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# The Development and Validation of a Novice Nurse Decision-Making Skills Education Curriculum

Joanne Stephanie Simmons  
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# Walden University

College of Health Sciences

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Joanne Simmons

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## Review Committee

Dr. Dana Leach, Committee Chairperson, Health Services Faculty  
Dr. Melanie Braswell, Committee Member, Health Services Faculty  
Dr. Barbara Gross, University Reviewer, Health Services Faculty

Chief Academic Officer  
Eric Riedel, Ph.D.

Walden University  
2017

Abstract

The Development and Validation of a Novice Nurse Decision-Making Skills Education

Curriculum

by

Joanne Simmons

MS, Walden University, 2014

BSN, University of Texas at Arlington, 2012

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

February 2017

## Abstract

Novice nurses (NNs) are entering critical care environments with limited knowledge, skills, and decision-making expertise. They are expected to care for complex patients in a dynamic healthcare setting. The research question for this project examined whether NNs improve their knowledge and skills by participating in a nursing decision-making skills curriculum. The purpose of the project was to develop and validate a nursing decision-making skills education curriculum working in an intermediate critical care unit. Taba's instructional theoretical model was used to guide the new curriculum development along with current evidence based practice found in the current literature. Scaffolding approach theory encouraged the use of more knowledgeable peers or educators to assist NN with skill acquisition. Project participants consisted of 5 local learning specialists in critical-care nursing with a minimum of a bachelor's of science degree in nursing as well as national certifications. Upon curriculum review completion, each of the 5 specialists were asked to complete a 5-point Likert scale survey to evaluate the content of the newly developed curriculum. Descriptive analysis was completed on the survey data. Three of the 5 learning specialists agreed and 2 strongly agreed that the program met its stated objectives. Three of the learning specialists strongly agreed and 2 agreed that the course content was relevant to NNs' day-to-day roles and that the material and resources facilitated the development of decision-making skills. Adjunct NN education may promote positive social change by providing an effective strategy for improving decision-making skills among NNs, potentially leading to improved patient outcomes in a healthier community with a skilled healthcare workforce.

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## Dedication

To my amazing son, Kellen, thank you for your understanding and support; without your love and tenacity, this accomplishment would have remained a dream deferred. Thank you for believing in me!

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To T. Milton Lewis, who started me on this journey over 50 years ago; thank you for believing in me.

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## Section 1: Novice Nurse Education

### **Overview of the Evidence-Based Project**

A novice nurse (NN) is a nurse with no prior work experience in his or her assigned area and with less than 1 year of work experience (Benner, 1984). Hospitals and healthcare facilities support NNs' growth and development through residency programs and transitional courses. This Doctor of Nursing Practice (DNP) project focused on the complementary or adjunct education of NNs through application of practice and simulation. The purpose of the DNP project is to provide experiential education to improve the decision-making processes of NNs. Didactics, discussion, mentorship, demonstration, conceptual mapping, and simulation play a critical role in this learning process. Early recognition needs assessment, and education intervention is crucial to quality care and positive patient outcomes. The orientation to intermediate critical care (ICC) requires 16 weeks of orientation that includes the American Association of Critical Care Orientation: Essentials of Critical Care Orientation (ECCO) course, basic electrocardiogram skills, advanced cardiac life-support skills, and unit-specific orientation.

Nurses constitute the largest body of healthcare providers, with an approximate 3,063,163 registered nurses in 2008, and have a substantive impact on quality of care (Health Resources and Services Administration, 2010). Healthcare facilities have the formidable and arduous task of providing quality training to a large body of frontline healthcare providers. Concise, detailed, specific NN education is needed to bridge theory and practice.

Education addressing professional knowledge, individual consequences for error, and individual learning that has an interdisciplinary focus can provide NNs with clear paths toward future success. Education that is patient focused and that is based on medical knowledge that can be taught in a nonthreatening milieu improves NNs' interpersonal communication and confidence levels. Supplemental education shows that NNs are valued assets in the nursing community and that nurse leaders support their education and development of quality, safe practices. The effort to reshape NN education demonstrates a commitment to quality practices and to enhancing the patient experience.

Opportunities to learn in a simulated arena where patient-centered care is recognized through values and needs assessment foster collaboration in care practices. In such situations, NNs are able to learn in a nonthreatening environment without harming patients, in which they have the ability to repeat tasks until their decision-making processes improve. Open, honest communication, mutual respect, and interdisciplinary practices inclusive of patients' preferences lead to quality patient care. Queried NNs concurred that simulation for teaching purposes improved their decision making, confidence, learning, and skills for direct patient care (Kaddoura, 2010).

In addition to mandatory facility-orientation education, NNs learn what is safe and how to offer good care through supplemental unit-specific education. NNs experience firsthand how their care impacts patients' outcomes and nurse-quality indicators through the use of technology, communication, and care coordination. NN education is practice focused, with an emphasis on developing quality, safe care. As problems challenge NNs, peer colleagues assist in skill acquisition through modeling, imitation, and development of logical steps to solve complex care situations.

NNs are not only entering the work environment without prior experience, but also lack self-confidence and practice experience to complete assigned tasks in the critical-care area. Processes of doing, being, and knowing must occur in order for knowledge to increase. Such a process would be transformative and progressive. Educators should use a scaffolding process in which new information builds on old information. Scaffolding is a process used to facilitate NN education. Active learning occurs as new experiences develop and the learner becomes more knowledgeable.

Healthcare facilities assist in this growth and development through nurse-residency programs. In this project, I sought to determine if these programs are sufficient. Unit-specific education provides preliminary practical transitional practice in a systematic, organized manner. Meeting foundational needs of NNs leads to longevity, retention, and better patient outcomes. Increasing levels of acuity in care and practice increase professional and practical knowledge (Duchscher, 2008). Young nurses lose professional efficacy when they are charged with managing patients with high acuity when they lack the skills and experience to do so (Duchscher, 2008).

### **Background and Context**

NNs in critical-care areas face two dilemmas: They are new graduates, and the area of practice requires high acuity. In this situation, NNs must function independently without prior experience. The effectiveness of many educational and residency programs available to support NNs during the first year of practice is unknown (Edwards, Hawker, Carrier, & Rees, 2015). Experiential learning is crucial in nurses' transition from NN to advanced beginner. Demonstration, performance, and simulation are effective tools to

assist in the development of decision-making processes that eventually lead to self-confidence and autonomy of practice.

### **Problem Statement**

The practice issue identified for this DNP project was supplemental critical-care education for NNs working in ICC in a Level 1 trauma hospital in Central Florida. Despite organized hospital orientation and unit-specific orientation, NNs continue to lack confidence in practice and knowledge to provide quality, safe care. NNs are transitioning from student to care provider.

For NNs, the first year is a period of rapid growth and development associated with complex emotional, sociocultural, physical, and intellectual development; this process occurs in a chronological progression for the NN (Duchscher, 2008). *Doing* occurs during the first 3 months of the NN orientation and is a period of adjustment and acceptance of the new role, duties, and expectations (Dearmun, 2000; Duchscher, 2008). A period of uncertainty ensues as the NN transitions from student to professional nurse with an autonomous practice. Psychosocial and professional reservation emerges as realities of practice without ongoing support are laden with self-doubt and anxiety (Duchscher, 2008).

*Being* occurs during Months 4 and 5 as the NN becomes more cognizant of practice expectations and begins scaffolding information. NNs need ongoing guidance as feelings of renunciation, timidity, and cognitive dissonance build an underpinning for future evolution (Duchscher, 2008). Ongoing growth and familiarity allow NNs to think about future professional aspirations as they welcome new experiences and grow in self-confidence (Duchscher, 2008).



The initial 12 months include many challenges in *knowing* for the NN; these pertain to relationships, realization of inadequate clinical knowledge, prioritization, communication, skills, self-confidence, and organization (Duchscher, 2008). The NN's prior learning, though it may align with current practice, becomes transformational and evolutionary. The NN is now able to answer questions, has self-confidence, assists colleagues, and experiences a gradual process, knowing, that leads to distinct and obvious confidence in skills and comfort of practice (Duchscher, 2008).

### **Purpose Statement and Project Objectives**

The purpose of the DNP project was to provide education to improve clinical-decision-making skills, thereby improving self-confidence, critical-thinking skills, and quality patient care and enhancing the patient experience. The pressures of the first year of practice create anxiety and frustration (Stefanski & Rossler, 2009; Thomson, 2011); this project will guide NNs through stages of uncertainty and doubt toward job satisfaction, skill competency, and professional independence. Because NNs will not experience every critical-care event during the orientation period (Stefanski & Rossler, 2009), educators must expose them to these critical situations in a controlled environment before they must face them independently. Simulation provides acute learning without harm to a patient (Stefanski & Rossler, 2009). Although simulation is expensive, the end result is a competent, self-assured NN who is capable of caring for patients in a dynamic critical-care area. See Table 1 for unit-specific training modules.

Table 1

*Unit-Specific Education*

| Unit-specific education              | Module objectives   |
|--------------------------------------|---|
| Continuous bladder irrigation (CBI)  | <ol style="list-style-type: none"> <li>1. Retrieve necessary supplies (solutions from central supply: if the solution is plain without additives versus pharmacy: if there are additives, for example, to decrease bleeding)</li> <li>2. Frequency of monitoring (intake and output, color of urine, bladder and urethral assessment)</li> <li>3. Documentation (accuracy)</li> <li>4. Troubleshooting for blockage</li> <li>5. Discontinuing CBI</li> <li>6. Review critical check and other critical-care resources</li> </ol>  |
| Arterial line (A-line)               | <ol style="list-style-type: none"> <li>1. Retrieve necessary supplies (solutions from central supply)</li> <li>2. Set up equipment</li> <li>3. Troubleshoot potential problems in patient care during use of equipment</li> <li>4. Zeroing the transducer</li> <li>5. Drawing laboratory specimens</li> <li>6. Transducing</li> <li>7. Discontinuing A-line</li> <li>8. Review critical check and other critical-care resources</li> </ol>  |
| Chest tube (CT)                      | <ol style="list-style-type: none"> <li>1. Retrieve necessary supplies (solutions from central supply)</li> <li>2. Set up equipment</li> <li>3. Troubleshoot potential problems in patient care during use of equipment</li> <li>4. Discontinue CT</li> <li>5. Review critical check and other critical-care resources</li> </ol>  |
| Central vascular line (CVL) dressing | <ol style="list-style-type: none"> <li>1. Assess CVL site</li> <li>2. Assess for necessities</li> <li>3. Retrieve necessary supplies for CVL dressing change</li> <li>4. CVL care from an external facility</li> <li>5. Assess for patency</li> <li>6. Intravenous infusions and laboratory-specimen draws</li> <li>7. Troubleshoot potential problems related to the patient with CVL</li> <li>8. Occlusion treatment</li> <li>9. Accurately simulate discontinuance of CVL</li> <li>10. Adverse effects of discontinuing</li> <li>11. Review critical checks and other critical-care resources</li> </ol> |

*(table continues)*

| Unit-specific education | Module objectives   |
|-------------------------|---|
| Sepsis screen           | <ol style="list-style-type: none"> <li>1. Retrieve necessary equipment (computer, thermometer)</li> <li>2. Assess at bedside during shift change with leaving and entering registered nurses and every 4 hours</li> <li>3. Review patient information and how it relates to sepsis and application of the sepsis screen</li> <li>4. Rapid-response therapy</li> <li>5. Review critical check and other critical-care resources</li> </ol> |
| Failure to rescue       | <ol style="list-style-type: none"> <li>1. Calling a code</li> <li>2. Location of code cart</li> <li>3. Giving a report to the code team</li> <li>4. Documenting the patient during a code</li> <li>5. Notifying the managing physician and family</li> <li>6. Code documentation</li> </ol>   |

### **Significance to Practice**

A plethora of onboarding strategies enhance the orientation process for NNs. Despite a range of novice registered nurse (RN) programs and graduate-nurse residency programs, a gap persists in NNs' self-confidence, competency, skill acquisition, and critical thinking upon completion of orientation. Healthcare facilities and nurse educators seek new and innovative ideas to fill the learning gap, meet best-practice guidelines, and provide quality patient care.

NNs are the future of nursing, and as health care changes, so must antiquated methods of orientation. Linear orientation strategies focused on content do not encourage critical thinking, recognition of the full scope of patient needs, or understanding of how one system affects another (Stefanski & Rossler, 2009). The development of ECCO by the American Association of Critical-Care Nurses provided comprehensive critical-care education; however, the program lacked clinical components (Stefanski & Rossler, 2009). Supplemental education in the form of simulation, case studies, critical-thinking

discussions, review of critical checks, and other critical-care resources fosters self-confidence, critical-thinking skills, and professional autonomy for NNs in the program.

### **Definition of Terms**

*Advanced beginner*: A nurse who has established slightly satisfactory implementation (Benner, 1984).

*Andragogy*: The teaching theories and principles of how adults learn (Billings & Halstead, 2012).

*Arterial line (A-line)*: A catheter inserted into an artery for monitoring (“Arterial Line,” 2011).

*Being*: A period of frustration as a NN learns of professional inconsistencies, occurring during Months 4 to 5 (Duchscher, 2008).

*Central vascular line (CVL)*: A catheter inserted through a vein that ends at the vena cava.

*Chest tube*: A flexible tube inserted through the chest wall into the mediastinum or pleural space (“Chest,” 2011).

*Competent*: Demonstrating competence in the same job or similar jobs for 2 to 3 years (Benner, 1984).

*Continuous bladder irrigation (CBI)*: Use of a three-way urinary catheter (“Continuous Bladder Irrigation,” 2011).

*Doing*: A period of professional transition that occurs in the first 3-4 months for a NN (Duchscher, 2008).

*Expert*: A nurse who demonstrates intuition, analyses the whole situation, and possesses critical-thinking skills and sufficient knowledge (Benner, 1984).

*Knowing*: The final stage that occurs in the initial 12 months, when NNs achieve confidence and stability in their roles and responsibilities (Duchscher, 2008).

*Novice nurse*: A nurse with less than 1 year of experience (Benner, 1984).

*Proficient*: Perceiving a situation as a whole rather than as fragmented (Benner, 1984).

*Scaffolding*: The use of more knowledgeable staff to assist novices with skill acquisition (Wood, Bruner, & Ross, 1976).

*Sepsis screen*: A tool used to identify systemic infection in a systematic manner (“Sepsis Workup,” 2009).

### **Assumptions and Limitations**

Medical students, interns, and residents have protected time away from patient care, which is used for education and teaching. NNs have the same need for protected time, as they must have the opportunity to develop, ask questions, practice procedures, and trace and correct problems in mechanical or electronic equipment once they are in the workplace. NNs require a time to ask troubling and perplexing questions away from direct patient care, where the environment is safe, controlled, and free of scrutiny. Evidence supporting adjunct NN education is not apparent or sufficient at this time. Continued supportive education of NNs is essential to ensure safe, quality care in an ever-dynamic healthcare system serving a diverse population.

The attrition rate for NNs is 35% to 60% (Beecroft, Kunzman, & Krozek, 2001, as cited in Chandler, 2012). Skill acquisition, knowledge, steps, and processes are needed to support NNs as they transition from graduate nurses to practitioners. Adequate

orientation is cost effective and is the right thing for healthcare organizations, NNs, and patients.

Adjunct education provides an opportunity to collaborate and develop relationships, and it dispels feelings of incompetence and fear (Chandler, 2012). Individual units must have the choice to provide additional education as staff and unit needs demand. The overall purpose of adjunct education is assuring quality, safe patient care by increasing confidence, competence, efficiency, and proficiency in NNs.

### **Summary**

Management and care of the critical-care patient require skills and experience, yet NNs without prior work experience are expected to assume care with the same competence as their senior colleagues. Patients have a plethora of lines, tubes, and drains; NNs must also contend with instability of diseases, rapid changes in status, multiple comorbidities, and alarms from monitors, which can be overwhelming. Transitioning from the role of student to that of a professional interacting with healthcare colleagues and family members while remaining cognizant of patients' changing needs may produce anxiety in NNs, adding to already low self-confidence levels (Stefanski & Rossler, 2009).

The NN will not experience every learning situation in the orientation process (Stefanski & Rossler, 2009), yet critical-care education is needed to facilitate growth and development. Supplemental unit-specific education for NNs provides the opportunity for exposure to the management of critical-care situations in a safe environment without harm to patients. NNs' self-confidence in managing critically ill patients is increased through simulation (Stefanski & Rossler, 2009).

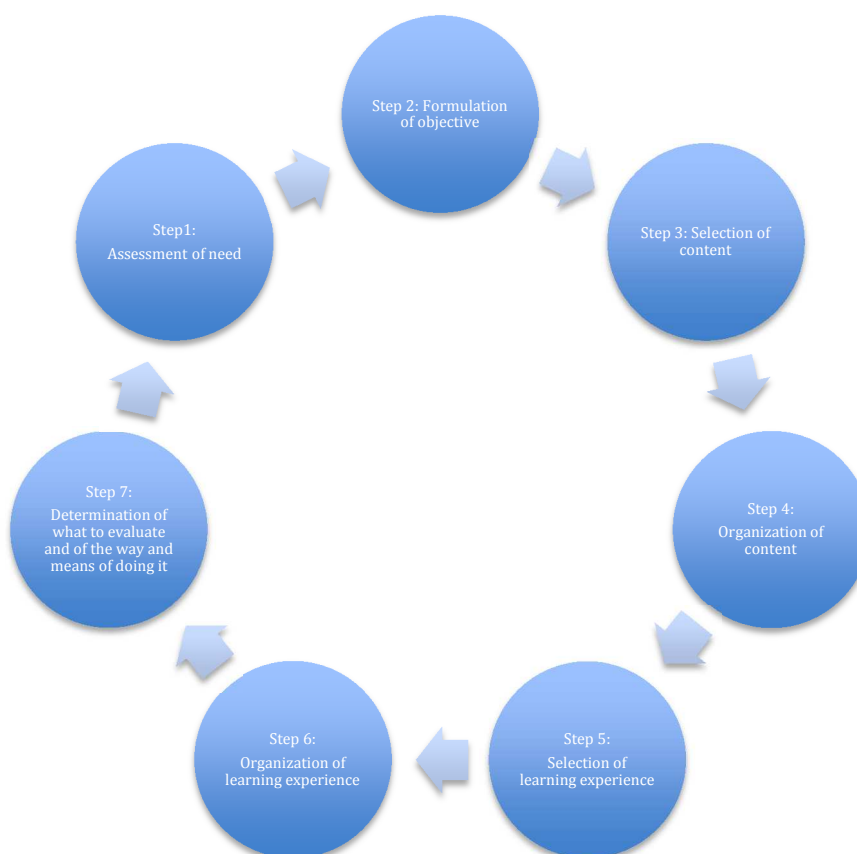
## Section 2: Review of Scholarly Evidence

### Literature Review

#### Specific Literature

The Taba model uses a systematic seven-step process of developing an individualized behavioral curriculum that evaluates objectives linked to activities (Ornstein & Hunkins, 2009; see Figure 1). Using the Taba model, educators develop a plan to determine gaps in learning and meet those gaps (Costa & Loveall, 2002). Education plans should build around generalized concepts to allow for individualized student discovery. Additionally, NN decision making is linear, sequential, straightforward, and is limited due to inadequate exposure (Gillespie & Peterson, 2009). The foundation of the Taba model rests on what needs to be understood: knowledge, skills to be learned, and concepts NNs need to know (Ornstein & Hunkins, 2009). The Taba model correlates with Bloom's taxonomy regarding cognitive, affective, and psychomotor learning.

NNs, with no experience, are expected to perform in circumstances with which they have no familiarity; thus, they are unable to make judicious intercessions (Benner, 1984). For the purpose of this DNP project, a NN is a nurse with less than 1 year of experience on ICC. An expert nurse, in contrast, is one who demonstrates intuition, the ability to analyze a whole situation, critical-thinking skills, and knowledge (Benner, 1984; McHugh & Lake, 2011). Nursing and nursing care have changed. Care is more multifaceted than it was in the past, requiring specialized skills and knowledge to work in critical-care areas (Maguire, 2013). The NN who has no prior knowledge and is new to critical care presents with additional challenges to becoming an independent practitioner.



*Figure 1.* Taba model.

Many researchers have reviewed NNs' transition to clinical practice and the gaps in knowledge they experience (Maguire, 2013; Stefanski & Rossler, 2009; Tagney & Haines, 2009). As the demand for nurses increases and baby boomers leave the profession, NNs are working in critical-care areas with little or no experience. Historically, before transitioning to critical-care areas, NNs worked in a myriad of less acute areas to gain experience, critical-thinking skills, and competence. Various methods exist to train NNs, but the format is often fragmented, with a plethora of variables (Maguire, 2013).

Healthcare is dynamic, with innovative technology and patients who are more critically ill, requiring nurses to have critical-thinking skills, analytical skills, and



reasoning ability (McHugh & Lake, 2011). Common themes among authors suggest that NNs lack confidence and skill when caring for patients (Hargreaves & Lane, 2000; Maguire, 2013; McHugh & Lake, 2011). Simulations allow nurses to practice in similar work environments without harming patients, increasing NNs' self-confidence, proficiency, and efficiency (Stefanski & Rossler, 2009). Although simulation is beneficial, adjunct education adds depth and substance to the critical-care orientation process.

Not only does the NN face confidence in practice, but healthcare facilities must also address the issue of advanced-beginner nurses who are training NNs. Retention is at risk, and the cost of training a new NN is estimated at greater than \$96,000 per nurse (Arnold, 2012). The number of nurses who are leaving critical-care areas is increasing due to lack of preparation to care for critically ill patients; these nurses are dissatisfied with hospital education and feel uncomfortable or unsafe in practice (Stefanski & Rossler, 2009). Lack of adequate education is the primary reason NNs leave units before acquiring and developing the skills needed to move through the five levels of proficiency: novice, advance beginner, competent, proficient, and expert (Benner, 1984).

Nurse educators face education challenges. No longer is competency a check-off matter, and didactic teaching is not appropriate for today's healthcare providers (Stefanski & Rossler, 2009); simulation and unit-specific education geared toward individualized learning are practical and enhance learning and competence. A survey of NNs revealed that 96% felt that simulation was beneficial to their learning (Stefanski & Rossler, 2009). NNs learn rules and principles to guide their practice; however, rules are rigid and do not provide guidance to assess level of acuteness, to determine the order in

which to perform critical tasks, or to vary performance (Benner, 1984). NNs must learn how to master these principles quickly and efficiently; inadequate orientation leads to high attrition rates and compromises safe patient care (Theisen & Sandau, 2013).

Increasing numbers of nurses are using evidence-based practices to guide the care they provide to patients. A growing body of evidence shows that education must change to reflect patient complexity and increasing acuity of healthcare (Maguire, 2013). Education must be generalized yet geared toward specialized care (Bush & Smith, 2010, as cited in Maguire, 2013; Henderson et al., 2007).

### **General Literature**

The NN, as an adult learner, brings a plethora of life experiences to the work milieu (Knowles, 1990, as cited in Billings & Halstead, 2012) and is able to relate past experiences to facilitate new learning concepts. According to the principles of andragogy, it is necessary to consider all aspects of adult learners' needs and allow them to use past experiences and knowledge to solve present complex situations. Adult learners are independent and desire to learn what is important and personal to them (Billings & Halstead, 2012). NN education must foster independence, confidence, and competency, with a consistent preceptor serving as a guide (Burch, Napier, & Altimier, 2009; Casey et al., 2004, as cited by Chandler, 2012; Theisen & Sandau, 2013). Focusing on known areas of struggle improves NNs' confidence, critical-thinking skills, communication, and quality patient care (Rush, Adamack, Gordon, Lilly, & Janke, 2013).

Rapid growth in health care has aligned with increased demand for nurses in critical care, as patients are becoming progressively sicker with higher acuity, requiring an increase in the competence, efficiency, and proficiency of nurses (Rivera,

Shedenhelm, & Gibbs, 2015). NNs come to the workplace with varying levels of educational preparedness (Tagney & Haines, 2009). The public demand for quality, evidence-based care requires healthcare facilities to review orientation gaps and provide nurses with necessary critical skills to meet dynamic healthcare challenges (Tagney & Haines, 2009). Achieving these goals requires assessment of needs and strategically development of an education-action plan that includes experiential education, demonstration, and conceptual mapping (Ornstein & Hunkins, 2009).

Critical-care educational content presented to meet the various learning styles of participants ensures that every learner's style is addressed to facilitate active learning. NNs hired directly into critical-care areas lack critical-thinking proficiencies to make appropriate clinical decisions (Wahl & Thompson, 2013); however, when educators use concept mapping as a teaching tool, problem recognition, scientific-assessment construction, clinical execution, reflection, and prioritization improve. NNs may also benefit from the clinical expertise of other nurses, use of open-ended questions to foster critical thinking, and individual mentoring (Rush et al., 2013).

The transition from NN to competent nurse can be daunting, attended by a profusion of emotions; time and understanding are required for active growth and development to occur (Jewell, 2013). The opportunity to question and to employ recently learned information and skills under the supervision of supportive staff at a time when theory and practice intersect benefits not only the NN, but also the healthcare profession. A growing body of evidence supports the notion that NN supplemental education beyond the required unit-based orientation positively affects retention, patient care, and the nursing profession (Jewell, 2013). Additionally, NNs improve in their critical-thinking

skills when repetition, reflection, and conversation are implemented in orientation (Forneris & Peden-McAlpine, 2007). Taba conjectured that repetition of habits also improves education, along with various teaching methods (as cited in Ornstein & Hunkins, 2009).

### **Library Database Search**

Searches of electronic databases facilitated a review of published literature on NNs and decision making. The Cochrane Database of Systematic Reviews, MEDLINE, ERIC, CINAHL Complete, PubMed, ScienceDirect, Ovid Nursing Journals Full Text, and ProQuest provided works with robust qualitative evidence on the decision-making process of NNs. However, gaps in the literature persist concerning educational processes to facilitate decision-making processes for NNs who are new to critical-care units. Search engines provided works with guidelines to develop decision-making processes. However, no empirical evidence emerged; rather, an abundance of options was evident. Searches included specific key words to identify NNs and efforts to support the growth of NNs, such as *Kirkpatrick, Benner and Dreyfus, decision-making in nursing, novice nurse, andragogy and adult learner, orientation programs, mentoring, internship, and novice nurse and residency programs* to establish supporting evidence on the NN decision-making process.

### **Summary of Literature**

The literature between 1984 and 2015 suggested a need for additional, specific NN education beyond facility- and unit-specific training. To practice securely and without harming patients, NNs require experiential learning opportunities during orientation, along with ample practice time. Although NNs will not experience all

learning competencies during the orientation process, a safe environment will facilitate growth and development in NN orientation.

Two gaps persist in the literature, pertaining to how to develop an NN from NN to advanced beginner and how to develop a NN into a critical-care nurse. NNs experience many stresses as they transition from graduate nurse to NN; when combined, these stresses are exacerbated (Ornstein & Hunkins, 2009). As a learning specialist, I experienced variations in the orientation process of NNs due to years of experience as a preceptor, and I developed knowledge about the acuity of patients cared for during orientation. Extensive research on the work of Benner (1984), Dreyfus (2004), and Kirkpatrick (1998) as well as Bloom's taxonomy (1956) supported a systematic approach to education that promotes individual NNs in achieving the competence they require. The Taba model provides a basis on which to develop a systematic approach to project decision making.

### Section 3: Methodology

#### **Theoretical Basis**

Novice nurses lack the experience and knowledge they need to function adequately in the areas in which they practice; therefore, according to the American Association of Colleges of Nursing (2009), nurse educators need to improve the current orientation process. The purpose of this DNP project is to provide education to develop the decision-making skills of NNs in critical-care units through experiential learning in a controlled environment. A growing body of knowledge demonstrates that positive patient outcomes, quality of care, and patient experiences depend on the experience of the nurses caring for patients (McHugh & Lake, 2011). Benner's (1984) novice-to-expert theory is a construct theory originating in the Dreyfus model of skill acquisition. NNs practice in venues without prior experience, lack confidence in their ability to care for patients proficiently, are unable to apply optimal judgment, and need oral and physical prompts (Benner, 1984). Benner's theory may be applied to NN education efforts in order to increase their skill level, experience, and professional-practice efficacy, resulting in better quality patient care and more self-confident nurses (McHugh & Lake, 2011).

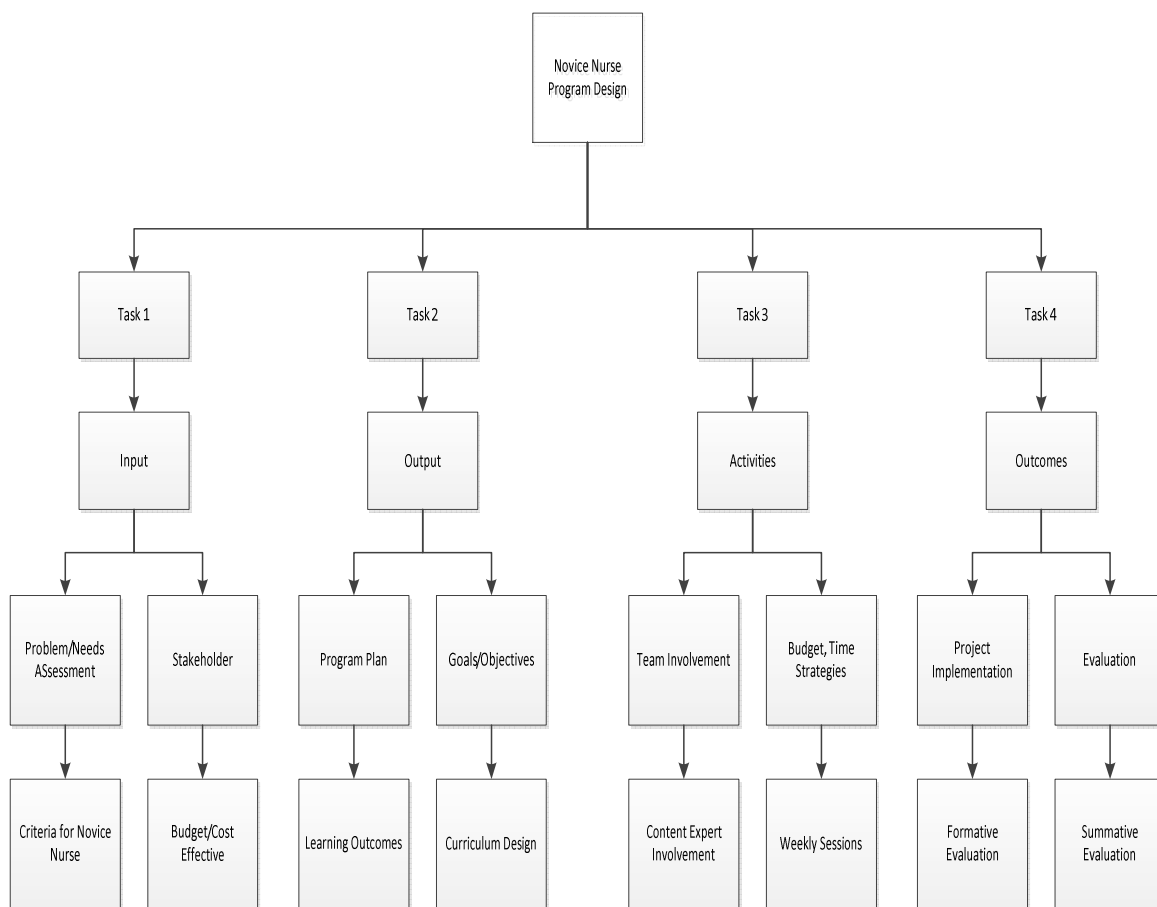
#### **Background Context**

Healthcare is dynamic, and with the current shortage of qualified nursing staff, healthcare facilities must hire NNs in areas that once only advanced nurses entered. Nurses working in these areas require critical-care knowledge and specialized skills. Adequately preparing NNs for these areas is costly and requires a strong foundation. Through review of the literature and collection of data, I sought to determine best methods to enhance andragogy and implement adult-learning principles. During the

novice stage, continued guidance, critiquing, and observation of team members provide concrete documentation on practices that may facilitate additional training and improvement. Setting the standard and principle for NN clinical competencies requires understanding of andragogy (Maguire, 2013), as adults learn what is important to them. Simulation is an integral educational tool that can provide education in a safe, unthreatening environment, allowing nurses to practice without harming patients. Review for applicability of simulation and current teaching methods to guide NNs learning may lead to changes in orientation guidelines. Historically, nurses have participated in orientation and have received feedback and coaching plans upon its completion.

### **Approach**

Prior to the development of an education action plan, an assessment is required. In addition, knowledge of the group is necessary to deliver appropriate content. NNs lack poise and require assistance to practice safely (Benner, 1984). The scaffolding theory of Wood et al. (1976) encourages the use of more knowledgeable peers or educators to assist novices with skill acquisition, providing scaffolding only for the duration of need. Developing a structured scaffolding plan builds confidence, efficacy, proficiency, and, ultimately, safe patient outcomes (McLeod, 2008). During the first week of unit orientation, NNs will participate in a skill fair to determine their comfort level with policies and procedures, CBI, CVL dressing change, CT, A-line, and sepsis screening. Competencies will be assessed for safe practice and level of comfort (see Figures 2 and 3).



*Figure 2.* Program outline.



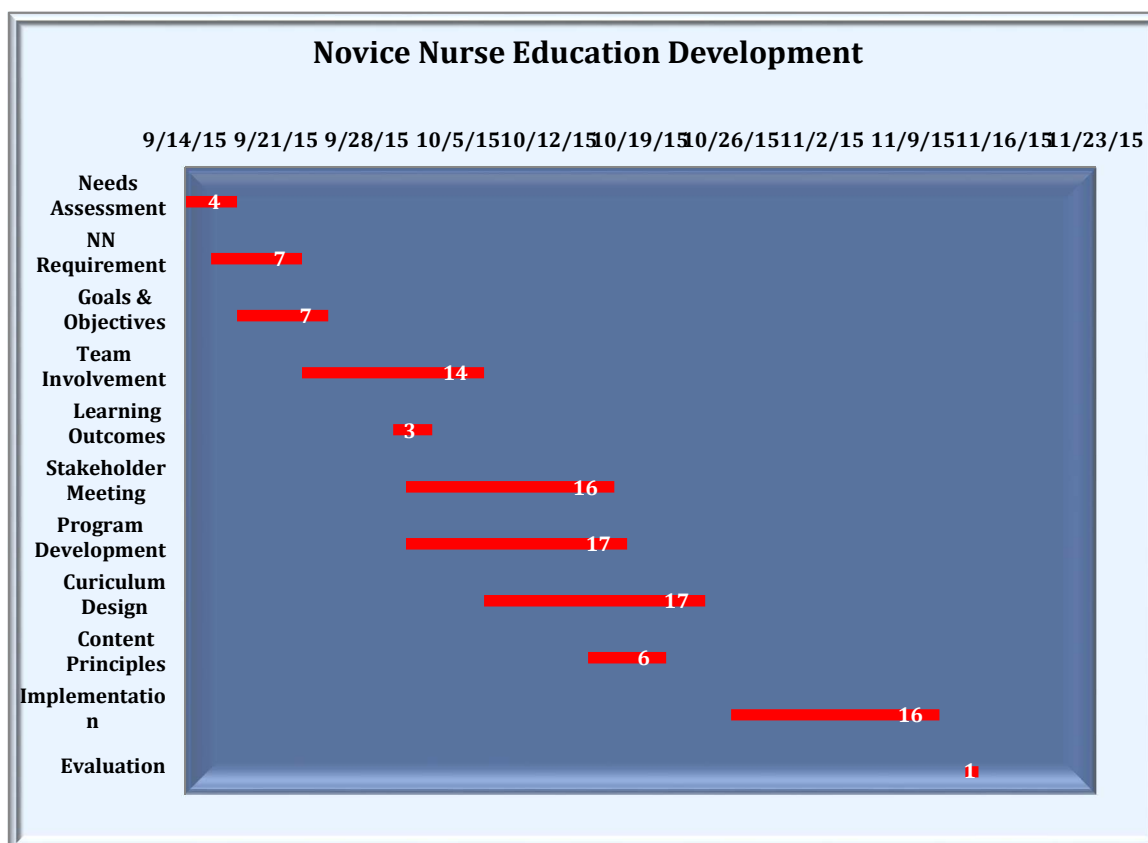


Figure 3. Novice nurse education development.

### Population and Sampling

The participants for this project were all NNs who had been newly hired or had transferred to the ICC unit at a Level 1 trauma hospital in Florida. NNs were recruited during the second week of unit-specific orientation by convenience sampling. Numbers varied as the number of new hires and transfers depended on unit-staffing needs. Participants represented a population of NNs that was diverse in age, gender, race, nationality, and educational preparedness. Convenience sampling was appropriate for this education project, in that NNs were in the right environment at the right time (Burns & Groves, 2009). All RNs at the study site were part of the education project; all nurses

jointly attended the same education sessions and participated in the same simulation sessions. Additional participants were added as new NNs were hired or transferred into the unit.

### **Data Collection**

All NNs participated in an initial, unit-specific, high-risk, low-use simulation of procedures to assess their knowledge and comfort with practice. Continued learning opportunities accrued over a 3-month period to enhance growth and development. Upon conclusion of the education project, an evaluation validated the content of the curriculum.

### **Data Analysis**

Data analysis evaluated the applicability of practice and whether objectives were met, information was clear, resources facilitated the decision-making process, and the environment was conducive to learning. I used data collected with a Likert-type scale used to analyze the qualitative data obtained. The responses to questions determined the level to which the five content experts agreed.

### **Program Evaluation**

Formative evaluations occurred during the project and were an ongoing process. The purpose of the formative evaluation was to improve the project content, concepts with which NNs struggle, the delivery method, and the overall applicability of the project. The outcome of the program determined the effectiveness of NN supplemental education in improving decision making, enhancing self-confidence, and promoting quality, safe practices and positive patient outcomes.

The goal of the ICC-specific education project was to provide clinical application and skill demonstration of common unit-specific, high-risk, low-frequency skills to

improve decision making. Nurse leaders and administrators with an understanding of Benner's (1984) novice-to-expert theory are better able to meet the learning needs of the NN. The NN supplemental education project provided much-needed experiential and didactic training to improve not only NNs' decision-making skills, but also self-confidence, thereby enhancing patient outcomes.

### **Summary**

Simulation allows reality-based learning to occur and theoretical knowledge to increase (Bambini, Washburn, & Perkins, 2009). However, no empirical evidence exists that simulation improves patients' outcomes (Aebersold & Tschannen, 2013). Bambini et al. (2009) found that simulation improved clinical judgment, confidence, and communication. When adults actively participate in learning, retention increases, and simulation helps in improving complex skills, resulting in improved critical thinking (Galloway, 2009).

## Section 4: Findings, Discussion, and Implications

### **Summary of Findings**

The purpose of this project was to provide an education-action plan to complement NN education in intermediate critical care. The project's quantitative component aligned with the research question "Do NNs new to the role of nursing benefit from participating in a program that enhances their decision-making skills?"

Project participants were five learning specialists in critical-care nursing, all of whom held a minimum of a bachelor of science degree in nursing as well as national certifications. Upon completion of a group discussion, a 5-point Likert scale survey determined the efficacy of the nursing program in enhancing decision-making skills among NNs. I performed descriptive statistics on the survey data.

### **Findings and Implications: Quantitative Analysis**

The first question I asked participants was "Do NNs, new to the role of nursing, benefit from participation in a program that enhances their acute-care knowledge and skills?" Using the data completed by the learning specialists on the 5-point Likert-type survey, the first question was addressed through quantitative descriptive analysis. Table 2 shows results from the descriptive analyses. The results in Table 2 reveal that all five learning specialists reported high agreement with all five items.

Table 2

*Descriptive Statistics of Questionnaire Items*

| Item  | Agreement categories |    |          |    | Agreement: Central tendency & variability |           |            |            |           |
|---|----------------------|----|----------|----|---|-----------|------------|------------|-----------|
|   | A                    |    | SA       |    | <i>M</i>                                  | <i>Md</i> | <i>Min</i> | <i>Max</i> | <i>SD</i> |
|   | <i>N</i>             | %  | <i>n</i> | %  |   |           |            |            |           |
| The program met its stated objectives.                              | 2                    | 40 | 3        | 60 | 4.60                                      | 5.00      | 4.00       | 5.00       | 0.55      |
| The course content was relevant to novice nurses' day-to-day roles. | 2                    | 40 | 3        | 60 | 4.60                                      | 5.00      | 4.00       | 5.00       | 0.55      |
| The material and resources facilitated decision-making skills.      | 2                    | 40 | 3        | 60 | 4.60                                      | 5.00      | 4.00       | 5.00       | 0.55      |
| The program will improve novice nurses' growth and development.     | 2                    | 40 | 3        | 60 | 4.60                                      | 5.00      | 4.00       | 5.00       | 0.55      |
| The environment was conducive to learning.                          | 2                    | 40 | 3        | 60 | 4.60                                      | 5.00      | 4.00       | 5.00       | 0.55      |

*Note.* A = agree, SA = strongly agree, *M* = mean, *Md* = median, *Min* = minimum score, *Max* = maximum score, *SD* = standard deviation. Scoring of items: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree.

Three of the five learning specialists agreed with the first item, “The program met its stated objectives,” whereas two strongly agreed. The second item was “The course content was relevant to nurses’ day-to-day roles.” Three of the five (60%) learning specialists strongly agreed with this statement, and two agreed. The third item was “The material and resources facilitated decision-making skills.” Results from descriptive statistical analyses showed that the majority (3 of 5 learning specialists) strongly agreed, and two agreed. The same results accrued from the prior items were found for the fourth item, “The program will improve novice nurses’ growth and development.” For the fourth item, 60% of learning specialists strongly agreed, and 40% agreed. The fifth item, “The environment was conducive to learning,” had the same scores as the four previous items, with 60% of learning specialists strongly agreeing and 40% agreeing.

The quantitative results addressed the research questions, providing strong support for the assertion that an acute-care training program for novices would effectively meet its stated objective, would have content relevant to the day-to-day activities of NNs in critical-care settings, would include materials and resources that would enhance NNs' decision-making skills, would lead to the growth and development of NNs, and would be conducted in an environment conducive to learning. Based on findings from the descriptive statistical analyses, the program, aimed at enhancing NNs' decision-making skills, would be effective and meet its stated goals and purpose.

### **Discussion of Findings in the Context of Literature**

Nurses in critical care have a high attrition rate, and despite resources in the form of experienced colleagues, attrition has left critical-care units depleted of resources; however, many transitional and decision-making opportunities continue for NNs (Edwards et al., 2015). The results from the participants are consistent with the literature, supporting the need for additional NN education (Jewell, 2013). Structured experiential learning benefits not only participating NNs, but also the facility. NNs lack the knowledge they need to think critically and thus have decreased decision-making capabilities; however, with concept mapping, they experience significant improvement (Jewell, 2013; Wahl & Thompson, 2013). Coaching programs focused on NN development affect retention and patient outcomes (Jewell, 2013). NN education must be customized to meet the special need of nurses who lack experience while working with high-acuity patients (Bob, 2009). All participants conveyed that the education program would be beneficial to NNs and would improve their decision-making processes. The

information garnered may be used to improve best practices for NN orientation education in ICC.

### **Implications**

No specific policies govern NNs' orientation or transition to advanced beginner. Healthcare facilities experience the negative impact of this lack of policies in poor nurse retention, the nursing shortage, and poor patient safety. Healthcare facilities that lack an additional layer of growth and development when they hire NNs directly into critical care nevertheless expect the NNs to collaborate with colleagues from other disciplines effectively and appropriately. Many facilities have benefitted from residency programs and modified individualized orientation programs (Jewell, 2013). When implemented, this program will provide NNs with additional hands-on practice in a controlled environment. Additionally, NNs will be allowed to shadow nurses on other units to gain needed exposure and experience. The program may be adapted for NNs working in areas in addition to critical care.

### **Implications for Policy**

The implications for practice affect not only NNs, but also nurse educators. Nurse educators are challenged to provide appropriate education for NNs to ensure competent nurses as well as to maintain safe nursing practice. Nurse educators must also find competent, willing nurses who are prepared to train NNs, with the understanding that training must continuously be duplicated due to attrition. DNP graduates can advocate at the hospital level to propose pilot studies and implement them to effect change in how NNs are educated. Healthcare reform also affects how nurses provide patient-centered care. NNs must be knowledgeable regarding community resources and must educate

patients and family members about their availability. NNs no longer start in nonacute areas and progress to critical care; therefore nursing schools and healthcare facilities must change to meet the needs of this emerging group. Healthcare facilities must answer present healthcare needs.

### **Implications for Practice**

Precepting NNs is a challenging, daunting, and formidable process involving dedication, engagement, and support of nursing managers and staff. Preceptors must be knowledgeable and skillful, as well as able to coach and mentor NNs as they transition from student nurse to nurse to critical-care nurse. This project introduced supplemental education that could improve NNs' decision-making skills when combined with the ECCO program. Additionally, findings suggest that providing NNs with consistent, experienced preceptors; rationales for practice; and role expectations fosters growth and development and affects nurse retention (Burch et al., 2009).

### **Implications for Research**

Additional study is needed on the benefits of supplemental NN education in critical care. Like health care, nurse education is dynamic and fluid. The core and foundational principles that guide nursing practice must sustain and propel NN education, as these newest members of the profession embrace the profession and acclimate to critical care. Competent nurses are needed to ensure safe patient care and a successful, healthy workforce. Replication of this program in a noncritical-care and intensive-care units would be beneficial. Through assessment and evaluation, NNs completing the program should be compared to those not going through the program in terms of the development of decision-making skills.



### **Implications for Social Change**

The opportunities in nursing continue to grow, affecting retention and increasing the number of NNs entering the profession. Providing this group with effective education is cost effective and sets a tone for the type of care local communities expect from staff. This education proposal and education pilot study implementation may positively affect social change by developing more knowledgeable nurses and creating positive patient comes, healthy communities, and a stronger healthcare workforce.

### **Project Strengths, Limitations, and Recommendations**

#### **Project Strengths**

The NN education program has many benefits and strengths. Adult learners learn what is important to them (Billings & Halstead, 2012), and the program allows NNs to focus on areas of practice in which they are deficient and want to improve. Evidence supports residency programs and simulation as learning tools for practice success; the program allows the development of knowledge and skills. Providing frequent education in areas NNs will experience in their daily practice in an unthreatening environment leads to the development of strength. The education format is clear, easy to follow, and dynamic for the instructor and NNs. A variety of teaching tools are used in an effort to accommodate all learning types, with time built in for reinforcement.

#### **Project Limitations**

Time is a limitation of this project. Although NNs are in a 1-year residency program, 432 hours are allotted for clinical orientation; preceptors and learning specialists are aware of the time constraints and remain cognizant of the impact a lengthy orientation has on the unit's productivity. Due to time constraints, educators may omit or

downplay important information, teach work-arounds, and delay experiential learning. The program has yet to be implemented; consequently, no available data can suggest that additional unit-specific education will affect time.

Additionally, the sample size ( $n = 5$ ) was relatively small, and although three of the five (60%) learning specialists strongly agreed and two agreed the program would benefit NNs' development of decision-making skills, the validity of this finding is questionable due to the small number of participants. Researcher bias is possible, as I developed and chose participants through convenience sampling.

### **Recommendations for Remediation of Limitations in Future Work**

The convenience sampling of noncritical care areas with a larger sample of learning specialists is required to evaluate the validity of the program. Additionally, results from the ICC pilot should be used in critical care and noncritical care areas to determine feasibility. Replication of this program is essential to validate its ability to meet the educational needs of new nurses transitioning into critical-care units. To eliminate researcher bias, additional studies would ensure credible, defensible work. Additionally, for further studies to maintain consistency in data collection, researchers should administer surveys and limit the number of questions to five to avoid participant disengagement.

### **Analysis of Self**

#### **Scholar**

The doctor of nursing practice program provided the tools to evaluate literature and how to align research findings to health care. The project allowed me to assess, interpret literature, synthesize, and articulate findings in a concrete, logical manner.

Looking to literature and evaluating the gap in NN education, I developed a program that will add to the body of nursing knowledge regarding NN education and orientation to intermediate critical care. The evidence also supports the use of innovative programs with supplemental education to meet the needs of learners. Developing this program required collaboration with other disciplines and may develop into a best practice.

### **Practitioner**

Developing the NN education program has increased my knowledge and skill set while allowing me to focus on innovative, creative ideas for improving and redesigning how NNs are educated. The additional education may be a tool to keep nurses engaged professionally and thus affect the nursing shortage. As a learning specialist, I am cognizant not only of the importance of educating NNs, but also of the need to develop preceptors and collaborate with other disciplines to facilitate the growth of NNs. This program strengthens this component of my professional practice.

### **Project Developer**

Developing this program has contributed toward filling a gap in NN education and has supported my ability to apply evidence-based practice to change the trajectory of outcomes. The ability to engage all necessary stakeholders during development and execution further allowed for the articulation of visual and tangible concepts that eventually will lead to fulfillment of the program. Learning specialists must keep abreast of healthcare changes and their effects on nursing practice. Developing this program has broadened the scope of practice, positioning education in a systemic view rather than in a silo. Formative and summative evaluation is important to ensure that amendment and enhancement occur as warranted. The knowledge I have garnered in developing the NN

program will be useful when mentoring undergraduate and graduate students and developing programs in practice. Upon completion of my studies, I hope to develop a poster presentation.

### **Summary and Conclusions**

Developing this program solidified the need for additional unit-specific education for NNs working in ICC. When implemented, this program may appreciably improve NNs' decision-making skills (Jewell, 2013). Giving educators and preceptors necessary tools to support their education may ultimately affect the care they provide and thus achieve social change. Large numbers of NNs are entering critical care. Providing them with a strong foundation is crucial to the future of nursing. To provide and maintain a healthy community, nurses must have knowledge and skills to provide competent care and services.

### Section 5: Scholarly Product

Knowing one's audience and what they want or need is an advantage when presenting. The content may then be appropriately geared toward the intended audience.

My plan is to present the program in a poster presentation at the practicum site.

Presenting a poster will allow colleagues to critique the content and offer suggestions to improve it.

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## Appendix: Likert-Type Scale Survey for Novice Nurse Project—Content Validity

Please circle the best appropriate answer below:

1. The program met its stated objectives

5) Strongly disagree    4) Disagree    3) Neutral    2) Agree    1) Strongly Agree

2. The course content was relevant to novice nurse day-to-day role

5) Strongly disagree    4) Disagree    3) Neutral    2) Agree    1) Strongly Agree

3. The material and resources facilitated decision-making skills

5) Strongly disagree    4) Disagree    3) Neutral    2) Agree    1) Strongly Agree

4. I believe the program will improve novice nurses growth and development

5) Strongly disagree    4) Disagree    3) Neutral    2) Agree    1) Strongly Agree

5. The environment was conducive to learning

5) Strongly disagree    4) Disagree    3) Neutral    2) Agree    1) Strongly Agree