assessment Tool was .977 ($M$ = .519, range = .711). The alpha coefficients for the five questions related to each of the eight competency domains were calculated and ranged between .85 and .90. Additionally, the internal consistency for the eight vignette questions was calculated as .57 ($M$ = .157, range = .346). Data related to Cronbach's alpha coefficient may be found in Table 34.

Table 34. *Cronbach's Alpha Coefficient*

| Internal Consistency | | | | |
|---|---|---|---|---|
| Mean Inter-item Correlation | *n* | *M* | Range | Alpha Coefficient |
| Competency Domains | | | | |
| 1. Facilitate learning | 5 | .586 | .184 | .873 |
| 2. Facilitate learner development and socialization | 5 | .647 | .153 | .901 |
| 3. Use assessment and evaluation strategies | 5 | .736 | .290 | .932 |
| 4. Participate in curriculum design and evaluation of program outcomes | 5 | .806 | .171 | .954 |
| 5. Function as a change agent and leader | 5 | .691 | .288 | .914 |
| 6. Pursue continuous quality improvement in the nurse educator role | 5 | .649 | .304 | .899 |
| 7. Engage in scholarship | 5 | .547 | .443 | .861 |
| 8. Function within the educational environment | 5 | .559 | .414 | .857 |
| Total Vignette Score | 8 | .157 | .346 | .570 |
| Total Skill Acquisition Score | 40 | .519 | .711 | .977 |

## Summary

The purpose of this chapter was to present data gathered for a study examining skill acquisition among 339 nurse educators from North Carolina and West Virginia. The researcher designed data collection instrument developed for this study was based on the conceptual framework of skill acquisition originally described by Dreyfus and Dreyfus (1986) and the NLN Nurse Educator Competencies (Halstead, 2007). Respondents were asked to rate their level of confidence in completing 40 nurse educator activities. In addition, eight vignette questions were developed and respondents were asked to select one of five choices that reflected the action they would take in response to the vignette scenario. Lastly, respondents were asked to respond to a series of eight demographic questions.

Analysis of the demographic information indicated that the majority of respondents had a master's degree in nursing and more than half taught in associate or diploma programs. Nearly equal numbers of respondents indicated they were employed in either the community college or public university setting, while fewer participants worked in private schools or universities. Twenty eight percent of respondents indicated they had between one and 10 years of clinical experience. More respondents indicated they had 1 – 5 years teaching experience than any other category. The majority of respondents indicated they participated in greater than 25 hours of professional development, while a little more than one quarter of respondents indicated they participated in five or fewer hours of professional development focused on curriculum and instruction.

The mean total skill acquisition score and standard deviation indicated that participants in this study had a moderately high level of confidence in completing tasks associated with the nurse educator role. Additionally, chi-square analysis determined participant responses were statistically significant in relation to all 40 competency statements on the *Nurse Educator Skill Acquisition Assessment Tool.*

Analysis revealed there was a statistically significant and moderately positive correlation between total skill acquisition score and total vignette score. Additionally, participant responses were statistically significant in relation to all eight competency domains. Participants indicated they had a moderately high level of confidence in completing tasks associated with each competency domain. The mean total vignette score also indicated that participants had a moderately high level of confidence in solving vignette scenarios related to the nurse educator role.

Analysis of demographics revealed participant responses were statistically significant in relation to work setting, educational preparation, teaching experience, and program type. Additionally, the highest mean ranks occurred for those respondents with a doctoral degree, who were working in the public university setting, who reported more than 20 years of teaching and less than 10 years of clinical experience, and who reported greater than 25 hours of professional development and more than 19 hours of professional development focused on curriculum and instruction.

Statistical significance was found for six of the eight competency domains based on work setting. Additionally, nurse educators working in public universities received the highest mean rank for all eight competency domains while those working in community colleges received the lowest mean rank for seven of the eight competency

domains. Statistical significance was also found for all eight competency domains based on the highest level of education reported by participants. Additionally, nurse educators reporting a doctoral degree received the highest mean rank and those reporting an undergraduate degree received the lowest mean rank for each of the eight competency domains. Statistical significance was found for all eight competency domains based on years of teaching experience and nurse educators reporting more than 20 years of teaching experience received the highest mean rank while those reporting less than five years received the lowest mean rank for all eight competency domains. Statistical significance was found for only two competency domains based on years of clinical experience. Additionally, nurse educators with 26 to 43 years of clinical experience received the highest mean rank for two competency domains and those reporting 11 to 17 years of clinical experience received the lowest mean ranks for five competency domains. Nurse educators with 18 to 25 years of clinical experience received the lowest mean ranks for three competency domains.

Statistical significance was found for all eight competency domains based on program type and nurse educators teaching in graduate programs received the highest mean rank while those teaching in associate or diploma programs received the lowest mean rank for all eight competency domains. No statistical significance was found for any of the eight competency domains based on either hours of professional development or hours of professional development focused on curriculum and instruction.

The relationships between each competency domain score and its corresponding vignette score were all slight or moderately positive and six of the eight relationships were statistically significant. The relationships between total skill

acquisition score and the total vignette score based on program type, work setting, teaching experience, and clinical experience were all statistically significant. Additionally, the relationship between total skill acquisition score and total vignette score based on more than 15 hours of professional development was statistically significant. The relationship between total skill acquisition score and total vignette score and less than seven and more than 16 hours of professional development focused on curriculum and instruction was statistically significant.

Statistically significant relationships were found between competency domains one, two, three, four, six, seven, and eight and their corresponding vignette score based on the level of education that nurse educators reported. Additionally, statistical significance was found for the relationships between competency domains one, three, four, six, seven, and eight and their corresponding vignette score based on work setting, years of clinical experience, and hours of professional development focused on curriculum and instruction.

Statistical significance was also found for the relationships between competency domains one, three, four, five, six, seven, and eight and their corresponding vignette score based on years of teaching experience and hours of professional development. Additionally, coefficients of determination revealed the explained variance for the relationships between competency domains one and seven and their corresponding vignette scores for each demographic variable accounted for between 10% and 30% of the variance in each case.

# CHAPTER FIVE: CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

This chapter reviews the purpose of the study, methods, and the demographic data. Summaries of the study findings are presented. This chapter ends with a presentation of study conclusions, discussion, implications, and recommendations for further research.

## Purpose of the Study

The purpose of this study was to design and validate a skill acquisition model for the nurse educator role. Additionally, the study investigated the differences in skill acquisition among nurse educators based on demographic factors such as clinical and teaching experience, work setting, educational background, professional development activities, and successfully completing the NLN Certified Nurse Educator Exam. In addition, relationships between total skill acquisition and the practical application of nurse educator skills were investigated. The following research questions guided the study.

RQ1 What is the total perceived level of skill acquisition related to the NLN Nurse Educator Competencies?

RQ2 What is the perceived level of skill acquisition for each of the eight NLN Nurse Educator Competency domains?

RQ3 What differences, if any, exist between the total perceived level of skill acquisition and selected demographics?

RQ4 What differences, if any, exist between the perceived level of skill acquisition for each of the eight NLN Nurse Educator Competency domains and selected demographics?

RQ5 What is the relationship, if any, between the total perceived level of skill acquisition and the practical application of nurse educator skills?

RQ6 What is the relationship, if any, between the perceived levels of skill acquisition for each of the eight NLN Nurse Educator Competency domains and the practical application of nurse educator skills?

RQ7 What differences, if any, exist in the relationship between the total perceived level of skill acquisition and the practical application of nurse educator skills based on selected demographics?

RQ8 What differences, if any, exist in the relationship between the perceived level of skill acquisition for each of the eight NLN Nurse Educator Competency domains and the practical application of nurse educator skills based on selected demographics?

## Methods

This was a descriptive quantitative study of a population sampling of nurse educators across the states of North Carolina and West Virginia. This study used a researcher developed survey instrument to collect information related to the skill acquisition of the sample population.

For the purposes of this study, nurse educators currently teaching in undergraduate or graduate nursing programs were the targeted population, while nurse educators teaching in acute or long term care facilities, licensed practical nursing programs, certified nursing assistant programs or allied health programs were excluded

from the study. According to the West Virginia State Board for Registered Nurses, a total of 796 registered nurses identified themselves as nurse educators during the 2008 licensing period and 519 (65 %) of those educators were teaching in graduate or undergraduate nursing programs in the State of West Virginia during the 2008/2009 school year. The North Carolina State Board for Registered Nurses reported a total of 1309 registered nurses who identified themselves as nurse educators during the 2008/2009 school year. Using the same projection (65%), an estimated 850 registered nurses were working as nurse educators in graduate or undergraduate nursing programs in the State of North Carolina during the 2008/2009 school year. The combined total from North Carolina and West Virginia (N = 1369) made up the sample population. A total of 454 participants (33%) answered the survey and 339 (24.7%) of the total sample population (N = 1369) met inclusion criteria and were included in data analysis.

Research for this study was conducted via a researcher designed three part survey instrument, the *Nurse Educator Skill Acquisition Assessment Tool.* This instrument was derived based on the available literature, the Nurse Educator Skill Acquisition Model (Appendix E), and the Nurse Educator Competencies published by the National League for Nursing (NLN) (2007). The *Nurse Educator Skill Acquisition Assessment Tool* was validated for content and format by an expert panel consisting of five members.

## Summary of Findings

Demographic data collected by the *Nurse Educator Skill Acquisition Assessment Tool* indicated the majority of respondents (57.1%) reported their highest level of education was the master's degree in nursing ($n$ = 192), while 7.1% had

completed a postmaster's certificate ($n$ = 24) and 26.2% had completed a doctoral degree ($n$ = 88). Most respondents indicated they taught in associate or diploma programs ($n$ = 153) and nearly equal numbers of respondents indicated they worked in either the community college ($n$ = 118, 34.9%) or public university ($n$ = 119, 35.2%) setting, while 28.4% reported being employed by a private school or university ($n$ = 96). Participants reported a range from one to 43 years of clinical experience ($M$ = 17.9, SD = 9.8) and one to 45 years of teaching experience ($M$ = 13.6, SD = 10.2). More than half the respondents reported more than 25 hours of professional development during the past year. Professional development hours devoted to curriculum and instruction ranged from zero to 90 hours ($M$ = 13.1, SD = 12.1) and most respondents (89.9%) indicated they had not taken the NLN Certified Nurse Educator exam.

The total nurse educator skill acquisition scores ranged from 24 to 200. According to the *Nurse Educator Skill Acquisition Assessment Tool* scoring grid, 0 – 40 indicates novice, 41 – 80 indicates advanced beginner, 81 – 120 indicates competence, 121 – 160 indicates proficiency, and 161 – 200 indicates an expert level of skill acquisition. Thus, the mean total score (153.24) and standard deviation (29.04) indicated a proficient level of total skill acquisition.

The 40 competency statements in Part 2 of the *Nurse Educator Skill Acquisition Assessment Tool* related to the eight NLN competency domains with five statements related to each of the eight domains. A one sample $t$-test determined participant responses were statistically significant in relation to all competency domains. The mean and standard deviation scores revealed a proficient level of skill acquisition for all eight competency domains.

Data analysis by Kruskal-Wallis testing revealed that the highest level of education attained by participants, years of teaching experience, type of program and school were all statistically significant in relation to the total skill acquisition score. Years of clinical experience, the number of professional development hours, and the number of professional development hours devoted to curriculum and instruction were not statistically significant in relation to skill acquisition.

In relation to the eight competency domains, Kruskal-Wallis analysis resulted in statistical significance for all eight domains based on the educational preparation, teaching experience and type of program respondents reported working in. Additionally, six of the eight competency domains resulted in statistical significance based on the type of school participants reporting working in – 1. Facilitate learning, 2. Facilitate learner development and socialization, 3. Use assessment and evaluation strategies, 4. Participate in curriculum design and evaluation of program outcomes, 5. Function as a change agent and leader, and 7. Engage in scholarship. Analysis revealed statistical significance for two of the eight competency domains (5. Function as a change agent and leader and, 6. Pursue continuous quality improvement in the nurse educator role) based on the amount of clinical experience reported by participants. No statistical significance was found for any of the eight competency domains based on the amount professional development hours or the amount of professional development hours devoted to curriculum and instruction.

Part three of the *Nurse Educator Skill Acquisition Assessment Tool* consisted of eight multiple choice vignette questions relating to the corresponding competency domain and designed to assess the practical application of nurse educator skill. Chi-

square values revealed that each vignette question was statistically significant. Mean scores indicated that participants would act within the competent level of skill acquisition to address four vignettes (1. Facilitate learning, 3. Use assessment and evaluation strategies, 5. Function as a change agent and leader, and 7. Engage in scholarship. Participants would act within the proficient level of skill acquisition to address three vignettes – 2. Facilitate learner development and socialization, 4. Participate in curriculum design and evaluation of program outcomes, and 6. Pursue continuous quality improvement in the nurse educator role) and participants would act within the advanced beginner level of skill acquisition to address the vignette associated with domain eight (Function within the educational environment).

Pearson *r* analysis revealed a statistically significant and moderately positive correlation between total skill acquisition and total vignette scores. Additionally, there was a slight or moderately positive correlation between each competency domain score and the corresponding vignette score. Statistical significance was found in six (1. Facilitate learning, 3. Use assessment and evaluation strategies, 4. Participate in curriculum design and evaluation of program outcomes, 6. Pursue continuous quality improvement in the nurse educator role, 7. Engage in scholarship, and 8. Function within the educational environment) of the eight relationships between competency domain score and corresponding vignette scores.

Spearman Rho analysis resulted in slight or moderately positive and statistically significant relationships between the total skill acquisition score and vignette score based on undergraduate programs; while moderately positive and statistically significant relationships were found between total skill acquisition score and vignette

score for both masters degree and doctoral programs. A slightly positive and statistically significant relationship was found between the total skill acquisition score and the total vignette score for those working in the community college setting, while the relationship between total skill acquisition score and total vignette score for both the private and public university settings was moderate positive and statistically significant.

Spearman Rho analysis resulted in slight or moderately positive and statistically significant relationships between total skill acquisition and total vignette score for both years of teaching and years of clinical experience. A moderately positive and statistically significant relationship was found between the total skill acquisition and total vignette score for both 15 to 25 hours and more than 25 hours of professional development. No statistical significance was found in the relationship between total skill acquisition score and total vignette score for hours of professional development focused on curriculum and instruction though each relationship was slight or moderately positive.

## Conclusions

The analysis of the data collected for this study provided sufficient evidence to support the following conclusions.

### RQ1 What is the total perceived level of skill acquisition related to the NLN Nurse Educator Competencies?

Use of chi-square analysis determined participants' responses were statistically significant in relation to all 40 statements. Although the scores ranged from 24 to 200, the mean score (M = 153.24) indicated that the respondents in this study had a moderately high level of confidence in their ability to complete tasks associated with the nurse educator role. Based on these data and the *Nurse Educator Skill Acquisition Assessment*

*Tool* scoring grid, it can be concluded that the participants in this study possess a proficient level of skill acquisition.

**RQ2 What is the perceived level of skill acquisition for each of the eight NLN Nurse Educator Competency domains?**

Statistical significance was reached for all eight competency domain scores. The mean and standard deviation scores revealed a proficient level of skill acquisition for all eight competency domains. Therefore, it can be concluded that nurse educators participating in this study perceive their levels of skill acquisition as proficient for all eight competency domains.

**RQ3 What differences, if any, exist between the total perceived level of skill acquisition and selected demographics?**

The relationships between the total perceived level of skill acquisition and previously described demographics were analyzed based on nurse educator responses to demographic questions. NLN Certified Nurse Educator exam was excluded from analysis for this research question due to insufficient cell size.

**E*ducation preparation*.** Study findings yielded statistically significant differences in levels of total skill acquisition based on educational preparation. Doctorally prepared nurse educators reported higher levels of total skill acquisition than did nurse educators with associate or bachelors degrees. The conclusion based on these findings is that there is a difference in total skill acquisition based on the level of education reported by participants; the higher the level of education, the higher the level of skill acquisition.

***Work setting.*** Study findings indicated statistically significant differences in levels of total skill acquisition based on work setting. Nurse educators working in public

universities reported higher levels of skill acquisition than those working in community colleges. The conclusion based on these findings is that there is a difference in total skill acquisition based on the work setting; those working in public universities have higher levels of skill acquisition compared to those working in the community college setting.

***Program type.*** Study findings yielded statistically significant differences in levels of skill acquisition based on the type of program respondents reported working in. Participants working in graduate programs reported higher levels of skill acquisition than nurse educators working in associate or diploma programs. The conclusion based on these findings is that there is difference in total skill acquisition based on program type; those working in graduate programs have higher levels of skill acquisition compared to those working in associate or diploma programs.

***Clinical experience.*** Study findings indicated that nurse educators with one to 10 years of clinical experience received the highest mean rank while those with 26 – 43 years received the lowest mean rank however, statistical significance was not established. The conclusion based on these findings is that there is no difference in total skill acquisition based on years of clinical experience.

***Teaching experience***. Study findings yielded statistically significant differences in levels of skill acquisition based on years of teaching experience. Nurse educators with 20 or more years of teaching experience reported higher levels of skill acquisition than those with less than 20 years of experience. The conclusion based on these findings is that there is a difference in total skill acquisition based on the amount of teaching experience reported by participants; the higher the level of teaching experience the higher the level of skill acquisition.

***Professional development***. Study findings indicate that there were no significant differences in levels of total skill acquisition based on hours of professional development respondents reported participating in during the past year.

***Professional development focused on curriculum and instruction***. Study findings indicate that there were no significant differences in levels of total skill acquisition based on hours of professional development focused on curriculum and instruction.

**RQ4 What differences, if any, exist between the perceived level of skill acquisition for each of the eight NLN Nurse Educator Competency domains and selected demographics?**

The relationship between the perceived level of skill acquisition within each of the eight competency domains and previously described demographics was analyzed based on nurse educator responses to demographic questions.

***Educational preparation.*** Study findings yielded statistically significant differences in skill acquisition within each of the eight competency domains based on educational preparation. Nurse educators with doctoral degrees reported higher levels of skill acquisition for each competency domain than nurse educators with undergraduate degrees. Doctorally prepared educators received the highest mean rank for each of the eight competency domains, while educators with the associate or bachelor's degree received the lowest mean rank for each domain. The conclusion based on these findings is that there is a difference in skill acquisition for each of the eight competency domains based on participants' educational preparation.

***Work setting.*** Study findings yielded statistically significant differences in skill acquisition within six of the eight competency domains (1. Facilitate learning, 2.

Facilitate learner development and socialization, 3. Use assessment and evaluation strategies, 4. Participate in curriculum design and evaluation of program outcomes, 5. Function as a change agent and leader, and 7. Engage in scholarship) based on work setting. The conclusion based on these findings is that there is a difference in skill acquisition for six of the eight competency domains based on work setting. Additionally, those working in public universities reported higher levels of skill acquisition for all eight competency domains while those working in community colleges reported lower levels of skill acquisition for seven of the eight competency domains.

***Program type.*** Study findings yielded statistically significant differences in skill acquisition among competency domains based on the type of program participants reporting working in. Nurse educators working in graduate programs reported higher levels of skill acquisition for all eight competency domains while those working in associate or diploma programs reported the lowest levels of skill acquisition. The conclusion based on these findings is that there is a difference in skill acquisition for each of the eight competency domains based on the type of program participants' reported teaching in.

***Teaching experience.*** Study findings yielded statistically significant differences in skill acquisition within all eight competency domains based on years of teaching experience. Nurse educators with 20 or more years of teaching experience reported higher levels of skill acquisition while educators with five years or less experience reported the lowest levels of skill acquisition for each of the eight competency domains. The conclusion based on these findings is that there is a difference in skill acquisition for each of the eight competency domains based on years of teaching

experience; the higher the level of teaching experience, the higher the level of skill acquisition.

***Clinical experience.*** Participants reporting 26 to 43 years of clinical experience received the highest mean rank for seven of the eight competency domains, while those reporting 11 to 17 or 18 to 25 years received the lowest mean rank. Statistical significance was shown for only two of the eight competency domains (5. Function as a change agent and leader, and 6. Pursue continuous quality improvement in the nurse educator role) based on years of clinical experience. The conclusion based on these findings is that there is no difference in skill acquisition for the eight competency domains based on years of clinical experience as reported by participants.

***Professional development.*** Study findings yielded no significant differences in skill acquisition within competency domains based on professional development. The conclusion based on these findings is that there is no difference in skill acquisition within the competency domains based on hours of professional development respondents' reported participating in during the past year.

***Professional development focused on curriculum and instruction.*** Study findings yielded no significant differences in skill acquisition within competency domains based on professional development focused on curriculum and instruction. The conclusion based on these findings is that there is no difference in skill acquisition within the competency domains based on hours of professional development focused on curriculum and instruction.

**RQ5 What is the relationship, if any, between the total perceived level of skill acquisition and the practical application of nurse educator skills?**

The data shows a statistically significant and moderately positive correlation between total skill acquisition score and total vignette score and the explained variance was 31.9%. The conclusion based on these findings is that there is a statistically significant and moderately positive relationship between total skill acquisition and the practical application of nurse educator skills.

**RQ6 What is the relationship, if any, between the perceived levels of skill acquisition for each of the eight NLN Nurse Educator Competency domains and the practical application of nurse educator skills?**

Study findings show that six of the eight relationships between competency domain and corresponding vignette scores were slight to moderately positive and statistically significant, while two relationships (2. Facilitate learner development and socialization and 5. Function as a change agent and leader) were slight to moderately positive and showed no statistical significance. As a result, no significance can be attached to the relationships between competency domains two and five and their corresponding vignette scores. The conclusion based on these findings is that, in general, there was a slight to moderately positive relationship between all eight competency domain and corresponding vignette scores, although two relationships showed no statistical significance.

**RQ7 What differences, if any, exist in the relationship between the total perceived level of skill acquisition and the practical application of nurse educator skills based on selected demographics?**

The relationship between the perceived level of skill acquisition within each of the eight competency domains and the corresponding vignette score based on previously stated demographics was analyzed based on nurse educator responses to

demographic questions. Educational preparation was not analyzed for this research question due to insufficient cell size.

***Program type.*** The relationships between total skill acquisition and total vignette score based on program type were statistically significant and slight or moderately positive. Additionally, the relationship between total skill acquisition, total vignette score, and those teaching in master's degree programs accounted for 21.8% of the total variance while those teaching in doctoral programs accounted for 10. 9%. The relationships between total skill acquisition and total vignette score based on program type were all positive and statistically significant, but the relationship between total skill acquisition and total vignette scores for those working in master's programs show the strongest positive relationship. Based on these findings it can be concluded that the type of program reported by respondents makes a difference in the relationships between total skill acquisition and total vignette scores; those working in master's degree programs showed the strongest positive relationship between total skill acquisition and the practical application of nurse educator skills.

***Work setting.*** The relationships between total skill acquisition and total vignette score based on work setting (community college, private school or university, public university) were all slight or moderately positive and showed statistical significance in each case. Additionally, the relationship between total skill acquisition, total vignette score, and the public university accounted for 19.4% of the total variance. The relationships between total skill acquisition and total vignette score, based on either, community colleges, private schools or universities, or public universities were all positive and statistically significant, but the relationship between total skill acquisition

and total vignette scores for those who work in public universities show the strongest positive relationship. The conclusion based on these findings is that those working in public universities show the strongest positive relationship between total skill acquisition and the practical application of nurse educator skills.

***Teaching experience.*** The relationships between total skill acquisition and total vignette score based on the years of teaching experience reported by participants were all slight or moderately positive and showed statistical significance. Additionally, the relationship between total skill acquisition and total vignette score for those participants reporting 17 to 45 years of teaching experience accounted for 14.2% of the total variance. The relationship between total skill acquisition and total vignette score based on years of teaching experience were all positive and statistically significant, but the relationship between total skill acquisition, total vignette scores, and those with 17 to 45 years of teaching experience show the strongest positive relationship. The conclusion based on these findings is that higher the level of teaching experience, the greater the relationship between total skill acquisition and the practical application of nurse educator skills.

***Clinical experience.*** The relationships between total skill acquisition and total vignette score based on the years of clinical experience reported by participants were all slight or moderately positive and showed statistical significance. Additionally, the relationship between total skill acquisition, total vignette score, and those participants reporting 22 to 43 years of clinical experience accounted for 18.9% of the total variance. The relationships between total skill acquisition and total vignette score for all levels of clinical experience are positive and statistically significant, but the relationship between

total skill acquisition and total vignette scores for those reporting 22 to 43 years of clinical experience showed the strongest positive relationship. The conclusion based on these findings is that there is a difference in the relationship between total skill acquisition and total vignette score based on clinical experience; those reporting 22 to 43 years of clinical experience had the strongest relationship between total skill acquisition and the practical application of nurse educator skills.

***Professional development.*** The relationships between total skill acquisition and total vignette score based on hours of professional development during the past year were all statistically significant and slight or moderately positive. Additionally, the relationship between total skill acquisition and total vignette score for those participants reporting between 15 and 25 hours of professional development accounted for 18.1% of the total variance. The conclusion based on these findings is that there is a difference in the relationships between total skill acquisition and the practical application of nurse educator skills based on hours of professional development; those reporting 15 to 25 hours of professional development had the strongest positive relationship between skill acquisition and the practical application of nurse educator skills.

***Professional development focused on curriculum and instruction.*** The relationships between total skill acquisition and total vignette score based on the hours of professional development focusing on curriculum and instruction were slight or moderately positive. However, statistical significance was shown for only those respondents reporting the highest levels of professional development, between 16 and 90 hours. Additionally, the relationship between total skill acquisition and total vignette

score for those participants reporting between 16 and 90 hours of professional development accounted for 24.8% of the total variance.

The relationships between total skill acquisition and total vignette scores were slight or moderately positive but only statistically significant for those respondents reporting between 16 and 90 hours of professional development focused on curriculum and instruction; no significance can be attached to the relationships between total skill acquisition and total vignette scores based on less than 16 hours of professional development focused on curriculum and instruction. The conclusion based on these findings is that there is a statistically significant difference in the relationship between total skill acquisition and hours of professional development focused on curriculum and instruction; those reporting the highest levels of professional development focused on curriculum and instruction had the strongest positive relationship between total skill acquisition and the practical application of nurse educator skills.

**RQ8 What differences, if any, exist in the relationship between the perceived level of skill acquisition for each of the eight NLN Nurse Educator Competency domains and the practical application of nurse educator skills based on selected demographics?**

The relationship between the perceived level of skill acquisition within each of the eight competency domains and the corresponding vignette score based on previously stated demographics was analyzed in relation to nurse educator responses to demographic questions. However, program type was not included in this analysis due to insufficient cell size.

***Educational preparation.*** Study findings indicated a statistically significant slight or moderately positive relationship between skill acquisition and the practical application of nurse educator skills for competency domains one (Facilitate learning),

four (Participate in curriculum development and evaluation of program outcomes), seven (Engage in scholarship), and eight (Function within the educational environment) for nurse educators reporting a master's degree as the highest level of education achieved. Similar, statistically significant and slight to moderately positive relationships were also found for the relationship between skill acquisition and the practical application of nurse educator skills for competency domains one (Facilitate learning), two (Facilitate learner development and socialization), three (Use assessment and evaluation strategies), six (Pursue continuous quality improvement in the nurse educator role), seven (Engage in scholarship), and eight (Function within the educational environment) for nurse educators with a post-master's certificate or doctoral degree.

Nurse educators with a post-master's certificate or doctoral degree reflect stronger positive and statistically significant relationships for competency domain seven (engage in scholarship) and eight (function within the educational environment) than nurse educators with a master's degree. Master's-level nurse educators, however, reflected a slightly stronger positive and statistically significant relationship between skill acquisition and the practical application of nurse educator skills for competency domain one (facilitate learning) than nurse educators reporting a doctoral degree.

In conclusion, the data suggest that the statistically significant relationships between skill acquisition and the practical application of nurse educator skills were all slight to moderately positive and there were more statistically significant relationships between skill acquisition and the practical application of nurse educator skills for those educators reporting a post master's certificate or doctoral degree.

***Work setting.*** Study findings indicated a slight to moderately positive and statistically significant relationship between skill acquisition and the practical application of nurse educator skills for competency domains one (Facilitate learning), three (Use assessment and evaluation strategies), four (Participate in curriculum development and evaluation of program outcomes), six (Pursue continuous quality improvement in the nurse educator role), and seven (Engage in scholarship) for nurse educators working in the community college setting. Similarly, a statistically significant and slight to moderately positive relationship was also found for competency domains one (Facilitate learning), six (Pursue continuous quality improvement in the nurse educator role), seven (Engage in scholarship), and eight (Function within the educational environment) for nurse educators working in the private university setting. For nurse educators working in the public university setting, slight to moderately positive and statistically significant relationships were found for competency domains one (Facilitate learning), three (Use assessment and evaluation strategies), four (Participate in curriculum development and evaluation of program outcomes), six (Pursue continuous quality improvement in the nurse educator role), seven (Engage in scholarship), and eight (Function within the educational environment).

In conclusion, the data show that while all of the statistically significant relationships were slight to moderately positive, those working in the community college setting reflect a stronger positive relationship for competency domain one (facilitate learning) while nurse educators working in the public university setting reflect stronger positive relationships for competency domains four (participate in curriculum development and evaluation of program outcomes), seven (engage in scholarship), and

eight (function within the educational environment). Additionally, there were more statistically significant relationships between skill acquisition by domain and the practical application of nurse educator skills for those working in the public university setting than for those working in either the community college or private university setting.

***Teaching experience.*** Study findings indicated a slight to moderately positive and statistically significant relationship between total skill acquisition and the practical application of nurse educator skills for competency domain one (Facilitate learning), six (Pursue continuous quality improvement in the nurse educator role), and seven (Engage in scholarship) for nurse educators reporting between one and 10 years of teaching experience. For nurse educators reporting between 11 and 45 years of teaching experience, slight to moderately positive and statistically significant relationships were found between skill acquisition and the practical application of nurse educator skills for competency domains one (Facilitate learning), three (Use assessment and evaluation strategies), four (Participate in curriculum design and evaluation of program outcomes), five (Function as a change agent and leader), six (Pursue continuous quality improvement in the nurse educator role), seven (Engage in scholarship), and eight (Function within the educational environment).

In conclusion, the data show that nurse educators reporting between one and 10 years of teaching experience reflected stronger positive relationships for competency domains one (facilitate learning) and seven (engage in scholarship), while those reporting between 11 and 45 years of teaching experience reflected more statistically significant relationships overall than those reporting fewer years of teaching experience.

***Clinical experience.*** Study findings indicated slight to moderately positive and statistically significant relationships between total skill acquisition and the practical application of nurse educator skills for competency domain one (Facilitate learning), four (Participate in curriculum development and evaluation of program outcomes), six (Pursue continuous quality improvement in the nurse educator role), seven (Engage in scholarship), and eight (Function within the educational environment) for nurse educators reporting between one and 17 years of clinical experience. Similarly, slight to moderately positive and statistically significant relationships were found between skill acquisition and the practical application of nurse educator skills for competency domains one (Facilitate learning), three (Use assessment and evaluation strategies), four (Participate in curriculum design and evaluation of program outcomes), six (Pursue continuous quality improvement in the nurse educator role), seven (Engage in scholarship), and eight (Function within the educational environment) for nurse educators reporting between 18 and 43 years of clinical experience.

In conclusion, nurse educators reporting between 18 and 43 years of clinical experience reflected stronger positive relationships for competency domains one (Facilitate learning), three (Use assessment and evaluation strategies), four (Participate in curriculum design and evaluation of program outcomes), and six (Pursue continuous quality improvement in the nurse educator role) while those reporting fewer years of clinical experience reflected stronger positive relationships for competency domains seven (Engage in scholarship) and eight (Function within the educational environment). Additionally, nurse educators reporting more years of clinical experience reflected more statistically significant relationships between skill acquisition and the practical

application of nurse educator skills than those reporting fewer years of clinical experience.

***Professional development.*** Study findings indicated slight to moderately positive and statistically significant relationships between total skill acquisition and the practical application of nurse educator skills for competency domain one (Facilitate learning), three (Use assessment and evaluation strategies), four (Participate in curriculum design and evaluation of program outcomes), five (Function as a change agent and leader), six (Pursue continuous quality improvement in the nurse educator role), seven (Engage in scholarship), and eight (Function within the educational environment) for nurse educators reporting between one and 25 hours of professional development. Similarly, slight to moderately positive and statistically significant relationships were found between skill acquisition and the practical application of nurse educator skills for competency domains one (Facilitate learning), three (Use assessment and evaluation strategies), four (Participate in curriculum design and evaluation of program outcomes), six (Pursue continuous quality improvement in the nurse educator role), seven (Engage in scholarship), and eight (Function within the educational environment) for nurse educators reporting more than 25 hours of professional development.

In conclusion, nurse educators reporting between one and 25 hours of professional development reflected slight to moderately positive and statistically significant relationships for seven of the eight competency domains while those reporting more than 25 hours of professional development reflected slight to moderately positive relationships for six of the eight competency domains. Additionally, nurse educators reporting fewer hours of professional development reflected slightly stronger positive

relationships for competency domains one (Facilitate learning), three (Use assessment and evaluation strategies), four (Participate in curriculum design and evaluation of program outcomes), seven (Engage in scholarship) and eight (Function within the educational environment) than those reporting more hours of professional development. Nurse educators reporting more hours of professional development, however, reflected stronger positive relationships for competency domains six (Pursue continuous quality improvement in the nurse educator role) and eight (Function within the educational environment) than those reporting fewer hours of professional development.

***Professional development focused on curriculum and instruction.*** Study findings indicated slight to moderately positive and statistically significant relationships between skill acquisition and the practical application of nurse educator skills for competency domain one (Facilitate learning), three (Use assessment and evaluation strategies), four (Participate in curriculum design and evaluation of program outcomes), six (Pursue continuous quality improvement in the nurse educator role), seven (Engage in scholarship), and eight (Function within the educational environment) for nurse educators reporting 10 or fewer hours of professional development focused on curriculum and instruction. Similarly, slight to moderately positive and statistically significant relationships were found between skill acquisition and the practical application of nurse educator skills for competency domains one (Facilitate learning), three (Use assessment and evaluation strategies), six (Pursue continuous quality improvement in the nurse educator role), seven (Engage in scholarship), and eight (Function within the educational environment) for nurse educators reporting between 11 and 90 hours of professional development focused on curriculum and instruction.

In conclusion, nurse educators reporting 10 or fewer hours of professional development focused on curriculum and instruction reflected slightly stronger positive relationships for competency domains one (Facilitate learning), four (Participate in curriculum design and evaluation of program outcomes), and seven (Engage in scholarship) while those reporting between 11 and 90 hours of professional development focused on curriculum and instruction reflected a stronger positive relationship for competency domain three (Use assessment and evaluation strategies), six (Pursue continuous quality improvement in the nurse educator role), and eight (Function within the educational environment). Additionally, nurse educators reporting fewer hours of professional development focused on curriculum and instruction reflected more statistically significant relationships between skill acquisition and the practical application of nurse educator skills than those reporting more hours of professional development.

## Discussion and Implications

The majority of participating nurse educators indicated they had a moderate, moderately high, or high level of confidence in completing activities associated with the nurse educator role. These descriptors correspond with the competent, proficient, or expert level of skill acquisition as described by Dreyfus and Dreyfus (1980), Benner (1984), and the conceptual framework for nurse educators designed specifically for this study.

The findings suggest that participating nurse educators felt a moderately high level of confidence in their knowledge base and may be related to the fact that 70.8 percent of participants claimed more than five years of teaching experience. In fact,

Benner (1984) selected clinical nurses with at least five years of clinical experience who were recognized for their clinical expertise, to participate in her original study focused on skill acquisition among clinical nurses.

More than half (57.1%) of the participants in this study had at least a master's degree and one third of participants had completed formal education beyond the master's degree. These findings support previous literature indicating that experience is an important factor in skill acquisition and suggests that formal education may also play an important part in acquiring skill.

The moderate level of confidence indicating a competent level of skill acquisition, which were the six lowest, were received for (a) leading interdisciplinary efforts to address healthcare and educational needs regionally, nationally, and internationally; (b) balancing teaching, scholarship, and service; (c) participating as a team member in scholarly activities and demonstrating effective proposal writing; (d) designing and conducting research; (e) disseminating information locally, nationally, and/or internationally to enhance nursing education; and, (f) advocating for nursing in the political arena. Based on these results, it would seem that nurse educators have a high level of confidence in their level of skill acquisition but may also benefit from mentoring and experience in areas associated with leadership, change, scholarship, and continuous quality improvement in the nurse educator role.

Similarly, total competency domain scores reported by nurse educators indicated they had a moderately high level of confidence in completing tasks associated with each competency domain. This finding again supports the work of Dreyfus and Dreyfus (1980), Benner (1984), and Greene et al. (1993) who indicated that discernment

is learned by experience in practice and that experienced individuals functioning at a higher level of skill acquisition easily discern the more salient aspects of a situation and seamlessly act appropriately and without conscious decision-making.

The lowest mean competency domain score (17.75) indicated a proficient level of skill acquisition and was received for engaging in scholarship. Based on these findings it would seem reasonable for nurse educators to focus professional development and mentoring activities related to scholarship in order to increase experience in this area. These findings may also reflect the fact that more than one third of respondents indicated they work in a community college where scholarship may not be a central focus of their work environment.

The majority of nurse educators participating in this study indicated their highest level of education was the master's degree in nursing. However, doctorally prepared nurse educators reported higher levels of skill acquisition than those with an associate or bachelor's degree. Additionally, the relationships between competency domains and the corresponding vignette scores repeated the trend when based on the highest level of education reported by participants. For example, the relationships between seven of the eight competency domains and their corresponding vignette scores for those participants reporting a master's degree are slight or moderately positive and four were statistically significant. For those participants reporting education beyond the master's degree, the relationships between all eight competency domains and the corresponding vignette scores are more strongly positive and six of the relationships were statistically significant. For this study, the higher the level of education reported by participants, the more strongly positive and statistically significant the relationships

between competency domains and vignette scores were. These findings support the work of Bartels (2007), who asserts that preparation by the master's program leads to an understanding of, and preparation in, the science and practice of nursing, thus missing the development of researcher/scholar and advanced nursing science expertise. According to Bartels (2007), this development, achieved through doctoral preparation, is critically necessary for a career in the academy.

Similarly, participants who reported teaching in public universities and graduate programs reported higher levels of skill acquisition than those teaching in community colleges in associate or diploma programs. Additionally, the relationship between total skill acquisition and the practical application of nurse educator skills based on each program type and work setting were slight or moderately positive and statistically significant. The relationships between total skill acquisition and vignette score based on either a master's program or public university showed the strongest positive relationships. The trend continues with the relationships between skill acquisition within competency domains and corresponding vignette scores when based on the type of work setting reported by participants. For example, the relationships between skill acquisition within competency domains and corresponding vignette scores were slight or moderately positive. Statistical significance was reached for four competency domains for those working in the community college and public university settings and for six competency domains for those working in the public university setting. According to Halstead (2007), the requirements for nurse educators may vary depending on the academic setting or program. For example, associate degree programs in community colleges may value clinical expertise and teaching over scholarship; and baccalaureate or

graduate programs in research based universities often value scholarship and tenure activities. These results may reflect the fact that several competency domains are specifically geared toward scholarship and tenure activities and educators working in institutions requiring these activities are more likely to have experience in these areas.

Nurse educators with 20 or more years of teaching experience reported higher levels of skill acquisition than those five or fewer years experience. The relationships between total skill acquisition and the practical application of nurse educator skills based on all levels of teaching experience were moderately positive and statistically significant. In addition, the relationships between total skill acquisition and the practical application of nurse educator skills for those reporting the highest levels of teaching experience (17 – 45 years) and clinical experience (22 – 43 years) were both statistically significant and show the strongest positive relationships. These findings support Dreyfus and Dreyfus' (1979) conclusion that specific experiences increase skill acquisition because experience most effectively leads to knowledge acquisition; in this case teaching rather than clinical experience leads to knowledge acquisition related to the nurse educator role.

Total professional development hours and professional development hours focused on curriculum and instruction did not show a significant difference in the level of skill acquisition. However, the relationships between total skill acquisition and the practical application of nurse educator skills based on all levels of professional development were positive and statistically significant, but the relationship between total skill acquisition and the practical application of nurse educator skills for those reporting 15 to 25 hours showed the strongest positive relationship. Additionally, participants reporting higher levels (16 or more) of professional development hours focused on

curriculum and instruction reported higher levels of skill acquisition than those reporting five or fewer hours. While no statistical significance was established, these findings indicate a trend toward more professional development activities focused on curriculum and instruction leading to a higher level of skill acquisition.

Since total professional development hours almost certainly include clinical topics it is not surprising that no significant difference in the level of skill acquisition was shown. This finding supports the reviewed literature concluding that professional development must include teaching and research expectations, committee and faculty governance responsibilities, as well as responsibilities for community and recruitment events within the college itself (Magnussen, 1997; Morin & Ashton, 1998; Sorcinelli, 1994; Watson & Grossman, 1994).

Researchers have shown that vignettes allow participants to consider a situation in a nonthreatening environment; then make practice decisions based on their knowledge and experience in similar situations (Azzarello, 2003; Ludwick & Zeller, 2001; Van Eerden, 2001). In addition, vignettes allow researchers to ascertain how people might behave in situations, especially those that may be difficult to observe in daily life (Polit & Hungler, 1999). A statistically significant and moderately positive relationship was found between the total skill acquisition score and the practical application of nurse educator skills (measured by vignettes), indicating that participant's actions are based on their level of skill acquisition. Individual competency domain and corresponding vignette scores revealed a slight or moderately positive relationship between all eight competency domains and their corresponding vignette scores. While six of the eight relationships between competency domain and corresponding vignette score

were statistically significant, two relationships (facilitate learner development and socialization and function as a change agent and leader) showed no statistical significance. The fact that relationships between total skill acquisition and the corresponding vignettes were statistically significant but only slight or moderately positive may indicate the need for vignette question revision.

For this study, skill acquisition was measured using a researcher designed survey instrument, the *Nurse Educator Skill Acquisition Assessment Tool.* Face validity for the tool was established by expert review and reliability was measure by Cronbach's alpha coefficient. The internal consistency for the 40 item scale on Part 2 of the *Nurse Educator Skill Acquisition Assessment Tool* was very high (.977) indicating that the competency statements were similar and results should be similar if used with other sample groups. The internal consistency measured by alpha coefficient for the five questions related to each of the eight competency domains was calculated and ranged between .85 and .90, indicating that competency statements within each domain were similar. The internal consistency for the eight vignette questions was calculated as .57 however, the range was calculated at .346, indicating optimal reliability for a scale with less than 10 items. Validity and reliability data suggest that the *Nurse Educator Skill Acquisition Assessment Tool* may exhibit similar results when used with additional sample populations.

In conclusion, the framework for skill acquisition designed for this study not only adds to the body of knowledge related to skill acquisition, role development, and role transition but also provides a unique method to study skill acquisition. Additionally, the results of this study provides useful information for administrators of schools of

nursing in planning and implementing the professional development of nurse educators. As this study shows, experience and education play key roles in skill acquisition. In addition to attending professional development programs, providing opportunities for experiences related to the nurse educator competencies will help to ensure faculty are gaining skill.

Additionally, the results of this study indicate that faculty members with postmaster's certificates and terminal degrees have higher levels of skill acquisition. Curricula developers may use to the results of this study to design graduate level programs that provide practical experiences targeted specifically at the nurse educator competencies and/or use the Nurse Educator Skill Acquisition Assessment Tool to determine skill acquisition levels at various points in graduate programs. This study also provides guidance to nurse educators and their mentors as well as those who design professional development activities to provide experiences and programs that coordinate with skill levels. The results of this study may be useful for peer or supervisor evaluations of faculty members looking for an objective method to measure skill.

## Concluding Remarks Regarding the Nurse Educator Skill Acquisition Model

This investigation represented an initial attempt to design and validate a skill acquisition model for the nurse educator role. The Dreyfus Model of Skill Acquisition along with the NLN Nurse Educator Competencies provided a framework for the development of the Nurse Educator Skill Acquisition Model and a survey instrument was designed to assess study participants' level of skill acquisition. Survey items were designed to reflect the novice to expert skill acquisition levels.

Analysis of the data revealed that the survey instrument discriminated between all five levels of skill acquisition – novice, advanced beginner, competent, proficient, and expert; indicating that the skill acquisition model for the nurse educator role mirrors the five level Dreyfus Model. The proficient and expert levels, however, were represented by greater numbers of individuals in this study than the novice and advanced beginner levels; and may reflect the fact that the majority of respondents (70.8%) reported greater than five years of experience in the nurse educator role. The findings from this study indicated that experience propels an individual along the novice to expert continuum and supports previous research by both Benner (1984) and Dreyfus and Dreyfus (1986).

Additionally, the small group of novices ($n = 3$) and advanced beginners ($n = 4$) in this study may also indicate that many nurse educators begin the role as advanced beginners or at a competent level of skill acquisition. Previous experiences as students in nursing programs or working with or among nursing students while in the clinical role may explain this phenomenon. Research focusing on skill acquisition during the first three years of the nurse educator role may elicit more refined data regarding the novice and advanced beginner levels of skill acquisition for this application.

A high level of reliability for the *Nurse Educator Skill Acquisition Assessment Tool* was shown by the Cronbach's alpha coefficient of .977 indicating that the survey tool will show similar results when used for additional sample groups of nurse educators. Additionally, reliability data for the eight competency domain and eight vignette questions was high. The moderately positive and statistically significant relationship between the total skill acquisition and total vignette score indicates that respondent skill acquisition level for both confidence and action were similar and serves to validate the

findings. The relationships between the domain and vignette scores were slight to moderately positive and statistically significant in most but not all cases. Increasing the number of vignette questions or revising the questions may result in stronger positive relationships.

In conclusion, the findings from this study indicate that the Nurse Educator Skill Acquisition Model appears to reflect the skill acquisition of nurse educators. Additionally, although further refinement is warranted, the *Nurse Educator Skill Acquisition Assessment Tool* appears to reliably measure skill acquisition among nurse educators.

## Recommendations for Further Research

This study investigated and provided insight into skill acquisition among nurse educators, as well as information regarding factors that play a role in knowledge and skill acquisition. Other questions raised by this study may be answered by further research. These are summarized as follows:

1. This study focused solely on nurse educators from North Carolina and West Virginia. Additional study could provide insight into the skill acquisition among nurse educators from other geographic locations or nationally.

2. Findings from this study indicated that the sample population of nurse educators had a high level of confidence in completing skills associated with the nurse educator role. However, the majority of respondents indicated they had more than five years of teaching experience. Additional study of skill acquisition among nurse educators during the first three to five years of their teaching careers may provide more information about the novice and advanced beginner levels of skill acquisition for the nurse educator role.

3. This study investigated skill acquisition using a survey questionnaire with competency statements and vignettes. Further investigation by interview and observation may elicit more in depth and detailed information about skill acquisition. Although the relationships between skill acquisition within competency domains and the corresponding vignette scores were slight or moderately positive, revision of the vignette questions may elicit stronger positive relationships.

4. Findings from this study did not conclusively indicate that professional development focused on curriculum and instruction played a significant role in skill acquisition, however a trend indicating that more professional development may lead to increased skill acquisition was shown. Further study regarding professional development is warranted.

5. Respondents for this study indicated the vast majority had not taken the relatively new NLN Certified Nurse Educator exam. Inquiry into the skill acquisition levels of those having passed the exam is warranted when greater numbers of educators have completed it.

6. The Nurse Educator Skill Acquisition Model was developed for this study in an attempt to investigate the skill acquisition of nurse educators. Study findings indicate that the model successfully described nurse educator skill acquisition; however, further study aimed at validating the model is warranted.

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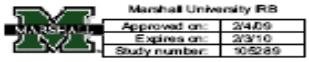
# APPENDICES

# Appendix A: Participant Letter




Dear Nurse Educator:

I am currently a doctoral student at Marshall University, and I am seeking your help in the completion of my dissertation. My research is focused on nurse educators and their skill acquisition from novice to expert. It is my hope the findings from this study can be used to guide and inform our professional development as nurse educators.

I would greatly appreciate it if you would take a few minutes of your time to complete this survey. Please visit _____ online to complete the survey. It should take approximately 15-20 minutes. I have assigned each potential participant a personal identification number (PIN) in order that I may track responses and send nonresponders a follow up request. Please enter your PIN as you begin the survey. **YOUR PIN IS _____.**

Participation is voluntary and your consent is implied by your response. The information you supply is confidential. The results of the survey will be determined by the answers you provide and not by any personal information. Data will only be reported in aggregate form.

As a fellow educator, I understand the demands placed on your time; therefore, I am truly appreciative of your taking the time necessary to complete this survey. It is my hope that your responses and those of your colleagues across West Virginia and North Carolina will help us understand the skill acquisition of nurses as they take on and become experienced with the nurse educator role.

If you have any questions concerning your rights as a research participant you may contact the Marshall university office of Research Integrity at (304) 696-4303.

Thank you for your participation. Please contact me if you have questions. I can be reached at lisarams@suddenlink.net.

I look forward to receiving your responses.

Sincerely,

Lisa Ramsburg, MSN

**Appendix B: Participant Survey**

# NURSE EDUCATOR SKILL ACQUISITION ASSESSMENT TOOL

## Part 1 – Demographic Information

1. Please describe your highest level of education:

   ASN _____ BSN _____ MSN _____

   Postmaster's Certificate _____ Doctoral Degree _____

2. In which type of program do you teach? (Check all that apply)

   LPN _____ CNA _____ Homemaker _____ ADN _____ Diploma _____ BSN _____

   MSN _____ Doctoral _____ Other, please describe _____

3. Please indicate the type of school you teach in:

   Community College _____ Private school or university _____ Public University _____

   Other _____, please describe:

   _____

4. How long have you been teaching nursing? _____

5. How many years of experience do you have in the clinical setting? (outside the teaching role):

   _____

6. How many hours of professional development have you participated in during the past year?

   _____< 15 _____ 15 to 25 _____ > 25

7. How many hours of professional development focused on curriculum and instruction have you participated in during the past year? _____

8. Have you passed the NLN Nurse Educator Exam? Yes _____ No _____

| Part 2 – Skill Acquisition Information | | | | | |
|---|---|---|---|---|---|
| Please indicate your level of confidence with the following activities by circling the appropriate number.<br><br>Rate your level of confidence:<br>1 – Low confidence<br>2 – Moderately low level of confidence<br>3 – Moderate confidence<br>4 – Moderately high level of confidence<br>5 – High level of confidence. | **Low Confidence** | **Moderately Low Confidence** | **Moderate Confidence** | **Moderately High Confidence** | **High Confidence** |
| 1. Identify essential course/clinical content that meets course objectives | 1 | 2 | 3 | 4 | 5 |
| 2. Conduct class/clinical experiences that effectively impart nursing knowledge | 1 | 2 | 3 | 4 | 5 |
| 3. Understand how course content meets curriculum objectives | 1 | 2 | 3 | 4 | 5 |
| 4. Develop a plan to assist individual students in academic difficulty | 1 | 2 | 3 | 4 | 5 |
| 5. Develop innovative programs for student success and retention | 1 | 2 | 3 | 4 | 5 |
| 6. Identify your own teaching style | 1 | 2 | 3 | 4 | 5 |
| 7. Discriminate between different teaching and learning styles | 1 | 2 | 3 | 4 | 5 |
| 8. Understand how your own teaching style contributes to curricular outcomes | 1 | 2 | 3 | 4 | 5 |
| 9. Alter teaching style to accommodate learning styles | 1 | 2 | 3 | 4 | 5 |
| 10. Design new teaching strategies | 1 | 2 | 3 | 4 | 5 |
| 11. Identify basic assessment/evaluation strategies | 1 | 2 | 3 | 4 | 5 |
| 12. Choose effective assessment/evaluation strategies | 1 | 2 | 3 | 4 | 5 |
| 13. Construct and analyze multiple choice test items | 1 | 2 | 3 | 4 | 5 |
| 14. Alter assessment/evaluation strategies based on test analysis | 1 | 2 | 3 | 4 | 5 |
| 15. Design new assessment / evaluation strategies | 1 | 2 | 3 | 4 | 5 |
| 16. Identify overall curriculum design | 1 | 2 | 3 | 4 | 5 |
| 17. Understand different curricular components | 1 | 2 | 3 | 4 | 5 |
| 18. Participate in program evaluation | 1 | 2 | 3 | 4 | 5 |
| 19. Suggest changes to your program evaluation | 1 | 2 | 3 | 4 | 5 |

| | | | | | |
|---|---|---|---|---|---|
| process | | | | | |
| 20. Design innovative curriculums to improve nursing education | 1 | 2 | 3 | 4 | 5 |
| 21. Identify your own leadership style | 1 | 2 | 3 | 4 | 5 |
| 22. Understand how your personal style may be used effectively to promote change. | 1 | 2 | 3 | 4 | 5 |
| 23. Implement strategies for organizational change | 1 | 2 | 3 | 4 | 5 |
| 24. Function as a leader in your parent institution | 1 | 2 | 3 | 4 | 5 |
| 25. Lead interdisciplinary efforts to address healthcare and educational needs regionally, nationally, and internationally | 1 | 2 | 3 | 4 | 5 |
| 26. Identify personal professional development needs | 1 | 2 | 3 | 4 | 5 |
| 27. Participate in professional development activities to meet personal goals | 1 | 2 | 3 | 4 | 5 |
| 28. Demonstrate improvement of performance based on professional development, self-reflection, and experience | 1 | 2 | 3 | 4 | 5 |
| 29. Balance teaching, scholarship, and service | 1 | 2 | 3 | 4 | 5 |
| 30. Serve as a mentor | 1 | 2 | 3 | 4 | 5 |
| 31. Use teaching content/strategies passed down from a peer or mentor | 1 | 2 | 3 | 4 | 5 |
| 32. Use available literature to plan teaching/learning activities | 1 | 2 | 3 | 4 | 5 |
| 33. Participate as a team member in scholarly activities; demonstrate effective proposal writing | 1 | 2 | 3 | 4 | 5 |
| 34. Design and conduct research | 1 | 2 | 3 | 4 | 5 |
| 35. Disseminate information locally, nationally, and/or internationally to enhance nursing education | 1 | 2 | 3 | 4 | 5 |
| 36. Determine your own professional goals | 1 | 2 | 3 | 4 | 5 |
| 37. Identify social, economic, political, and institutional forces that influence higher education | 1 | 2 | 3 | 4 | 5 |
| 38. Develop networks, collaborations, and partnerships to enhance nursing's influence within academia | 1 | 2 | 3 | 4 | 5 |
| 39. Build organizational climate using respect, collegiality, professionalism, and caring | 1 | 2 | 3 | 4 | 5 |

| | | | | | |
|---|---|---|---|---|---|
| 40. Advocate for nursing in the political arena | 1 | 2 | 3 | 4 | 5 |

Developed by Lisa Ramsburg, 2008

## Part 2, Continued

Please choose the response that you would do if you were in the situation described.

1. The director/dean has initiated a new policy at your school. The policy states that traditional teaching strategies (lecture) are outdated and minimally effective. Innovative teaching strategies that make use of technology, gaming, problem-based learning etc… will be the only strategies used to facilitate learning. How will you proceed?

A. You consult peers, mentors, textbooks and are unsure about how to proceed.

B. Feeling overwhelmed, you consult textbooks for guidelines or instructions for innovative teaching strategies.

C. Since you already make use of several innovative teaching strategies, you consult with a mentor or more experienced faculty member to further refine your present teaching strategies.

D. Nothing, you have already replaced traditional lectures with innovative strategies.

E. Since you rarely use traditional teaching strategies, you spend your time assisting/mentoring peers and demonstrating innovative strategies.

2. A student in your clinical rotation has been unprepared for the past two experiences. She indicates the clinical requirements are too lengthy and involved, and that there is too little time to be fully prepared. What is your response?

A. You ask other nurse educators in your school about protocols for dealing with unprepared students.

B. You talk with the student, explaining the expectations for the clinical rotation.

C. You talk with the student to discern specific problems the student may be having. In addition, you explain that being unprepared may lead to poor learning, unsatisfactory evaluations and ultimately, failing the course.

D. After finding out what issues, if any, the students is experiencing that have led to poor performance, you work with the student to design an overall plan for improvement.

E. You work with other faculty to design clinical experiences that meet course objectives, are achievable for students, and lead to success.

3. A student argues that your evaluation of written work is not justified. The student followed your rubric but did not go into depth in several areas. How will you respond? You

A. review the rubric and consult with peers to justify your evaluation.

B. meet with the student, listen to her complaints and promise to review the assignment again.

C. meet with the student and together, you review the rubric and assignment, pointing out problems with the written work.

D. meet with the student to show her specifically where and how to improve her work.

E. discuss the assignment with the student; pointing out ideas for improvement. You easily understand how the assignment and rubric may be altered to meet educational objectives and prevent further argument.

4. You and a peer are asked to evaluate your program's outcomes using graduate and employer expectations. How will you proceed?

A. Overwhelmed, you consult with your peer, hoping he has some good ideas.

B. You begin by making a list of actions but are uncertain how to prioritize activities.

C. After review of the assignment, you and your peer articulate a plan for evaluating program outcomes.

D. You take the lead, prioritizing and delegating activities to complete the assignment.

E. You take the lead in organizing data; quickly identifying and using emerging data seamlessly to maximum effect.

5. After reviewing the NCLEX pass rates for the graduating class, the Dean notes a significant decrease in your school's rate and assigns you to a committee charged with developing an action plan. Choose from the options below to describe yourself during the initial planning meeting. You

A. listen to other's ideas during the initial planning meeting.

B. make observations about the curriculum and NCLEX pass rate.

C. articulate the rationale for the current curriculum and desired outcomes associated with those components.

D. identify potential curriculum deficits and suggest changes.

E. quickly identify problem areas; develop a comprehensive program for improvement that includes curriculum change, assessment, and program evaluation.

6. You receive student evaluations for your class and notice a fairly high percentage of students rated your teaching strategies ineffective or minimally effective. How do you proceed?

A. Begin by asking peers or mentor about your performance.

B. Realizing that change must be made, you are uncertain of where and how to begin.

C. You compile a list of potential teaching strategies along with the pros and cons of each one.

D. You prioritize a list of new teaching strategies for next semester and begin planning for them.

E. You are able to change strategies 'on the fly' when a lesson is not working, already have contingency plans, and begin using them immediately.

7. As part of a tenure requirement, you must complete original research. You

A. decide to put off tenure activities for now.

B. are unsure how to begin and ask a colleague for direction.

C. select a topic and prioritize the tasks involved.

D. quickly review the steps involved in conducting research and begin.

E. look ahead to available resources, delegate resources during planning phase to potential problem areas, and move forward.

8. You are asked to participate on an interdisciplinary team charged with reviewing and revising (if necessary) the use of clinical sites, preceptors, and clinical experiences for ADN through MSN students for several nursing programs in your area. You begin by

A. asking questions to find out more information about the task at hand.

B. quickly identifying a course of action.

C. using previous experience to prioritize necessary steps.

D. using previous experience to anticipate potential problems and making contingency plans.

E. looking ahead to predict issues that may arise and rapidly implementing contingency plans to prevent failure.

## Appendix C: Nurse Educator Skill Acquisition Assessment Tool Scoring Grid

| | Novice | Advanced Beginner | Competent | Proficient | Expert |
|---|---|---|---|---|---|
| Competency Statement Score | 1 | 2 | 3 | 4 | 5 |
| Competency Domain Score | 1 – 5 | 6 -10 | 11 - 15 | 16 - 20 | 21 – 25 |
| Individual Vignette Score | 1 | 2 | 3 | 4 | 5 |
| Total Vignette Score | 1 – 8 | 9 – 16 | 17 - 24 | 25 - 32 | 33 – 40 |
| Total Skill Acquisition Score | 1 – 40 | 41 – 80 | 81 - 120 | 121 – 160 | 161 - 200 |

## Appendix D: Nurse Educator Skill Acquisition Conceptual Framework

| | Novice | Advanced Beginner | Competent | Proficient | Expert |
|---|---|---|---|---|---|
| **Competency 1** Facilitate Learning | Focuses on own teaching content | Discriminates learning intent | Models effect of own content and curriculum intent | Makes accurate suggestions/predictions for curriculum change | Supports curriculum intent |
| **Competency 2** Facilitate learning development and socialization | Identify own teaching style | Discriminates teaching/learning styles | Demonstrates how own teaching style fits with curricular outcomes | Alters teaching style to accommodate learning styles | Designs teaching styles to support curricular outcomes |
| **Competency 3** Assessment and evaluation | Identify basic assessment/evaluation strategies | Discriminates additional assessment/evaluation strategies | Demonstrates effective use of multiple assessment/evaluation strategies | Alters assessment/evaluation strategies as needed to accomplish curricular outcomes | Designs assessment / evaluation strategies to support curricular outcomes |
| **Competency 4** Curriculum design and program evaluation | Identifies curriculum design | Discriminates curricular components | Demonstrates how teaching strategies mesh with curricular design | Alters curricular design to meet educational outcomes. Effectively evaluates programs. | Designs innovative curriculum that meets or exceeds expected outcomes; designs program evaluation strategies |

| | Novice | Advanced Beginner | Competent | Proficient | Expert |
|---|---|---|---|---|---|
| **Competency 5** Leadership and change | Identifies leadership own style | Discriminates leadership style and how style may be used effectively to promote change. Determines need for educational and/or curricular change | Demonstrates effective educational and/or curricular change | Promotes and actively participates in innovating nursing education | Leads interdisciplinary teams to address societal healthcare needs and educational practices |
| **Competency 6** Continuous quality improvement in the educator role | Identifies professional development needs | Chooses professional development activities to meet personal goals | Demonstrates effective improvement of performance based on professional development and experience | Participates in self reflection. Balances teaching, scholarship, and service. Serves as a mentor. | Designs and implements policies based on legal and ethical issues; designs effective professional development activities |
| **Competency 7** Scholarship | Exhibits a spirit of inquiry | Uses available literature to improve teaching/learning activities | Participates as a team member in scholarly activities; demonstrates effective proposal writing. | Designs and conducts research. Disseminates information locally, nationally, and/or internationally to enhance nursing education. | Engages in theory building and testing to enhance the of professional nursing. |

| | Novice | Advanced Beginner | Competent | Proficient | Expert |
|---|---|---|---|---|---|
| **Competency 8** Function within the educational environment | Determines own professional goals | Identifies social, economic, political, and institutional forces that influence higher education | Integrates the values of respect, collegiality, professionalism, and caring to build an organizational climate | Develops networks, collaborations, and partnerships to enhance nursing's influence within academia | Assumes a leadership role in institutional governance; advocates for nursing and nursing education in the political arena |

## Appendix E: Nurse Educator Skill Acquisition Model

| Novice | Advanced Beginner | Competent | Proficient | Expert |
|---|---|---|---|---|
| Performance is abstract and rule-based; focused on variables in isolation. Educator focuses on own teaching content/course rather than considering larger curriculum intent. | Performance reflects simple analytical processing using a limited experience base. Tasks are paramount to everything else. Educator has difficulty prioritizing tasks; may become uncertain and easily overwhelmed. Relies on direction from more experienced colleagues rather than making independent decisions. | Performance reflects a mental model of how intent is achieved through educational tasks, but depends on analysis and planning rather than intuition. Prioritizes tasks and predicts educational outcomes based on experience. Performance is based on a rigid plan that is not adapted to account for the unexpected. | Performance reflects intuitive assessment of a situation but relies on an analytical plan to decide on a course of action. Educator recognizes factors that impact educational outcomes and the path for achieving them. Intuitively recognizes problems as they occur and makes curricular changes as needed. | Performance reflects the ability to assess, decide, and change as needed. Educator operates from a big-picture perspective for achieving short- and long- term outcomes. |

## Appendix F: Panel of Experts

The panel of experts who reviewed the skill acquisition model, survey questionnaire items and the research questions include:

Dr. Shelia Kyle, Director
St. Mary's School of Nursing
Huntington, WV

Dr. Lynne Welch, Retired
Huntington, WV

Dr. Elaine Tagliareni
Community College of Philadelphia
Philadelphia, PA

Dr. Sam Securro
Marshall University Graduate College
Charleston, WV

Dr. Mike Cunningham
Marshall University Graduate College
Charleston, WV

# Appendix G: Institutional Review Board Approval

MARSHALL UNIVERSITY
www.marshall.edu

**Office of Research Integrity**
Institutional Review Board
401 11th St., Suite 1300
Huntington, WV 25701

FWA 00002704

IRB1 #00002205
IRB2 #00003206

December 24, 2009

Ron Childress, Ph.D.
Graduate School of Education and Professional Development, MUGC

RE: IRBNet ID# 105289-3
**At:** Marshall University Institutional Review Board #2 (Social/Behavioral)

Dear Dr. Childress:

| | |
|---|---|
| **Protocol Title:** | [105289-3] An Initial Investigation of the Applicability of the Dreyfus Model of Skill Acquisition to the Professional Development of Nurse Educators |
| **Expiration Date:** | December 23, 2010 |
| **Site Location:** | MUGC |
| **Type of Change:** | Continuing Review/Progress Report APPROVED |
| **Review Type:** | Exempt Review |

The above study and informed consent were approved for an additional 12 months by the Marshall University Institutional Review Board #2 (Social/Behavioral) Chair. The approval will expire December 23, 2010. Continuing review materials should be submitted no later than 30 days prior to the expiration date.

This study is for student Lisa Ramsburg.

If you have any questions, please contact the Marshall University Institutional Review Board #2 (Social/Behavioral) Coordinator Bruce Day, CIP at (304) 696-4303 or day50@marshall.edu. Please include your study title and reference number in all correspondence with this office.

MARSHALL UNIVERSITY
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**Office of Research Integrity**
Institutional Review Board
401 11th St., Suite 1300
Huntington, WV 25701

FWA 00002704

IRB1 #00002205
IRB2 #00003206

February 4, 2009

Ron Childress
MUGC

RE: IRBNet ID# 105289-1
**At:** Marshall University Institutional Review Board #2 (Social/Behavioral)

Dear Dr. Childress:

| | | |
|---|---|---|
| **Protocol Title:** | [105289-1] An Initial Investigation of the Applicability of the Dreyfus Model of Skill Acquisition to the Professional Development of Nurse Educators | |
| **Expiration Date:** | February 3, 2010 | |
| **Site Location:** | MUGC | |
| **Type of Change:** | New Project | APPROVED |
| **Review Type:** | Exempt Review | |

In accordance with 45CFR46.101(b)(1), the above study and informed consent were granted Exempted approval today by the Marshall University Institutional Review Board #2 (Social/Behavioral) Chair for the period of 12 months. The approval will expire February 3, 2010. A continuing review request for this study must be submitted no later than 30 days prior to the expiration date.

This study is for student Lisa Ramsburg.

If you have any questions, please contact the Marshall University Institutional Review Board #2 (Social/Behavioral) Coordinator Bruce Day, CIP at (304) 696-4303 or day50@marshall.edu. Please include your study title and reference number in all correspondence with this office.

**CURRICULUM VITAE**
**LISA RAMSBURG**

## EDUCATION

Marshall University
Doctor of Education in Curriculum and Instruction, 2010

Marshall University
Master's of Science in Nursing, Nursing Administration, 2001

Marshall University
Bachelor's of Science in Nursing, 2000

St. Mary's School of Nursing
Diploma, 1980

## PROFESSIONAL EXPERIENCE

| | |
|---|---|
| 2004 – Present | Associate Professor, St. Mary's School of Nursing |
| 2003 – 2004 | Adjunct Faculty, Marshall University, College of Health Professions |
| 2002 – 2004 | Nurse Manager, Adult ICU, Cabell Huntington Hospital |
| 2001 – 2002 | Adjunct Faculty, West Virginia Institute of Technology |
| 1999 – 2002 | Nurse Manager, Staff Nurse, Telemetry, Putnam General Hospital |
| 1994 – 1999 | Administrator, Staff Nurse, Elite Healthcare and Strategic Health Services |
| 1993 – 1994 | Medical Services Consultant, Crawford Healthcare Management |
| 1980 – 1994 | Staff Nurse, ICU, St. Mary's Hospital, Putnam General Hospital |

## MEMBERSHIPS/SERVICE ACTIVITIES

Sigma Theta Tau, Nu Alpha Chapter
National League for Nursing
West Virginia League for Nursing

**Service Activities**
West Virginia League for Nursing, Board of Directors
West Virginia League for Nursing, Public Relations Committee
Faculty Advisor, St. Mary's School of Nursing Honor Society
National League for Nursing, Task Force on Innovations in Education (2005-2007)