

MASTER'S DEGREE AND POST-MASTER'S CERTIFICATE PREPARATION FOR
THE ACADEMIC NURSE EDUCATOR ROLE: THE USE OF THE NATIONAL
LEAGUE FOR NURSING CORE COMPETENCIES OF NURSE EDUCATORS AS A
CURRICULUM GUIDE

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This study described the education courses in Master of Science in Nursing Education (MSN Ed) degree and post-master's certificate (PMC) in nursing education programs and determined which of the eight NLN Core Competencies, used to certify nurse educators, were represented. Data regarding the required credit hours, practicum hours, distance accessibility, and preparation for the Certified Nurse Educator^{CM} (CNE) Examination also were collected. The study used a descriptive design using a web scraping technique. Program information was obtained from the accrediting bodies for graduate nursing programs in 2015. Course description data were obtained from web pages via curriculum plans, course catalogs, graduate handbooks, or other institutional web pages. Data were collected from each program website, collated, uploaded, and analyzed. In both types of programs, evidence was found for the NLN Core Competencies: Facilitate Learning (97%), Participate in Curriculum Design and Evaluation of Program Outcomes (97%), Use Assessment and Evaluation Strategies (95%), Pursue Continuous Quality Improvement in the Nurse Educator Role (88%), Engage in Scholarship (45%), Function as a Change Agent and Leader (30%), Facilitate Learner Development and Socialization (28%), and Function within the Educational Environment (12%). Only 36% and 40% of MSN Ed and PMC in nursing education programs, respectively, were completely distance accessible. Required credit hours varied

from 28 to 65 for the entire MSN Ed and from 6 to 47 for the nursing education courses. PMC credit hours varied from 3 to 45. Practicum clock hours, for both programs, ranged from 60–500 while practicum credit hours ranged from 1–18. Revision of MSN Ed and PMC curricula is indicated to improve inclusion of content in all competency areas. Moreover, increasing the number of distance accessible programs may encourage more nurses to consider a master’s degree or post-master’s certificate in nursing education.

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LIST OF ABBREVIATIONS

ACEN	Accreditation Commission for Education in Nursing
AACN	American Association of Colleges of Nursing
CNE	Certified Nurse Educator
DNP	Doctorate of Nursing Practice
IOM	Institute of Medicine
MSN	Master of Science in Nursing
MSN Ed	Master of Science in Nursing Education
NACNEP	National Advisory Council on Nurse Education and Practice
NLN	National League for Nursing
NLNAC	National League for Nursing Accrediting Commission
PhD	Doctorate of Philosophy
PMC	Post-master's Certificate in Nursing Education
QSEN	Quality and Safety Education for Nurses

CHAPTER I: INTRODUCTION

Extant literature on nurses' abilities to transition into the academic nurse educator role, certification for nurse educators, teaching strategies for nurse educators, and various aspects of the nurse educator role at the master's degree level has been published (Byrne & Welch, 2016; Cannon & Boswell, 2016; Christensen, 2015; Frank, 2015; Goodrich, 2014; Hunt, 2013; Ironside, 2015; Lundeen, 2014; Ortelli, 2012, 2016; Poindexter, 2013; Ruland & Leuner, 2010). No studies, however, have specifically examined curricula of Master of Science in Nursing Education (MSN Ed) degree programs preparing nurse educators or programs that offer Post-master's Certificate (PMC) in nursing education in the United States. This study described MSN Ed and PMC in programs in the U.S. that prepare nurse educators and reviewed the nurse educator preparation courses to determine the presence of National League for Nursing (NLN) Core Competencies in those courses that prepare graduates for the academic nurse educator role.

Background of the Study

The Institute of Medicine (IOM) and the Robert Wood Johnson Foundation, in their publication titled "The Future of Nursing: Leading Change, Advancing Health" (2011), called for the advancement of nursing education and nursing practice to transform healthcare practice (Benner, Sutphen, Leonard, & Day, 2010; Lavizzo-Mourey, 2012; Ortelli, 2012). Both a prerequisite for, and consequence of, this advancement is preparing an adequate cadre of nurse educators who are qualified and prepared to teach nursing. A new paradigm of nursing education led by nurse faculty is foundational to advancing healthcare practice and reform (Halstead, 2012). Experienced nursing faculty, however, are retiring without replacements, and those who teach may not be adequately prepared or

qualified to teach (Christensen, 2015; Goodrich, 2014; Poindexter, 2013). Thus, developing evidence-based nurse educator curricula is crucial for the future of our profession.

The nursing faculty shortage cannot be understated. The U.S. nurse faculty vacancy rate was 7.1% in the 2015–2016 academic year. Additionally, over 130 new faculty positions need to be created (American Association of Colleges of Nursing [AACN], 2016b). Similarly, the NLN reported a 7.9% vacancy rate for nurse faculty and noted that vacancies continue to grow despite increased numbers of full- and part-time educators (NLN, 2015). In 2016, AACN reported that 13,444 qualified applicants were turned away from master's programs as a result of vacant faculty positions (AACN, 2016b). The severe shortage of nurse educators has sparked an influx of students to MSN Ed programs in an effort to fill the gap. However, the percentage of Master of Science in Nursing (MSN) programs turning away qualified applicants jumped 10% in 2012 with MSN programs rejecting 18% of all qualified applicants (AACN, 2016b). The primary reasons for not accepting all qualified students were a dearth of doctorally prepared nurse faculty, difficulty in recruiting qualified faculty applicants, and the inability to offer competitive salaries for nursing faculty (AACN, 2016b; NLN, 2015). Currently, over 56,000 registered nurses work full- or part-time as nurse educators (United States Department of Labor, Bureau of Labor Statistics, 2015). Approximately 75% of nurse faculty hold a master's degree even though full-time, tenure track, or clinical track teaching at the bachelor's level or higher typically requires a doctoral degree (AACN, 2016b; Hunt, 2013; NLN, 2010).

The nursing faculty shortage is well documented; however, academic preparation of nurse educators and curricula in master's programs preparing nurse educators has not been studied, particularly in regard to recent healthcare reform and the need to prepare graduates for future roles in healthcare. According to Ironside (2015), there is growing concern that master's prepared nurses working as faculty are not properly educated in pedagogy, evaluation, and educational theory. The problem exists where programs are new or based on outdated frameworks or old paradigms. These programs prepare faculty to teach how they were taught, by adding content, rather than teaching concepts or using student-centered teaching modalities (Benner et al., 2010; Christensen, 2015; Ironside, 2015; Orтели, 2012).

While this concern is predominantly focused on faculty with a master's degree in specialty areas other than education, there also is concern about curricula of MSN Ed programs (Goodrich, 2014; Halstead, 2007; NLN, 2012; Poindexter, 2013). Moreover, MSN Ed programs often make changes to their curricula without benefit of adequate evidence and data (Orтели, 2012). Thus, while an increase in the number of MSN Ed-prepared faculty may be beneficial, if programs do not adequately prepare educators for their role, an overall net positive will not be realized. The need for evidence to guide MSN Ed curricula has never been greater (NLN, 2013).

In 2005, the NLN identified essential competencies of nurse educators, the first evidence-based review of the role of the nurse educator (NLN, 2005). Created by a task force of nurse educator experts (Halstead, 2007), these guidelines for nurse educators led to the first and only certification for academic nurse educators designated as an advanced practice specialty (Byrne & Welch, 2016; Christensen, 2015; NLN, 2005; Orтели, 2012).

The task force on nurse educator competencies reviewed the literature over a 12-year time span about the role of the nurse educator (Halstead, 2007). Identification of competencies for the nurse educator role was based on evidence from the literature review that included published articles from nursing, higher education, medicine, and additional bio-psycho-social-behavioral associated healthcare professions (Halstead, 2007). The task force used non-research-based articles during formulation of the NLN Core Competencies due to lack of research in the area. Examples used included best practices, exemplars, and feedback from nurse educators (Halstead, 2007).

To date, these competencies have been used to guide the work of nurse educators, develop curricula for MSN Ed programs, assess current educators' competencies (Kalb, 2008), and evaluate student outcomes (Halstead, 2007). However, it is not known to what extent these competencies have been used to guide the development of academic nurse educator preparation programs and, as a result, preparation of nurse educators for the academic role, which varies greatly (Ruland & Leuner, 2010).

Problem Statement

The extent to which the NLN Core Competencies of Nurse Educators guided development of MSN Ed and PMC curricula across the country is not known. This study described curricula in MSN Ed and PMC in nursing education programs and determined the presence of course content, derived from course descriptions, that addressed the NLN Core Competencies of Nurse Educators. This study provided evidence-based information regarding the extent to which the NLN Core Competencies were represented in the current curriculum for MSN Ed and PMC in nursing education programs.

Purpose of the Study

The purpose of this study was to describe curricula in master's degree programs that had a major (sometimes called an option, focus, specialty, or track) in nursing education (MSN Ed) and/or offered a PMC in nursing education. Using information available on websites, the study investigator reviewed programs to determine the presence of NLN educator competencies. This descriptive study addressed this knowledge gap by identifying which and how many educator competencies were reflected on websites from MSN Ed and PMC in nursing education programs in the United States.

Research Questions

The research questions that guided this study are listed below.

1. How many master's degree programs accredited by the Accreditation Commission for Education in Nursing (ACEN) and the AACN offer an MSN Ed, a PMC in nursing education, or both MSN Ed and PMC in nursing Education?
2. How many accredited MSN Ed, PMC in nursing education, or both MSN Ed and PMC in nursing education programs are entirely distance accessible?
3. Are any geographic areas of the U.S. underrepresented by MSN Ed or PMC in nursing education programs?
4. Of the programs that have education practicum credit hours, how many total education practicum credit hours are required in MSN Ed and PMC in nursing education programs?

5. What is the range and average required credit hours for the MSN Ed and PMC in nursing education?
6. How many MSN Ed and PMC in nursing education programs include courses from other schools such as education, information technology, or administration?
7. Is there evidence on program websites, based on course descriptions in MSN Ed programs, that nurse educators are prepared in the NLN Core Competencies of: Facilitate Learning, Facilitate Learner Development and Socialization, Use Assessment and Evaluation Strategies, Participate in Curriculum Design and Evaluation of Program Outcomes, Function as a Change Agent and Leader, Pursue Continuous Quality Improvement in the Nurse Educator Role, Engage in Scholarship, and Function within the Educational Environment?
8. Is there evidence on program websites, based on course descriptions in PMC in nursing education programs, that nurse educators are prepared in the NLN Core Competencies of Facilitate Learning, Facilitate Learner Development and Socialization, Use Assessment and Evaluation Strategies, Participate in Curriculum Design and Evaluation of Program Outcomes, Function as a Change Agent and Leader, Pursue Continuous Quality Improvement in the Nurse Educator Role, Engage in Scholarship, and Function within the Educational Environment?

9. Does the program description provided on the program website directly indicate that the program prepares the graduate to take the Certified Nurse Educator certification examination?

Significance of the Study

The National Advisory Council on Nurse Education and Practice (NACNEP, 2010) identified critical factors that must be addressed to ensure an adequate pipeline of qualified and experienced nurse educators. These factors include issues related to recruitment, provision of adequate nurse faculty education, funding for nurse faculty programs, and the aging and retirement of current nurse faculty (NACNEP, 2010). The limited and declining numbers of nurse faculty who currently employ contemporary teaching pedagogy and the challenge to recruit nurse faculty educated about state-of-the-art teaching and learning modalities is an immense challenge for academe (Ironside, 2015). To be fully prepared for the role of academic nurse educator, nurse faculty must be educated in graduate programs based on the NLN Core Competencies. Specific states that lack programs to prepare nurse educators at the MSN Ed or PMC level should be identified to determine if geographical barriers exist that contribute to the shortage of qualified nurse educators.

Nurse faculty must be prepared educationally at the graduate level to teach in academia; however, faculty also must be able to successfully execute the role of the nurse educator. Halstead, former president of the NLN, explained in a blog:

It is short-sighted to believe that building our faculty capacity can be addressed solely by recruiting additional nurses into academia. It is also be [*sic*] important for us to emphasize academic preparation in nursing education and faculty development programs to help novice educators develop their teaching skills. (Halstead, 2012)

Successful attainment of the knowledge, skills, and attitudes of the nurse educator culminates in achievement of the Certified Nurse Educator^{CM} (CNE) credential and validates the advanced practice expertise accomplished by nurse faculty (Cannon & Boswell, 2016). The CNE credentials have been linked with the length of time worked as a nurse educator in an academic setting (Christensen, 2015). Therefore, the study investigator also examined the required practicum hours or clock hours in MSN Ed and PMC curricula.

The investigator reviewed curricula for MSN Ed and PMC in nursing education programs to identify courses, practica, and program outcomes pertaining to the integration of the academic nurse educator NLN Core Competencies (NLN, 2012) into MSN programs that prepare students for the nurse educator role. Awareness of the current preparation for academic nurse educators is pivotal to guide curricular reform. Ruland and Leuner (2010) called for reconfiguration of master's level academic nurse educator curricula to reflect evidence-based standards, yet evidence supporting master's level nurse educator curricula remains minimal and, to date, no additional studies have examined master's level of curricula for nurse educators.

While approximately 75% of academic nurse faculty are prepared at the master's level, expertise to reform nursing education curricula is needed from doctorally prepared research doctorate (PhD) and practice doctorate (DNP) leaders (NLN, 2013). Doctorally prepared nurse educators have the additional knowledge, skills, and attitudes required to provide leadership in transforming education, to generate research in nursing education, and to translate research in nursing education (Ortelli, 2016). Master's prepared academic

nurse educators are expected to function at the basic level of competency defined by the NLN Core Competencies of Nurse Educators (NLN, 2012).

Understanding the degree to which MSN Ed and PMC curricula reflect the NLN core competencies provides valuable information to future nurse educators. Nursing program website data can assist potential students in making enrollment decisions regarding MSN Ed or PMC programs. Information concerning the distance accessibility of the program (i.e., whether the program is provided online, on-campus, or hybrid) may influence student enrollment decisions. Finally, whether education programs prepare the graduate for the CNE Examination also may impact the decision to select a program and, thus, was a variable included in the study.

Definition of Terms

This section provides definitions for the terms used in this study. These terms include academic nurse educator; master's in nursing education (MSN Ed), PMC in nursing education, academic nurse educator role; competency; curricula; course descriptions; on-campus, hybrid, or online course delivery; practica; and web scraping.

An academic nurse educator is defined as “an individual who fulfills a nursing faculty role in an academic setting” (NLN, Certification Commission, & Certification Test Development Committee, 2012, p. 13). In the U.S., a master's degree is the minimum requirement for teaching in academia (ACEN, 2013; Hunt, 2013). The study investigator defined an *academic nurse educator* as a master's prepared or post-master's prepared registered nurse who teaches in an academic setting.

The investigator defined *master of science in nursing education* (MSN Ed) as a Master of Science in Nursing education program that prepares graduates to teach student

nurses (AACN, 2016a). The master's prepared nurse educator has a deep understanding of the discipline of nursing and nursing practice and has completed course work in pedagogical skills (AACN, 2016a). MSN Ed programs have varying degrees of college credit and practicum requirements defined by the institution providing the degree.

The investigator defined *Post-master's Certificate in nursing education (PMC)* as a post-master's certificate program that prepares master's prepared nurses to teach student nurses. The PMC includes course work in pedagogical skills and has varying numbers of credit and practica requirements defined by the institution providing the PMC. Both MSN Ed and PMC programs prepare the student for the role of nurse faculty.

The academic nurse educator role is complex and multifaceted and occurs at many levels. Responsibilities of the nurse educator vary depending upon the type of institution—including research intensive, doctoral granting, comprehensive, and community college (The Carnegie Classification of Institutions of Higher Education, n.d.; Frank, 2015). The role encompasses clinical, didactic, full-time, part-time, instructor, assistant professor, associate professor, and/or full professor responsibilities. Leadership, integrity and ethical conduct in teaching, learning, and scholarly activities are required (Rosenkoetter & Milstead, 2010) whether faculty hold a master's degree or the preferred doctoral degree (Hunt, 2013; IOM, 2011). These qualities distinguish a nurse educator, and the investigator used these qualities to define the *academic nurse educator role* for this study.

Anema and McCoy (2010) described competence as tasks a person should be able to demonstrate and competency as the assessment of one's ability to do so. According to the American Nurses Association (2010), nurses and the nursing profession have a legal

obligation to the public to maintain professional competence in practice. In addition, the profession must be committed to aligning a process for assuring competence in nursing education including credentialing, certification, and professional and regulatory organizations (American Nurses Association, 2010). For nurse educators, these guidelines are the Core Competencies of Nurse Educators (NLN, Certification Commission, & Certification Test Development Committee, 2012). All academic programs have curricula that define the courses of study required to successfully complete requisite program outcomes. Each course builds on the next as course competencies are achieved. The investigator defined *competency* as the culminating result of achievement of the program outcomes using a synergistic, consistent curriculum (NLN, 2010; Sullivan, 2016), based on the NLN Core Competencies of Nurse Educators (NLN, Certification Commission, & Certification Test Development Committee, 2012).

Keating (2011) defines curriculum as a formal, planned program of study required for a degree or discipline. Curricula consist of courses taught by faculty in an educational institution that pertains to an area of specialization. Majors (sometimes called options, foci, specialties, or tracks) are fields of specialization in addition to the core curriculum. The purpose of a major is to provide focused education and to cultivate competence in a specialized subject area or program. The MSN Ed and the PMC in nursing education represent nursing education's specialized subject areas (Halstead, 2007) provided by colleges and universities in the U.S. The investigator used the definition of *curriculum* as presented by Keating (2011) and reviewed courses listed on program websites and identified as required for the nursing education major, whether at the master's or post-master's level.

Course descriptions provide basic information about courses in all degree programs, including certificate programs. Individual courses are listed together to identify the major requirements for the degree program. Course descriptions are published in course catalogs, online as electronic documents, or directly on program websites. The study investigator defined *course descriptions* in this study as concise statements that describe the subject matter, methodology, scope, and relevance of a course in terms of what the students should be able to demonstrate at the successful conclusion of the course (Stanford University, Office of the Registrar, n.d.; Sullivan, 2016).

For this study, the investigator defined course delivery methods. Traditional, *on-campus*, or face-to-face courses are delivered in a classroom setting. Students arrive to the classroom at a predetermined time for course instruction. *Hybrid* or blended courses include both on-campus and online components (Conceição & Lehman, 2011; Finkelman & Kenner, 2012; Ko & Rossen, 2010). *Online learning*, or eLearning, is delivered via the Internet, primarily the World Wide Web, with no face-to-face or on-campus activities required (Ko & Rossen, 2010; Sener, 2015). Purely online courses remove geographical barriers related to student participation (Sener, 2015). Students participate in the course using the Internet in a manner determined by the instructor to achieve the course student learning outcomes.

Nursing is a practice profession and thus includes a practice portion for educating students called clinical practica. *Practica*, clinical, or classroom supervised experiences are an integral part of every nursing program that give students hands-on application of studied theory, assist students to think critically, and socialize them to the profession (Gubrud, 2016). Practica are led by professors who facilitate the skills required for safe

practice in the profession. Practica hours vary, and typically the credit hour ratio is 2 to 4 clock hours per week for each credit awarded. Practica allow academic nurse educator students to actively participate in real classroom and clinical experiences and are shown to positively impact outcomes on the CNE Examination (Ortelli, 2012, 2016). The study investigator defined *practica* as hands-on application and supervised experience that lead students to increased critical thinking and profession socialization.

The investigator defined *web scraping* as the process of mining publicly accessible school of nursing websites to collect data including course descriptions about MSN Ed and PMC programs.

Summary

This chapter delineated the implications for completing this study. It included the background in MSN Ed and PMC nurse educator education, the problem studied, and the purpose of this study. Research questions were identified along with the definition of associated terms and the significance of this study. The following chapter describes the literature review the investigator conducted for this study.

CHAPTER II: LITERATURE REVIEW

This chapter summarizes literature that described factors that influence the preparation of academic nurse educators. Topics include implications of the nursing shortage, professional standards for MSN Ed and PMC in nursing education curricula in the U.S., NLN Core Competencies of Nurse Educators, the effects of nurse educator preparation on certification, and studies completed on educational preparation for the academic nurse educator role. The chapter reviews studies examining MSN Ed and PMC in education curricula. A review of the literature related to certification as a nurse educator follows; the review concludes with literature available regarding the master's and post-master's in nursing education curricula and a chapter summary.

The investigator located relevant literature by searching OVID, CINAHL Plus with Full Text, Academic OneFile, ERIC (CSA), and Medline databases for articles published from 2011 to August 2016. Essential documents pertaining to standards, such as the NLN Nurse Educator Competencies (Halstead, 2007) and the NLN Core Competencies of Nurse Educators (2005), were included. Key search words included faculty, nurse, nursing, educator, teaching, learning, competency, NLN, role, transition, advanced practice, certification, core competencies, curriculum, web scraping, graduate, master's, post-master's, certificate, preparation, and various combinations of the aforementioned terms. In addition, websites of accrediting agencies and national organizations representing nurse educators and nursing education were reviewed for this study.

Nurse Faculty Shortage

Healthcare consumers today are at risk of substandard nursing care due to a shortage of nurses (NACNEP, 2010). The projected shortage will be the largest since

1960 (Committee on Appropriations Subcommittee on Labor, Health and Human Services, Education and Related Agencies United States House of Representatives, 2012) and can be attributed, in part, to a lack of academic nurse educators. In 2014, over 68,000 qualified baccalaureate and graduate nursing applicants were turned away from programs due to the lack of educators and resources such as clinical sites and institutional funds for nurse educator salaries (AACN, 2015).

An estimated 16% job growth for registered nurses is expected by 2024 and one in four new jobs will be in the healthcare industry (U.S. Department of Labor, Bureau of Labor Statistics, 2015). To educate the 1.2 million nurses needed by the year 2024, even more nurse educators are required. Estimated growth in the postsecondary nursing education sector is approximately 13% through the year 2024 (U.S. Department of Labor, Bureau of Labor Statistics, 2015).

Although nurses and nursing care are crucial to ensuring quality health care for the citizens of the U.S., nurse educators are imperative to increasing the needed nursing workforce. Additional nurse educators are vital to meet the projected demand for nursing care and allow expansion of capacity in nursing schools (AACN, 2015). The leading factor cited by nursing schools regarding the inability to admit more nursing students is insufficient numbers of faculty (AACN, 2016b; NACNEP, 2010; Ortelli, 2012). At a time when more nurse educators are needed, well prepared nursing faculty are too scarce to fill the void. Reasons include competition for master's prepared nurses in non-academic institutions, budget constraints within colleges and universities, a shortage of graduate students entering nursing education, strained working conditions, and poor salaries for nurse educators (AACN, 2015).

In 2014, nationwide, approximately two-thirds of nursing schools reported turning qualified students away due to faculty shortages (AACN, 2016b). A 7.1% nurse faculty vacancy rate nationwide was noted by the AACN (2016b). Retiring faculty, limited graduate programs offering tracks in nursing education, poor faculty compensation, and limited graduate enrollments have all contributed to the lack of nurse educators (AACN, 2016a).

Fewer than half of doctorally prepared graduates, both PhD and DNP, choose academia and teaching as a career choice (NACNEP, 2010). Long hours, increased teaching workloads, non-competitive salaries, and demands for service and scholarship are all aspects of the faculty role that turn potential nurse educators to different career choices. Less than 9% of nurses possess a master's degree and less than 1% of nurses in the U.S. hold a PhD- or DNP-designated doctorate degree (Fang, Li, Arietti, & Bednash, 2014).

The dearth of doctorally prepared nurses, combined with the lack of interest in nursing education, has created gridlock in the recruitment of academically prepared nurse educators and the ability of programs to increase capacity to admit nursing students. For example, pre-licensure nursing programs report primary obstacles in expanding admissions are the lack of clinical placement settings, limited classroom space, and the shortage of faculty (NLN, 2015). Post-licensure and graduate programs report a shortage of faculty as the primary obstacle in expanding admission (NLN, 2015). While nurse educators must be prepared at a doctoral level to teach master's students, the minimum preparation of nurse faculty who teach undergraduate nurses is a master's degree. The impact of the faculty shortage becomes apparent when very few numbers of doctorally

prepared nurse faculty and inadequate numbers of master's prepared nurse faculty restrict the number of new nurses for patient care and endanger representation of nurse leadership in healthcare reform. It is a devastating domino effect for the entire healthcare field.

The investment required to effect change and avert the looming nursing shortage has been identified, but change takes time, research, and reporting. Change also takes action that capitalizes on evidence generated through research in nursing education. The severity of the nursing shortage has been well documented, but a solution to the nursing shortage lies in suitably educating, increased recruiting, and better retention of competent nurse educators now (AACN, 2016b; NLN, 2015; Poindexter, 2013).

Preparing nurse educators to teach is essential because most nurse educators come from nursing practice and are expert clinicians, but are not prepared as educators (Goodrich, 2014; Ortelli, 2012; Poindexter, 2013). Critical skills for nurse educators, such as knowledge and skill in teaching, assisting novice learners, curriculum development, and implementing effective evaluation methods are lacking in most expert clinicians (Christensen, 2015; Goodrich, 2014; Halstead, 2012; Poindexter, 2013). The academic nurse educator role is multidimensional and complicated; it takes place in both the classroom and in busy clinical settings. Nurse faculty are role models and leaders in academe; they are professional clinical nurses and nurse educators who subscribe to professional standards set forth by peers from both nursing and nursing education (Frank, 2015).

Professional Standards

Another source for curriculum formulation and professional standards are accrediting organizations dedicated to quality, ethics, and education in the academic nursing field. All MSN Ed and PMC programs in the U.S. are accredited by either the ACEN or the AACN.

ACEN. The ACEN, formerly the NLN Accrediting Commission (NLNAC), is one of two active accrediting organizations in the U.S. The mission of ACEN is to accredit institutions or programs that exude educational quality (ACEN, 2013). The goals of ACEN include propagation of core standards for nursing programs to strengthen the educational quality of accredited programs (ACEN, 2013).

ACEN published six standards that measure quantity, extent, value, and quality of nursing education programs (ACEN, 2013). Standard 4 describes the curricula of master's degrees and post-master's certificates: "The curriculum supports the achievement of the end-of-program student learning outcomes and program outcomes and is consistent with safe practice in contemporary healthcare environments" (ACEN, 2013, p. 6). Criteria specify characteristics of outstanding curricula in master's education and indicate that programs must provide role-specific national standards and competencies appropriate for and consistent with professional and contemporary best practice (ACEN, 2013). In summary, ACEN Standard 4 specifies criteria for master's and post-master's certificate curricula by referring one back to the appropriate advanced practice competencies and role-specific professional standards such as the NLN Core Competencies of Nurse Educators (NLN, Certification Commission, & Certification Test Development Committee, 2012).

Another NLN (2010) publication, *Outcomes and Competencies for Nursing Graduates*, addresses the outcomes and competencies for each level of nursing education, including master's degree programs. Specifically designed to look at each level of nursing education in relation to the next, it creates a comprehensive description of competencies expected of nurses at each level of education. The overall goal of this document is to challenge and assist nurse educators to redesign curricula for practice in today's healthcare arena (NLN, 2010).

Each of the core competencies for the master's prepared nurse are defined as "the measurable skills...developed by faculty in schools of nursing to meet established program outcomes" (NLN, 2010, p. 32). Each level of competency builds upon the previous level and shows a progression across the continuum of nursing education levels.

Although the NLN outcomes and competencies for nursing graduates inform nurse educators how to prepare the next generation of nurses for practice, it is not specific to the preparation of nurse educators. Program outcomes for MSN Ed or PMC in nursing education are left to nursing program administration and faculty, which is why curricula credit, clock, and practica hours vary to achieve the selected outcomes.

AACN. The Essentials of Master's Education in Nursing was developed by the AACN (2011). Specific curricular elements and framework essentials are identified as core for any master's program regardless of the major, concentration, or specialty. The Essentials document identifies the core knowledge and skills essential to all master's prepared nurses. The AACN Essentials of Master's Education in Nursing calls for additional specialized knowledge and coursework in the area of role specialization but

does not delineate the competencies or best practices associated with any area of specialization including the nurse educator.

The nine AACN (2011) Master's Essentials are (1) Background for Practice from Sciences and Humanities, (2) Organizational and Systems Leadership, (3) Quality Improvement and Safety, (4) Translating and Integrating Scholarship into Practice, (5) Informatics and Healthcare Technologies, (6) Health Policy and Advocacy, (7) Interprofessional Collaboration for Improving Patient and Population Health Outcomes, (8) Clinical Prevention and Population Health for Improving Health, and (9) Master's-Level Nursing Practice. In addition, the Essentials practice standard further delineates the master's role as direct or indirect care practice and identifies curricular components associated with these clinical practice areas. Both direct and indirect care practice roles contain graduate nursing core courses. Direct care practice core courses include the *3Ps* (pharmacology, pathophysiology, and physical assessment) and learning experiences specified by the functional role-certifying body.

The nurse educator, recognized by the AACN Master's Essentials (2011), as a direct practice care role requires preparation across all nine Essentials areas including preparation in curriculum design and development, teaching methodologies, educational needs assessment, and learner-centered theories and methods. Master's programs also must provide supervised clinical experiences that allow students to master all nine Essentials. However, the required number of credits, clinical, practica, clock, or laboratory hours suggested to achieve this goal are not provided in the Essentials. The reader is directed to the functional role certifying body for more specific information; for nurse educators, it is the NLN core competencies.

The AACN Essentials of Master's Education in Nursing (2011) professional standard document is meant to inform and transform master's in nursing education in response to healthcare changes. In 2010, it was used as a guide to describe the state of affairs of master's in nursing education curricula in the U.S.

Ruland and Leuner (2010) evaluated patterns and trends associated with academic nurse educator curricula using the AACN Master's Essentials and the NLN Nurse Educator Certification Criteria. The study evaluated approximately 79% of MSN Ed AACN-accredited programs in the U.S. where all information about the programs was found online. MSN Ed program student enrollments, between 2000 and 2009, ballooned by 15 to 80%; MSN Ed student numbers increased from 1,285 in 2000 to almost 14,000 in 2009. With the large amount of growth in nursing education but no clear curricular guidelines to follow, patterns or trends in curricular design were not able to be identified by Ruland and Leuner (2010).

Ruland and Leuner (2010) described three basic curricular content areas: graduate nursing core, advanced practice core, and specialty curricula as described in the AACN Master's Essentials (2011). Graduate core is required for all graduate nursing study and includes theory of nursing practice, research, ethics, professional role development, diversity and social issues, health promotion, disease prevention, and healthcare finance and organization. Advanced practice nursing core included the 3Ps: advanced health assessment, advanced pathophysiology, and advanced pharmacology. Specialty curricula were identified as education courses and clinical specialty courses. These three curricular content elements were identified as required for "direct client care" graduates (Ruland & Leuner, 2010, p. 250).

Findings from the Ruland and Leuner study (2010) revealed a range of 30 to 56 credit hours to achieve the MSN Ed degree, with an average of 39 credit hours required for MSN Ed completion. Sixty-nine percent of the programs required fewer than 39 credits and 31% required more than 40 hours.

Graduate core courses in research (96%), theory (91%), and healthcare policy (67%) were required in MSN Ed programs. All 3Ps of the advanced practice core were required in 23% of the MSN Ed programs, while 48% required advanced pathophysiology, 41% required advanced health assessment, and 27% mandated advanced pharmacology (Ruland & Leuner, 2010).

Ruland and Leuner (2010) found teaching strategies/instructional design (97%), curriculum development (96%), a teaching practicum (92%), and evaluation methods (89%) in the MSN Ed programs. Courses in a clinical specialty area such as geriatrics, pediatrics, or adult health were required in 46% of the programs reviewed—of those programs, 75% of the clinical specialty courses were designed for the nurse educator role (Ruland & Leuner, 2010).

Ruland and Leuner (2010) noted tradeoffs between the three curricular content areas to balance the number of credit hours with the recommended outcomes for MSN Ed programs. Programs that contained the core curriculum and the advanced practice practicum ranged between 30 and 39 credits. Programs requiring the core curriculum and the education core resulted in cutbacks in the 3Ps to remain under 40 credits. Programs that contained all aspects of all three levels of curricula required up to 56 credits to achieve the MSN Ed degree (Ruland & Leuner, 2010). Each program determined the curricular aspects to include or remove to achieve specific student learning outcomes.

The Ruland and Leuner study (2010) noted no overarching consensus or patterns in curriculum requirements MSN Ed programs.

Ruland and Leuner (2010) concluded that 63% of AACN-accredited institutions offered MSN Ed degrees that did not reflect evidence-based curriculum standards. MSN Ed programs varied in the number of required credit hours and the balance of graduate core curriculum, advanced practice core courses, and specialty educator core courses. Review of MSN Ed curricular differences and core requirements revealed a variety of approaches to this dilemma without overall agreement. Ruland and Leuner (2010) concluded with a call for discussion and reconfiguration of the curriculum to evidence-based standards for the master's prepared nurse educator.

Ruland and Leuner's (2010) study revealed the lack of curricular consensus and role-specific curricular and educational needs of the nurse educator. Ruland and Leuner's (2010) study reviewed only MSN Ed programs using an online manual web scraping technique. Courses and programs were described in terms of whether they met or addressed the AACN Master's Essentials (2011) and the NLN Nurse Educator Certification Criteria (NLN, Certification Commission, & Certification Test Development Committee, 2012).

Limitations of the Ruland and Leuner study (2010) related to the criteria used for evaluation of the MSN Ed curricula, the limitations of information provided on the web, and missing inter-rater reliability information. The AACN Master's Essentials (2011) identified required curricula for all master's programs in nursing; this guideline is not specific for academic nurse educators. Thus, it was not the most rigorous or best approach for evaluation of academic nurse educator curricula. The CNE Examination was

linked to the NLN Core Competencies of Nurse Educators (NLN, 2005), but the certification eligibility, used by Ruland and Leuner (2010), was linked to a practice analysis. Again, this was not a valid evaluation of the MSN Ed curricula for the study.

Inter-rater reliability data for the Ruland and Leuner (2010) study was lacking. Inter-rater reliability support for correct categorizations of the course descriptions, programs, or practica was provided by testimony of the investigators' experiences as nurse educators; no other data were provided.

To overcome limitations in previous research, the current study reviewed curricula for MSN Ed and PMC in nursing education and sought to determine the presence of the NLN Core Competencies of Nurse Educators (NLN, Certification Commission, & Certification Test Development Committee, 2012) in course descriptions. These competencies are specific to academic nurse educators and are designed to drive curricular reform in nursing education.

NLN Core Competencies of Nurse Educators. The NLN Core Competencies of Nurse Educators (NLN, Certification Commission, & Certification Test Development Committee, 2012) delineate the role of the nurse educator. An NLN position statement, "The Preparation of Nurse Educators," noted "the academic community should not assume that individuals are qualified to teach simply because they hold a particular credential... [but should be prepared] through planned deliberate preparation for such roles and responsibilities" (NLN, 2002, Background and Significance section, para. 9). In 2002, the NLN solicited nursing education leaders to define how future nursing faculty should be properly prepared to teach. Through a comprehensive and rigorous process of literature review and analysis, the NLN established the NLN Core Competencies of

Nurse Educators in the Standards of Practice for Academic Nurse Educators (NLN, 2005). The progression of interest and scholarly work about the preparation and competency of the nurse educator specialty defined a new area of research-based studies. Research in preparation of nurse educators has been dedicated to how nurse educators are expected to assimilate the role and practice in the academic arena. In 2005, the NLN designated nursing education as a specialty area and an advanced practice role then created the CNE Examination linked to the competencies (NLN, 2005).

In 2007, Billings stated, “the educator competencies framework...can be used to guide the development of curricula in master’s, post-master’s, doctoral, and continuing education programs that are designed to prepare future nurse educators” (Halstead, 2007, p. 5). *Nurse Educator Competencies: Creating an Evidence-Based Practice for Nurse Educators* provided the framework, presented as competencies, to guide curricula and identify the essential knowledge, skills, and attitudes essential to prepare nurse educators (Halstead, 2007).

The competencies were based on literature reviewed between 1992 and 2004 and derived from research in nursing, higher education, medicine, allied health, social work, psychology, and sociology (Halstead, 2007). The literature review also revealed a dearth of research in certain competency areas. In these cases, Halstead (2007) used non-research-based literature, such as best practices and exemplars. In the 2012 revision of *The Scope of Practice for Academic Nurse Educators* (NLN, Certification Commission, & Certification Test Development Committee, 2012), a nurse educator practice analysis was used to update the CNE test blueprint and provide assurance that the NLN Core Competencies remained aligned with standards of practice for nursing and

standards of professional development for nursing designated by the American Nurses Association (NLN, 2010).

The NLN Core Competencies of Nurse Educators are to:

- (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
- (6) Pursue Continuous Quality Improvement in the Nurse Educator Role
- (7) Engage in Scholarship, and
- (8) Function within the Educational Environment. (NLN, Certification Commission, & Certification Test Development Committee, 2012)

Collectively they are considered the standard of practice and preparation for the role of academic nurse educator. In the sections that follow, each competency is described beginning with the literature review, an overview of the competency, and suggested future research on that particular core competency (Halstead, 2007).

Competency I: Facilitate Learning. Competency I was developed based on prior research on educator qualities that positively affect teaching and facilitate learning. This competency also includes clinical teaching and clinical precepting. Most studies used descriptive surveys that were qualitative, quantitative, or a combination of the two. Topics investigated were effective teaching, clinical teaching, and the role of the preceptor (NLN, Certification Commission, & Certification Test Development Committee, 2012).

To facilitate learning, nurse educators are responsible for providing a supportive learning environment in various settings. Nurse educators must facilitate learning and achievement of specified learning outcomes in the affective, cognitive, and psychomotor

domains of learning. Expected tasks include use of various strategies appropriate to teaching–learning needs, and educators are expected to model self-reflective practice and critical thinking, including continuing education. Nurse educators must be proficient with multiple ways of communicating, including the use of technology, to promote the teaching–learning process. Nurse educators are expected to demonstrate integrity, enthusiasm, respect, flexibility, and knowledge of current nursing practice while developing collegial and professional relationships with colleagues, students, and agency personnel to promote professionalism and positive learning environments (NLN, Certification Commission, & Certification Test Development Committee, 2012).

Significant gaps in the literature for this competency were identified in the areas of graduate nursing education, clinical teaching, and preparation and competency of preceptors for graduate-level clinical instruction, especially those in non-acute care settings. There was minimal research on how to acquire the skills necessary to become an effective nurse educator (Halstead, 2007).

Competency II: Facilitate Learner Development and Socialization. To facilitate learner development and socialization, nurse educators must assist students to develop as professionals by integrating the values and behaviors associated with nursing practice. In addition, this competency addresses the need for nurse educators to vary teaching styles and educational delivery modes to accommodate student diversity. Nurse faculty are expected to utilize a variety of pedagogies and educational theories to teach nursing to a wide variety of learners.

Modeling, discussing, reflecting, and identifying professional behaviors expected of a professional nurse are important. The nurse educator is usually the first professional

nurse with whom students become acquainted. Students look at the faculty member as a role model and coach to give them direction and advice as they grow into the nursing role.

Halstead (2007) noted that gaps in the literature for core Competency II are pronounced. Not only was little research in facilitating learner development and socialization completed, but the extent to which application of techniques from other disciplines were effective for nursing education was not investigated. Further research, focusing on the various roles of nursing education, was identified as essential. Teaching students to use evidence as the basis for nursing practice when nursing education was not evidence-based also was noted as a serious problem (Halstead, 2007).

Competency III: Use Assessment and Evaluation Strategies. The review of literature for Competency III focused on four themes related to assessment and evaluation: clinical learning, classroom learning, student learning outcomes, and portfolios. Again, research supporting various clinical evaluation methods was scarce, and many methods are being taught in nurse educator curricula that have no evidence of effectiveness (Halstead, 2007).

Classroom learning assessment has focused traditionally on examinations including alternate item formats; however, limited research was noted to examine the effectiveness of these methods in achievement of specified student learning outcomes (Halstead, 2007). Portfolios used to represent student learning also have not been well evaluated for effectiveness because students may not find merit in completing this task. Small, isolated studies that do not extrapolate well to other situations continue to plague nursing education particularly at the graduate level (Halstead, 2007).

Competency III requires nurse educators to use assessment and evaluation strategies for measurement of student learning. Assessment is done in classroom, clinical, and laboratory settings and includes evaluation within the cognitive, psychomotor, and affective domains of learning (NLN, Certification Commission, & Certification Test Development Committee, 2012). Use of evidence to create and support varied assessment techniques is expected in the three domains.

Assessment of the teaching and learning process, as part of the nurse educator role, is also part of this competency. The nurse educator is expected to continually improve professional teaching practices by assessment of student learning in the classroom, clinical, and laboratory settings.

Similar to the previous NLN Core Competencies, gaps in the literature reflect limited research on specific assessment and evaluation strategies. Other than small, individual studies, research completed in this core competency area was anecdotal and limited at the graduate level (Halstead, 2007).

Competency IV: Participate in Curriculum Design and Evaluation of Program Outcomes. Few studies provided evidence related to this competency. Calls for curriculum change, reports of recommended curricular content, and case studies involving curricular changes represented the majority of published articles. Curriculum content, curriculum development, adaptive teaching/learning methods, faculty development in curriculum design, accreditation and professional standards, competency-based programs, and curriculum/program evaluation were topics covered in this review of literature (Halstead, 2007).

Competency IV requires the nurse educator to participate in curriculum design and evaluation of program outcomes (NLN, Certification Commission, & Certification Test Development Committee, 2012). Educators must be able to systematically assess program outcomes and utilize data to drive curriculum, course, and program revisions (Halstead, 2007). Educators must be familiar with current educational theory and research that will ensure continuous quality improvement and curricular development that reflects current healthcare needs and practices (Halstead, 2007).

Evidence noted for this competency was primarily anecdotal and found that socialization to the educator role, curriculum innovations, and strategies for teaching faculty how to participate in curricular change was lacking at the graduate level (Halstead, 2007). Evidence of best practices in course development, including web-based course construction, also was lacking.

Competency V: Function as a Change Agent and Leader. Nurse educators are in leadership positions and, thus, are in a position to impact the advancement of nursing as a profession and influence healthcare changes. Nurse educators must assume leadership roles and prepare nurses to navigate the changes in healthcare delivery. This is particularly imperative for graduate programs where future leaders are prepared.

Nurse educators, the majority of whom are prepared at the master's level, will direct the future for nursing education and nursing practice and are expected to take on leadership roles in academic institutions. Nursing faculty are able to integrate innovation into the nurse educator role and advocate for change in academic and healthcare organizations. Leadership at the systems and organizational level, along with use of evaluation methods to support change, is indicated for this competency.

Future research in this area is needed, particularly in healthcare systems and the business of health care, to teach nurse educators to function and lead in these areas (Halstead, 2007). Evidence to support and validate best practices for this competency is needed and ought to include use of technology and cultural sensitivity as well.

Competency VI: Pursue Continuous Quality Improvement in the Nurse

Educator Role. Again, the review of literature revealed a minimal amount of research in this area (Halstead, 2007). Topics evaluated for this competency included role strain in nurse educators, developmental needs of novice and experienced educators, faculty development, evaluation of teaching effectiveness, and socialization into the role of the nurse educator (Halstead, 2007).

Competency VI classifies continuous quality improvement as an essential component of the nurse educator role. This competency speaks to personal growth and development, lifelong learning, and use of reflective self-evaluation of the nurse educator. As nurse educators develop into the role, they must mentor others and provide support to faculty, students, and the educational environment (Halstead, 2007).

Identified research gaps included how to prepare novice nurse educators and how to help them effectively develop into professional nurse educators. Role development needs of nurse faculty, at every level of employment, needs attention. For this competency, “formal academic preparation for the nurse educator role was not addressed” (Halstead, 2007, p. 136) and has not been investigated in relation to the NLN Core Competencies. Evaluation and socialization to the educator role, faculty development and orientation, and effects of role strain round out the recommendations for further research in this area.

Competency VII: Engage in Scholarship. Literature review related to scholarship as a component of the nurse educator role produced the following themes: components of scholarship, knowledge of educational theory, nursing practice, research, characteristics of a scholar, and professional growth as a scholar (Halstead, 2007). Nurse educators should demonstrate expertise in scholarly activities, including writing proposals for funding or policies for students or programs. Qualities of a scholar include “integrity, courage, perseverance, vitality, and creativity” (NLN, Certification Commission, & Certification Test Development Committee, 2012, p. 21). Nursing scholarship advances the science of nursing education; it must be fueled by pride in the profession and exhibited as a spirit of inquiry. Research on teaching and learning, dissemination of new knowledge, and policy and program development are all evidence of scholarship within the nurse educator role.

Empirical research focused on the scholarship of teaching in nursing has been conducted, but research addressing the application or evaluation of other areas of scholarship in nursing education is warranted. Areas identified as priorities include determining the barriers to faculty scholarship, the resources that promote faculty scholarship, and the relationship between scholarship and student learning (Halstead, 2007).

Competency VIII: Function within the Educational Environment. The review of literature for Competency VIII revealed three primary topics: the organizational culture or work environment, institutional fit, and role negotiation. Faculty in higher education report that achievement of institutional goals is important but not at the expense of autonomy. Nurse educators who valued the mission and goals of the

institution and received attention as novice nurse educators tended to report higher levels of job satisfaction (Halstead, 2007).

To function within the academic environment, nurse educators must understand the environment. This is a large task considering the political, historical, cultural, social, and economic influences that impact institutions of higher education (Halstead, 2007). Nurse educators must effectively navigate these complex environments to advocate for their nursing program and the nursing profession.

Priorities for research in this area included how to attract nurse educators to a specific job and how to use faculty strengths to develop program goals or outcomes (Halstead, 2007). Inquiry and documentation regarding the contributions of nursing faculty in leadership roles within institutions, including the impact those leadership roles have on academe, have not been studied. Evidence of the similarities and differences in faculty demands between academic nursing compared to other academic disciplines also was identified as a research priority.

The NLN Core Competencies of Nurse Educators (NLN, Certification Commission, & Certification Test Development Committee, 2012) were created to guide curricula in programs that prepare nurses with the essential knowledge, skills, and attitudes fundamental for the academic nurse educator role (Halstead, 2007). The NLN Core Competency framework is the only academic nurse educator specific, evidence-supported, guideline for academic nurse educator curricula, and the academic nurse educator role and is the basis for certification as a nurse educator.

Certification as an Academic Nurse Educator

According to Cannon and Boswell (2016), certification in the nurse educator role is evidence of expertise as an academic nurse educator; it is a dynamic and evolving certification requiring continuous education to constantly improve the nursing profession. Certification is excellence demonstrated in an area of expertise; for nursing education, it is the CNE (Nick, Sharts-Hopko, & Leners, 2013). The NLN Core Competencies are the theoretical foundation for the CNE certification examination (NLN, 2005), which was created by the NLN in 2005 and based on practice analyses. The CNE designated the academic nurse educator as an advanced practice specialty role (NLN, 2005; NLN, Certification Commission, & Certification Test Development Committee, 2012). The CNE is sought by academic nurse educators as an advanced practice certification because it indicates achievement of expertise in the role of the nurse educator.

Four studies have been conducted about the relationship between academic preparation as an academic nurse educator and success on the CNE. Byrne and Welch (2016) found no correlation between academic faculty role and differences in test scores or years of teaching and CNE Examination pass rate. Byrne and Welch's (2016) small study was limited because it enrolled only 20 full-time nursing faculty with a variety of levels of educational preparation at one institution; therefore, the findings must be interpreted with caution.

Ortelli (2012) found a weak correlation between educational preparation and CNE Examination pass rates in three core competency areas: assessment and evaluation strategies ($r = 0.043$, $p = .03$); curriculum design and evaluation of program outcomes

($r = 0.040$, $p = .04$); and engage in scholarship, service, and leadership ($r = 0.045$, $p = .02$). However, MSN Ed test takers were not analyzed separately in this study.

Lundeen (2014) found most candidates who failed the CNE Examination held a master's degree and taught in an institution that granted graduate degrees. Data were not available to explore whether the candidates' preparation as academic nurse educators included education-specific coursework or an educational preparation program.

Christensen (2015) intended to evaluate differences between candidates with and without nurse educator preparation; however, lack of data in this area prevented answering this question. The main finding of the Christensen study (2015) was that total years worked as an academic nurse educator in an academic setting was associated with higher pass rates on the CNE Examination.

Although all four studies included educational preparation as a variable, none examined the characteristics of the educational programs attended by participants. The research about the CNE examinees and examination pass rates provided a glimpse of what constitutes success or failure with the only certification available for nurse educators (Lundeen, 2014). However, without data comparing pass rates with the examinees who had formal MSN Ed or PMC in nursing education training versus those who did not, these studies do not address the gap in MSN Ed or PMC in nursing education science. These studies reported on findings related to the NLN Core Competencies but not whether the MSN Ed or PMC in nursing education may have influenced the CNE Examination outcomes.

MSN Ed Preparation

The study of nursing education curricula has been neglected for over 40 years. The first national nursing education study since 1970 was completed by the Carnegie Foundation for the Advancement of Teaching (Benner et al., 2010). Overhauling and transforming nursing education was identified as paramount to meet the challenge of healthcare today (Benner et al., 2010). This report addressed the complexity required of nursing care and delineated implications for nursing education. Although the Carnegie Foundation study concentrated on the advancement of teaching for all professions, this report addressed preparation of nurse educators, including recommendations for improving nurse educator curricula and programs (Benner et al., 2010).

Benner and colleagues (2010) made six recommendations for improving nurse preparation for the educator role. The recommendations included: (1) enhanced faculty development for nurse educators, (2) teacher education courses in all graduate nursing programs, (3) advanced clinical practice preparation for all graduate nurse educator programs, (4) teaching and learning reflective practice techniques, (5) use of coaching in the classroom and clinical setting, and (6) support for using narrative pedagogy or problem-based learning. These recommendations are vital to providing quality nursing education to current students and preparing the nursing workforce of the future (Benner et al., 2010).

Benner et al.'s (2010) study was heralded as a breakthrough for preparing effective and qualified nurse educators and, when published, was the first national study in over four decades in nursing education. The recommendations, however, apply to all graduate nursing education and are not specific to master's programs with a focus in

nursing education. The authors convey that the findings are a catalyst for discussion, debate, and change (Benner et al., 2010). No specific curricular guidelines or competencies are offered to direct nurse educator education—only broad recommendations are made. Recommendations include courses in pedagogy, research, teaching courses, and teaching experience for all graduate nursing programs (Benner et al., 2010). These recommendations were based on evaluation of selected successful teaching strategies found in nine institutions; thus, the findings may be limited by the small sample size and manifestation of the strategies observed.

In 2008, the Robert Wood Johnson Foundation and the IOM partnered to identify the transformations needed for the future of nursing (IOM, 2011). When the Affordable Care Act was signed into law, the most widespread healthcare changes since 1965 were enacted. *The Future of Nursing* examined the ability of the nursing profession to respond to the Affordable Care Act requirements by ensuring an adequate supply of nurses and improving nursing education to meet current and future healthcare demands (IOM, 2011).

The IOM (2011) reflected that nurses are the largest cadre of healthcare providers and will have the largest impact on transforming the healthcare system. Although four key messages were identified by the IOM, only one specifically pertained to nursing education: “Nurses should achieve higher levels of education and training through an improved education system that promotes seamless academic progression” (IOM, 2011, p. 4). The recommendations for graduate nursing education included teaching strategies, interprofessional collaboration, research, enhanced faculty development, systems and organizational leadership, and health policy and advocacy leadership.

Most of the recommendations regarding nursing education from the IOM report (2011) were described previously in the NLN Core Competencies of Nurse Educators (NLN, Certification Commission, & Certification Test Development Committee, 2012). In addition, a key point from the IOM (2011) study addressed a seamless transition to higher education; however, nurse educator preparation was not a focus of the study.

One of the most recent studies was Phase II of the Quality and Safety Education for Nurses (QSEN) project that identified the knowledge, skills, and attitudes necessary for graduate-level competency. Evidence-based curricular concepts identified in the project were interprofessional collaboration, research, the 3Ps, advanced clinical practice, systems and organizational leadership, safety and quality improvement, integrating research into practice, use of technology, and health policy and advocacy leadership (QSEN, 2012). These vital curricular concepts were identified as essential for nurses educated at the master's level (QSEN, 2012). Curricular concepts specific to the MSN Ed or PMC in nursing education were not included in this project.

Chapter Summary

This chapter reviewed the literature found by searching the OVID, CINAHL Plus with Full Text, Academic OneFile, ERIC (CSA), and Medline databases limited from 2011 to August 2016 with the addition of pivotal work by the NLN regarding the Core Competencies (Halstead, 2007; NLN, 2005). Search terms included faculty, nurse, nursing, educator, teaching, learning, competency, NLN, role, transition, advanced practice, certification, core competencies, curriculum, web scraping, graduate, master's, post-master's, certificate, preparation, and various combinations of the aforementioned key terms.

This chapter described the severity of the nurse faculty shortage, identified implications related to certification as an academic nurse educator, and summarized studies and recommendations regarding MSN Ed preparation. The chapter described accrediting organization guidelines for master's prepared education and presented studies of curricula from the master's degree programs in nursing education and post-master's certificate. Accreditation guidelines and professional standards specific to graduate nursing education were reviewed; however, these guidelines state they are not specific for master's prepared or PMC nurse educators.

The literature review found only a few peer-reviewed articles and dissertation studies specific to nurse educator curriculum and/or the NLN Core Competencies of Nurse Educators. Minimal investigation has been reported on either topic; the study investigator found no research that used both curricula for academic nurse educators at the MSN Ed or PMC level and the NLN Core Competencies. As the premier and sole guideline for best practice in the nurse educator role, it is imperative to determine whether, how many, and how well MSN Ed and PMC in nursing education curricula integrate these guidelines. Academic nursing education programs continue to produce graduates of MSN Ed and PMC without benefit of evidence-based research describing current trends nursing education curricula.

The following chapter presents the methodology used in this descriptive study to describe the curricula of MSN Ed and PMC in nursing education. The chapter describes the web scraping technique used, data collection, and participant selection. It concludes with a description of the data analysis used.

CHAPTER III: METHODOLOGY

The purpose of this study was to describe the curricula of all masters' degree programs that offered a major and/or a post-master's certificate in nursing education regarding their use of NLN Core Competencies of Nurse Educators (NLN, Certification Commission, & Certification Test Development Committee, 2012). Using data available on public websites, the investigator reviewed programs and curricula to determine the presence of the NLN educator competencies. This chapter discusses the design, methods, procedures, and data sources with inclusion and exclusion criteria. Ethical considerations, data collection, data quality, data analysis, and limitations of the study also are discussed.

Methodology

Design and Procedure

The investigator used a descriptive design using a web scraping technique. The investigator obtained a website Uniform Resource Locator for each program on the AACN (2015) or ACEN (2015) lists. When no website was listed, the investigator conducted a Google[®] search to obtain a website address. The investigator entered college or university name, city, and state for each program on the search page to locate the specific nursing program.

After locating a website, the author entered the site on a spreadsheet for ease of use. The investigator completed manual web scraping to obtain course description data from web pages via curriculum plans, course catalogs, graduate handbooks, or other institutional web pages. The investigator manually entered (copied) from each program's website all course descriptions located online on the site to a data collection database created by the investigator.

This method of data collection, using program websites, is defined as web scraping (Haddaway, 2015). Web scraping has been used in previous research to study nurse educator preparation (Ruland & Leuner, 2010), curriculum development for doctoral nursing programs (Wyman & Henly, 2015), the online presence of radiologists on physician rating websites (Gilbert et al., 2015), and evaluating human capital as it influences admissions to pre-licensure nursing programs (Zrust, 2013).

The investigator reviewed MSN Ed or PMC in nursing education websites listed with AACN (2015) or ACEN (2015) to ascertain all courses required for completion of the major or certificate in nursing education offered by each school. All 529 MSN Ed and PMC programs in the U.S. currently are accredited by either the AACN or ACEN. The accrediting body for the NLN, formerly NLNAC, was renamed ACEN in 2013. The accrediting body for the NLN is now the Commission for Nursing Education Accreditation and offered accreditation services beginning early 2016 (NLN, 2016). Nursing programs previously accredited by the NLNAC were not found on the NLN website. Based on the MSN Ed and PMC in nursing education programs listed, the investigator created an Excel database to collect data to answer each research question (see Appendix).

After creating the database (see Appendix), the investigator categorized each course description into one or more of the NLN Core Competencies of Nurse Educators (NLN, Certification Commission, & Certification Test Development Committee, 2012). The investigator copied and pasted all course titles and descriptions verbatim into the database for evaluation. This technique accessed and collected website curriculum data, including course titles, course descriptions, practicum requirements, and curriculum

availability online. The investigator used complete course descriptions, including number of credit hours per course and any laboratory or practicum time required in each course to determine if one or more of the NLN Core Competencies were addressed.

Selection of Data Source

All MSN Ed and PMC in nursing education programs in the U.S. must be accredited by the AACN or the ACEN; therefore, the author reviewed all 529 accredited MSN Ed and PMC programs listed in October 2015 on the AACN (2015) and ACEN (2015) websites. Between October 2015 and August 2016, the investigator accessed websites for each MSN Ed or PMC program listed to locate the course and to collect relevant data regarding descriptions of each course required for the nursing education major or certificate. The investigator collected publicly available course descriptions and major requirements on program websites for analysis in this study.

Inclusion criteria. Inclusion criteria for this study were accredited MSN Ed or PMC programs identified via the AACN (2015) or ACEN (2015) websites in October 2015.

Exclusion criteria. Exclusion criteria included programs reported to prepare staff nurse educators only, school nurse educators (K–12), or health educators. In addition, programs with missing, incomplete, or incorrect data such as mismatched course title/description were excluded. Inaccessible websites or those that did not provide complete information about the concentration were excluded from collection of the NLN Core Competencies data. Incomplete information included, but was not limited to, missing course descriptions, problematic website access, or other issues that prevented the investigator from collecting complete information regarding the MSN Ed or PMC in

nursing education. The study investigator eliminated nursing programs with incomplete website information from the core competency evaluations, but included the website information in the discussion of this research. Broken or ineffective websites presumably affect student interest in nursing education programs and consequently may impact the number of new nurse educators entering the workforce. Finally, courses utilized for doctoral programs were not noted in this study because the focus was master's or post-master's preparation only.

Ethical considerations. Because this study did not involve human subjects, under the study's university research compliance procedures, the study was exempt from institutional review board approval.

Data Collection

The investigator accessed via the web all 576 nursing schools that offered an MSN Ed and/or a PMC in nursing education in the U.S. The AACN (2015) or ACEN (2015) lists did not identify specific programs provided by the nursing school; therefore, the author reviewed websites from all nursing schools listed to determine if they were eligible for inclusion in this study. Some programs provided an MSN Ed; others provided a PMC in nursing education; some provided both; others provided neither. The investigator added each program that fit the inclusion criteria to the database for evaluation.

Data Reliability

To support reliability of data interpretation from the data spreadsheet, including the identification of the presence of educator competencies in course descriptions, the investigator used six nursing education experts to corroborate the reliability of

investigator data interpretation. Using nurse consultants or experts for inter-rater reliability has been supported in previous studies conducted by O'Rourke and Zerwic (2016) and Wyman and Henly (2015). Reliability was examined through several iterative processes prior to data collection for both these studies. The process, noted in these studies, included review of course descriptions by nurse experts in the field in comparison to the investigator then differences in interpretation were discussed and revisions made prior to the next iteration. For the O'Rourke and Zerwic (2016) and Wyman and Henly (2015) studies, the process continued until confidence in inter-rater reliability was reached.

To support inter-rater reliability for the current study, a sample of data collected and categorized by the investigator was reviewed by six nursing education experts. Nurse educator courses were categorized into the NLN Core Competencies (NLN, Certification Commission, & Certification Test Development Committee, 2012) by the nursing education experts then compared to the same course categorization completed independently by the investigator.

The investigator conducted two separate sample surveys: the first with two nursing education experts and the investigator and the second with four nursing education experts and the investigator. The first survey was a random sample of 12 course descriptions located on the web from MSN Ed and PMC programs in nursing education. The investigator emailed to two nursing educators each course description with course number, course title, and number of credit hours and/or practicum hours. Following each course description, all eight of the NLN Core Competencies for Nurse Educators (NLN, Certification Commission, & Certification Test Development Committee, 2012) were

listed. The nurse educators were instructed to choose (instructions were to check all that applied) the specific NLN Core Competencies reflected in each course description. A link to the core competencies, created by the investigator and embedded in the survey, was posted in the course description; it provided the NLN Core Competencies with Task Statements (NLN, Certification Commission, & Certification Test Development Committee, 2012) to assist respondents in making the best decision for each course description.

Survey one was completed by the investigator and two nursing education experts who were also part of the investigator's dissertation committee. The overall agreement for all items in this phase was 81% among all three respondents. In addition, the investigator chose the exact core competency or competencies as did the nursing education experts for each course description 83% of the time (10/12 questions). One course description revealed a perfect match among all three respondents and the NLN Core Competencies.

As a result of the first survey, it was evident that some descriptions clearly were aligned with a specific competency, and others were not. Because descriptions were deemed to be ambiguous, confusing, or more difficult to determine which competency was being addressed in the course description, to increase the rigor of the process, the investigator selected specific descriptions for the second phase. Survey two consisted of nine course descriptions using the same format and instructions from the initial survey but with the selected course descriptions. The second phase survey was emailed to eight nursing education experts. Four complete responses were returned and used for

evaluation in addition to the survey completed by the investigator; thus, a total of five completed surveys were evaluated.

The overall agreement, for all five respondents, for survey two was 67%. The four nursing education experts alone revealed an overall agreement of 69% in survey two. A 2% difference was noted between the education experts and the investigator for this survey. In addition, 100% agreement on one or more of the NLN Core Competencies was noted among all five respondents 12 times.

For the first survey, overall agreement was acceptable at 81% (Cramer & Howitt, 2004). Course descriptions covering one or two specific subjects or requirements provided the most convergence on similar NLN Core Competencies. Conversely, in the second survey, descriptions were chosen that covered multiple subjects or topics making agreement difficult as reflected in the overall agreement of 67%.

Overall agreement on the first survey was acceptable; however, the investigator chose irrelevant core competencies in the first survey. Upon reflection and review of this survey, the investigator frequently linked the competencies of Facilitate Learning and of Facilitate Learner Development and Socialization together; it was difficult to choose one of these core competencies without choosing both. This may have been related to the investigator's knowledge of and minor in educational psychology. Educational psychology is the study of the development of effective educational techniques, including how people learn, motivation in teaching and learning, and teaching and learning theories including adult learning theories. Review of the initial survey by the investigator revealed that Facilitate Learning and Facilitate Learner Development and Socialization were viewed as synonymous. Thus, both core competencies were chosen together (if chosen at

all) each time. The investigator was able to distinguish between the two competencies and was much less likely to choose irrelevant core competencies in survey two (2/9 or 22%).

Review of the process of identifying the presence of competencies in course descriptions revealed that the investigator needed to review the course descriptions more critically. By reviewing key words or concepts found in course descriptions, the investigator could more selectively and appropriately identify the NLN Core Competencies. In addition, by critically reading each course description carefully, the investigator could concentrate on the content of the course and not what the course afforded the student once applied in the academic nurse educator role. Analysis also revealed that the longer and more complex the course description, the more likely the panel experts and investigator were to choose multiple, many times nonessential, core competencies. One long and complicated course description of a three-credit hour course resulted in selection of all eight NLN Core Competencies.

Based on the percent congruence in the two survey iterations the investigator felt confident that correct NLN Core Competencies were chosen for each course description. The first study revealed over 80% congruence between the nursing education experts, the investigator, and random course descriptions. When the course descriptions were ambiguous, confusing, or lengthy, as in the second study, there was an expected decrease in the overall percentage of agreement or congruence, but the difference between the nursing education experts and the investigator was only 2%. Thus, the investigator and the nursing education experts chose similarly for both iterations and had an acceptable grasp of the core competencies represented by the course descriptions. Inter-rater

reliability, for core competency selection, was provided with these pilot studies conducted in conjunction with nurse education experts and the investigator.

Data Analysis

Data were analyzed using descriptive statistics. Each research question was addressed independently based on the data collected and analyzed.

Chapter Summary

This chapter described the purpose of the study and methods for data collection and analysis. The investigator retrieved data for this study from websites of nursing programs that prepare academic nurse educators at the MSN Ed or the PMC in nursing education level. The author reviewed all 529 programs listed on the AACN (2015) or ACEN (2015) websites that met criteria for inclusion and evaluated the data in terms of the NLN Core Competencies of Nurse Educators. Pre-study surveys addressed inter-rater reliability. Chapter IV presents the results of the data analysis.

CHAPTER IV: RESULTS

The extent to which the NLN Core Competencies of Nurse Educators are present in MSN Ed and PMC curricula across the country was not known. This study described the curricula in MSN Ed and PMC in nursing education programs and determined the degree to which course descriptions addressed the NLN Core Competencies of Nurse Educators. This study provided evidence of the presence of NLN Core Competencies in the current curriculum for 317 MSN Ed and 212 PMC in nursing education programs in the U.S.

This chapter first presents descriptive data, followed by results of data analysis for each research question. The investigator used SPSS v.24 to answer research questions.

Descriptive Statistics

Of the 576 ACEN and AACN schools with accredited masters in nursing programs, only 355 schools actually had an MSN Ed or PMC program with a major in nursing education. The investigator reviewed these programs to answer the research questions in this study.

Research Question Results

Research Question 1

Question 1: How many master's degree programs accredited by the ACEN and the AACN offer an MSN Ed, a PMC in nursing education, or both MSN Ed and PMC in nursing education?

The AACN listed 484 schools offering master's or post-master's programs in nursing, while the ACEN listed 92 schools for a total of 576 schools. Of these 576 schools, a total of 529 programs were offered in one or both of the MSN Ed major or post-master's certificate. MSN Ed degrees were offered by 317 (60%) of the programs

while 212 (40% offered PMC programs (Table 1). The number of programs offering both the MSN Ed and PMC in nursing education was 174 (33%) of the 529 programs. This meant that 143 programs taught MSN Ed only, while 38 programs taught PMC only.

Table 1

MSN Ed and PMC Programs in the U.S.

Program	Frequency	Percent
MSN Ed	317	59.9
PMC	212	40.1
MSN Ed & PMC	174	32.8

Research Question 2

Question 2: How many accredited MSN Ed, PMC in nursing education, or both MSN Ed and PMC in nursing education programs are entirely distance accessible?

The investigator used data collected from program websites including course catalogs, student handbooks, and course descriptions to ascertain if the program was completely distance accessible. If students were required to attend campus for any reason, the program was excluded from analysis.

Of the 529 MSN Ed and PMC programs identified, 199 (37%) were completely distance accessible, and 330 (62%) were not (Table 2). MSN Ed and PMC programs self-identified as being available online or hybrid. The investigator identified programs that did not specify an online or hybrid platform as traditional or face-to-face.

Table 2

Completely Distance Accessible Programs

Distance Accessible	Frequency	Percent
Yes	199	37.6
No	330	62.4

Research Question 3

Question 3: Are any geographic areas of the U.S. underrepresented by MSN Ed or PMC in nursing education programs?

The investigator categorized each program by the state in which it was geographically located. The author accessed, listed, and categorized separately colleges or universities with multiple campuses in the same manner as listed by the ACEN and AACN. Every state in the U.S. had either a MSN Ed or PMC with the exception of Hawaii (Figure 1).

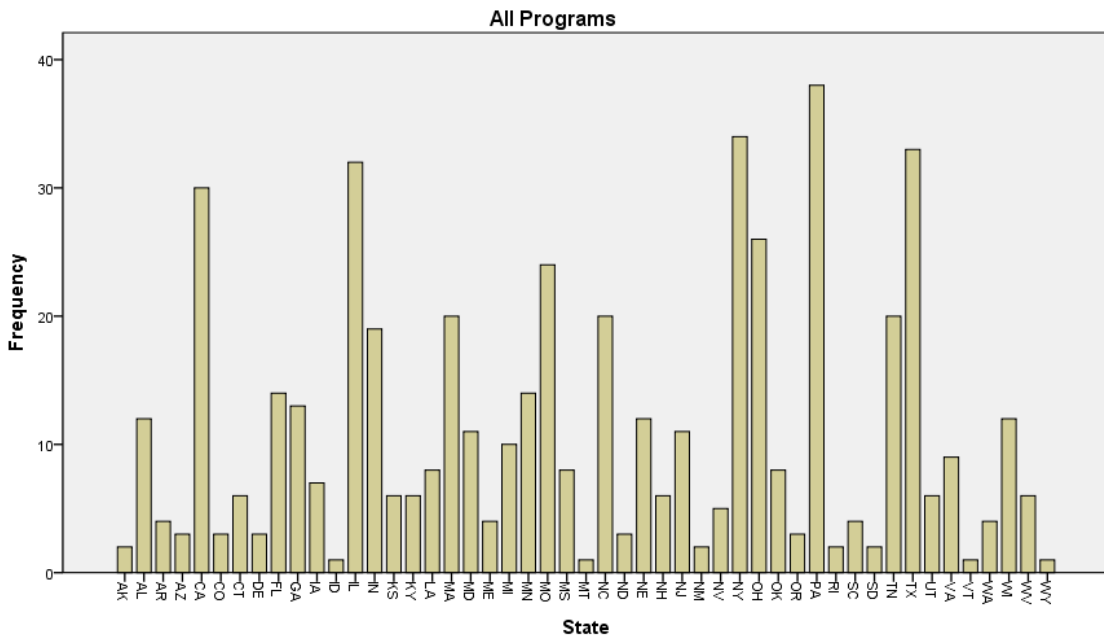


Figure 1. States in the U.S. with MSN Ed and PMC programs.

Programs were available either within the state as an on-campus program or available as an online program with an address listed in the state. MSN Ed programs are offered in 48 states (Figure 2), and 44 states offer PMC programs (Figure 3).

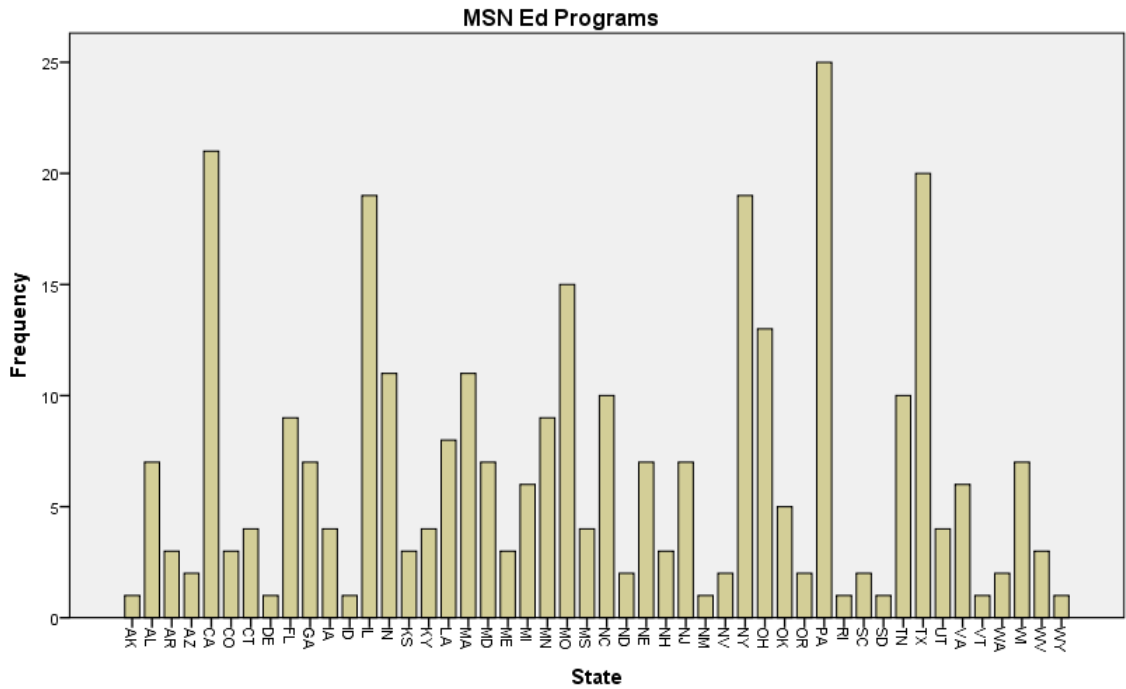


Figure 2. States in the U.S. with MSN Ed programs.

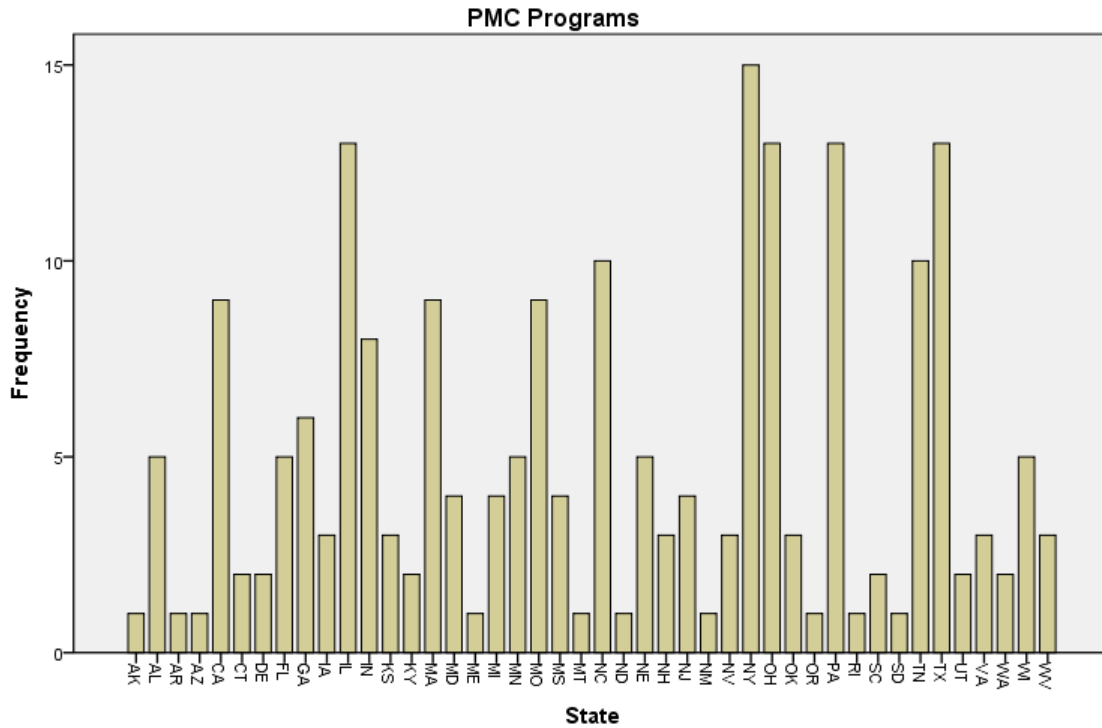


Figure 3. States in the U.S. with PMC programs.

For both MSN Ed and PMC programs, Idaho, Montana, Vermont, and Wyoming each had only one program represented. One MSN Ed program was noted in each of the following states: Alaska, Delaware, Idaho, New Mexico, Rhode Island, South Dakota, Vermont, and Wyoming. One PMC program was noted in Alaska, Arkansas, Arizona, Maine, Montana, North Dakota, New Mexico, Oregon, Rhode Island, and South Dakota. Conversely, Illinois, Texas, New York, and Pennsylvania had the most MSN Ed and PMC programs with 32, 33, 34, and 38, respectively. States with the highest number of MSN Ed programs were Illinois and New York with 19 each, Texas with 20, California with 21, and Pennsylvania with 25. States with the highest number of PMC programs were North Carolina and Tennessee with 10 each; Illinois, Ohio, Pennsylvania, and Texas with 13 each; and New York with 15.

Research Question 4

Question 4: Of the programs that had education practicum credit hours, how many total education practicum credit hours were required in MSN Ed and PMC in nursing education programs?

Most programs (89%) required practicum time; 85% of all programs reported credit hours while 4% reported clock hours. Practica requirements were designated in clock or credit hours, and for the credit hours there was no consistent method to determine how many clock hours each credit hour represented. Nursing education practica credit hours ranged from 1–18 for MSN Ed programs and 1–14 for PMC programs. Mean practicum credit hours were 4.44 for MSN Ed (2.199 standard deviation) and 4.55 for PMC programs (1.877 standard deviation) Table 3 lists nursing education practicum credit hours noted for each program.

Table 3

Nursing Education Practica Credit Hours

Program	<i>N</i>	Total ^a (%)	<i>M</i>	<i>SD</i>	Range
MSN Ed & PMC programs	529	450 (85%)	4.88	2.072	17 (1–18)
MSN Ed	317	267 (84%)	4.44	2.199	17 (1–14)
PMC	212	183 (86%)	4.55	1.877	13 (1–14)

^aTotal = Total number of programs requiring practica credit hours.

A total of 23 programs used clock hours when reporting practica requirements for both MSN Ed and PMC programs. Clock hours ranged from 60–500 with a Mean of 186 hours (101.64 standard deviation). Table 4 lists practica clock hours for nursing education

programs. Table 5 provides additional information regarding practica courses in nursing education programs.

Table 4

Nursing Education Practica Clock Hours

Program	<i>N</i>	Total ^a (%)	<i>M</i>	<i>SD</i>	Range
MSN Ed & PMC	529	23 (4%)	186.57	101.640	440 (60–500)
MSN Ed	317	15 (5%)	169.33	75.828	240 (60–500)
PMC	212	8 (4%)	218.88	138.330	440 (60–500)

^aTotal = Total number of programs requiring practica clock hours.

Table 5

Nursing Education Practica Courses

Program	<i>N</i>	Total ^a (%)	<i>M</i>	<i>SD</i>	Range ^b
MSN Ed & PMC	529	473 (89%)	1.16	0.415	2
MSN Ed	317	282 (89%)	1.16	0.438	2
PMC	212	191 (90%)	1.16	0.379	2

^aTotal = Total number of programs requiring practica courses. ^bRange = 1–3 courses per program.

Research Question 5

Question 5: What are the range and average required credit hours for the MSN Ed and PMC in nursing education?

For the MSN Ed, the investigator collected total required credit hours for the degree along with the credit hours required for the specialty alone. The investigator noted the total credits for the PMC certificate.

Total credit hours in MSN Ed programs ranged from 28–65 with a mean of 39 (5.287 standard deviation) while the education specialty credits ranged from 6–47 with a mean of 19 (7.499 standard deviation). The PMC credit hours ranged from 3–45 with a mean of 15 (5.182 standard deviation). See Table 6.

Table 6

Credit Hours in MSN Ed and PMC Programs

Total	N	M	MSN Ed			
			SD	Range	Min.	Max.
Credits To complete MSN Ed	317	39.20	5.287	37	28	65
NSG Ed cr. hrs.	317	18.93	7.499	41	6	47
			PMC			
NSG Ed cr. hrs.	212	15.00	5.182	42	3	45

Research Question 6

Question 6: How many MSN Ed and PMC in nursing education programs include courses from other schools such as education, information technology, or administration?

The investigator’s review found required interdisciplinary courses from schools outside of nursing in 42 programs. The school of education had 25 courses, with additional courses in an education sub-specialty: 4 in education technology, 2 in education foundations, and 2 in educational computing. The remainder of courses are listed in Table 7.

Table 7

Interdisciplinary Courses Required from Schools Outside of Nursing

Course Required	No. of Courses
Bio-statistics	1
Biology	3
Computer Information	1
Education	2
Education Foundations, Educational Computing	2
Education Technology	3
Education, Health Science, Informatics	3
Education, Information Technology	1
Educational Technology	1
Ethics	2
Graduate Core	1
Health Information Technology	1
Statistics	2

Research Question 7

Question 7: Is there evidence on program websites, based on course descriptions in MSN Ed programs, that the curriculum included the NLN Core Competencies of Facilitate Learning, Facilitate Learner Development and Socialization, Use Assessment and Evaluation Strategies, Participate in Curriculum Design and Evaluation of Program Outcomes, Function as a Change Agent and Leader, Pursue Continuous Quality

Improvement in the Nurse Educator Role, Engage in Scholarship, and Function within the Educational Environment?

On MSN Ed program websites, evidence was found for the NLN Core Competencies: Facilitate Learning (98%), Participate in Curriculum Design and Evaluation of Program Outcomes (97%), Use Assessment and Evaluation Strategies (95%), Pursue Continuous Quality Improvement in the Nurse Educator Role (90%), Engage in Scholarship (49%), Function as a Change Agent and Leader (35%), Facilitate Learner Development and Socialization (28%), and Function within the Educational Environment (14%). See Figure 4. Collectively, the top four NLN Core Competencies listed were evident in more than 90% of the MSN Ed programs, but the bottom four NLN Core Competencies were evident in less than 49% of the programs.

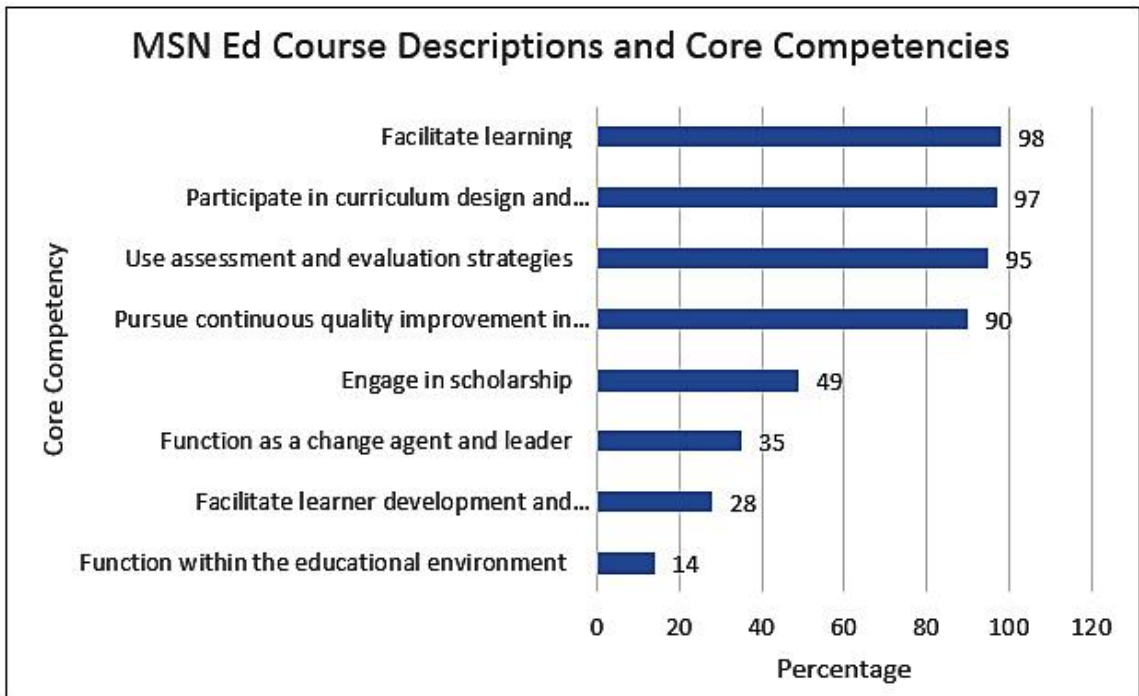


Figure 4. NLN Core Competencies in MSN Ed program course descriptions.

Research Question 8

Question 8: Is there evidence on program websites, based on course descriptions in PMC in nursing education programs, that the curriculum prepared nurse educators to attain the NLN Core Competencies of Facilitate Learning, Facilitate Learner Development and Socialization, Use Assessment and Evaluation Strategies, Participate in Curriculum Design and Evaluation of Program Outcomes, Function as a Change Agent and Leader, Pursue Continuous Quality Improvement in the Nurse Educator Role, Engage in Scholarship, and Function within the Educational Environment?

On PMC program websites, the investigator found evidence for the NLN Core Competencies to Facilitate Learning (97%), Participate in Curriculum Design and Evaluation of Program Outcomes (96%), Use Assessment and Evaluation Strategies (94%), Pursue Continuous Quality Improvement in the Nurse Educator Role (85%), Engage in Scholarship (39%), Function as a Change Agent and Leader (23%), Facilitate Learner Development and Socialization (27%), and Function within the Educational Environment (9%). See Figure 5. Collectively, the top four NLN Core Competencies listed were evident in more than 85% of the PMC programs, but the bottom four NLN Core Competencies were evident in less than 39% of the programs.

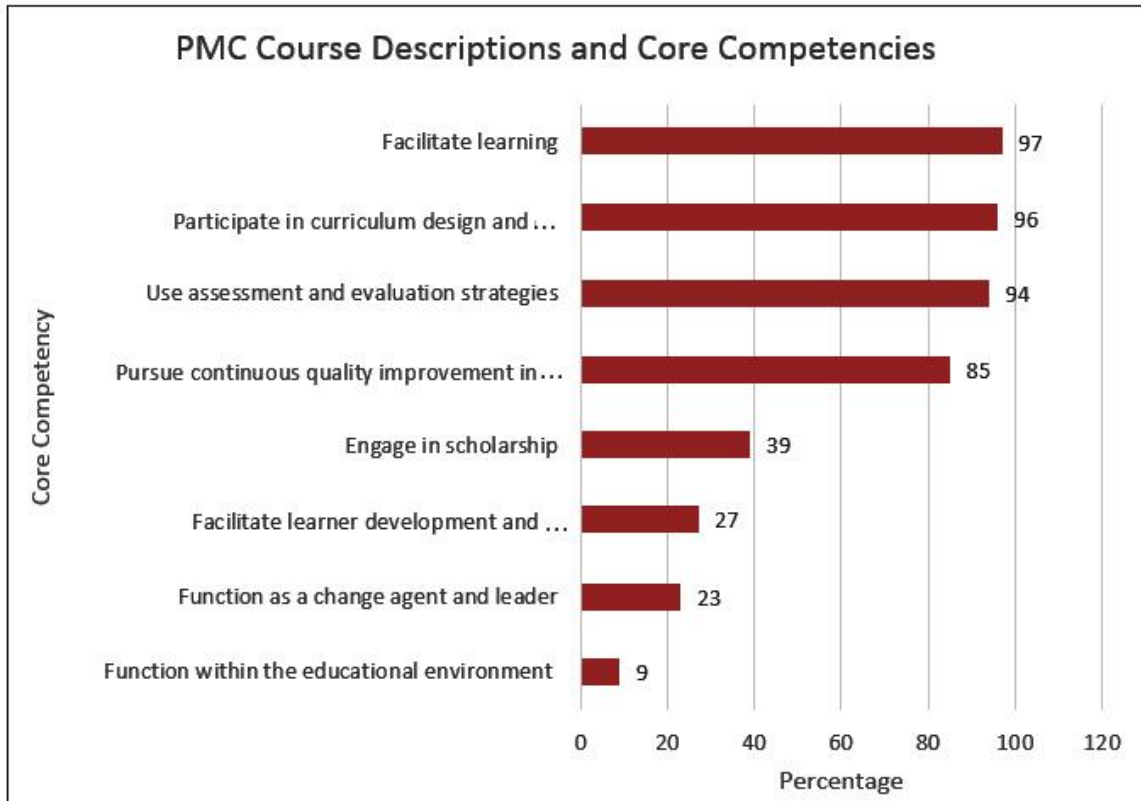


Figure 5. NLN Core Competencies in PMC program course descriptions.

Research Question 9

Question 9: Does the program description provided on the program website directly indicate that the program prepares the graduate to take the Certified Nurse Educator certification examination?

Only 32% ($n = 317$) of the MSN Ed program websites clearly stated the program prepared graduates for certification while 38% ($n = 212$) of PMC programs stated they prepared graduates to take the CNE certification (Table 8).

Table 8

Website States that Program Prepares Graduates to Take CNE Exam

Response	MSN Ed	
	Frequency	Percent
Yes	100	31.5
No	217	68.5
Response	PMC	
	Frequency	Percent
Yes	80	37.7
No	132	62.3

Chapter Summary

The study investigator reviewed MSN Ed and PMC in nursing education programs to determine the presence of content in course descriptions that addressed the NLN Core Competencies of Nurse Educators. In addition, the author collected demographic data to describe the number of MSN Ed, PMC, and both programs offered in the U.S. The chapter reported the number and range of credit and education practicum credit hours required for each program. The chapter also described the number and percentage of MSN Ed and PMC programs that offered completely distance accessible programs, the geographic distribution of the programs, and the number of programs that prepared graduates to take the CNE examination.

Chapter IV presented data collected and analyzed in response to each research question. Chapter V discusses the findings, comparisons to other studies, conclusions and implications for practice, and suggestions for future research.

CHAPTER V: DISCUSSION AND CONCLUSION

The extent to which the NLN Core Competencies of Nurse Educators were reflected in MSN Ed and PMC curricula across the country was not known. The investigator designed this study to describe the curricula in MSN Ed and PMC in nursing education programs and to determine the presence of content in publicly available course descriptions that addressed the NLN Core Competencies of Nurse Educators.

The investigator compared recommendations and implications for MSN Ed and PMC programs provided in this study to those completed in 2010. The chapter then discusses the implications of the educator competencies reflected in MSN Ed and PMC in nursing education programs in the United States, including the study limitations, and recommendations for further study. The chapter ends with conclusions and a summary.

Discussion

Number of MSN Ed and PMC Programs

The number of MSN Ed programs noted in this study constitute an increase over the number of MSN Ed programs noted by Ruland and Leuner (2010) in 2009. The study by Ruland and Leuner did not explore PMC programs; therefore, no comparison of overall program numbers for the PMC is available. However, Ruland and Leuner reported that nursing education programs were “rapidly proliferating” (2010, p. 249) without curriculum standards and showed an increase by 18% of MSN Ed programs during one year (2010). The current study revealed a much slower rate of increase for this type of program.

Although the overall number of MSN Ed programs increased over the previous six years, the rate of increase slowed. This change is reflected in the slower but continuous increase in the overall number of faculty (NLN, 2015). The slower increase in

MSN Ed programs may be the result of poor faculty salaries and the inability of schools to locate qualified graduate faculty in addition to the small number of doctorally prepared nurse educators (AACN, 2016a; NLN, 2015). The downward trend noted in MSN Ed programs is alarming when linked with the projected nursing shortage. Although the study by Ruland and Leuner (2010) reflected hope that the increase in MSN Ed programs might deflect the nurse shortage that is no longer the case. This study did not obtain data about student enrollment, and thus, it is possible that the current number of MSN Ed programs meets the needs of students choosing to become nurse educators.

Number of MSN Ed and PMC Programs Completely Distance Accessible

The investigator in this study examined data about distance accessibility of the MSN Ed and PMC programs to provide a context for understanding the nature of the programs. Some programs self-identified as being available online. Others identified as hybrid. Some did not specify the method of delivery and, therefore, the investigator identified them as traditional or face-to-face. Considering the proliferation of online access and resources available at many schools of nursing, it is unknown why only 37% of MSN Ed and PMC programs are provided in this format. This study did not explore reasons for this finding.

Geographic Distribution of MSN Ed and PMC Programs

Every state in the U.S., except Hawaii, had an MSN Ed or PMC program either within that state as an on-campus program or available as an online program with an address listed in that state. The only state without a physical campus was Hawaii; the rest of the U.S. was represented with MSN Ed and/or PMC programs.

Online MSN Ed or PMC programs essentially eliminate the need for every state to have an on-campus or physical university. However, with only 37% of the programs available entirely online, choices are limited. In addition, online programs, outside the students' state of residence may charge additional out-of-state tuition or fees. This study did not determine how many programs were available online in each state and is a limitation of the study.

Credit Hours for the MSN Ed and PMC Programs

Number of credit hours for the MSN degree. Total credit hours for the MSN Ed degree noted in this study ranged from 28 to 65: total credit hours for the MSN Ed degree in the study by Ruland and Leuner (2010) ranged from 30 to 56. Ruland and Leuner noted a range of 26 credits where the current study found a range of 37 credit hours for the MSN Ed. This indicates that MSN Ed programs are increasingly variant in the number of credit hours needed to achieve program outcomes. Graduates of MSN Ed programs should be ready to assume the faculty educator role and ultimately achieve the CNE specialty designation. The increase in the range of credit hours implies that MSN Ed program outcomes also are variant with no real consensus in what the MSN Ed graduate is expected to be able to do.

No nursing organization recommends a required number of credit, clinical, practicum, clock, or laboratory hours to achieve program outcomes for preparing nurse educators. This may explain why the variation in practicum and credit hours continue to diverge widely: there are no research or professional recommendations to provide guidance on number of credit, clinical, practica, clock, or laboratory hours to achieve the core competencies of nurse educators.

Number of credit hours for the MSN Ed and PMC specialty focus. MSN Ed education specialty credits and PMC credit hours were not collected by Ruland and Leuner (2010); therefore, no comparison can be completed.

Number of education practicum credit hours for the MSN Ed and PMC programs. It is significant to note, because nursing is a practice profession, that most of all MSN Ed and PMC programs required a practicum course whether reported in credit hours or clock hours. For programs reporting practica in credit hours, the majority required at least one practicum course. Of those programs reporting credit hours, slightly more PMC programs required a practicum course than MSN Ed programs. This may be the result of PMC students having already completed coursework to complete a master's in nursing degree and, therefore, able to concentrate specifically on nursing education coursework. Students completing the PMC need fewer credits to achieve the same or similar program outcomes. As a practice discipline, a nursing practicum assists nurse educator students in achieving salience in nursing education when actively practiced in classroom and clinical settings in a mentored experience.

Correspondingly, the PMC has a higher mean of required practicum clock hours than the MSN Ed. One possible reason for a greater number of practicum clock hours may be that the fewer credit hours required for the PMC curriculum may result in an increase in overall practicum hours to achieve program outcomes. In addition, PMC students have already earned a master's degree, usually requiring a substantial number of practicum credit and/or clock hours. While these hours would not have been necessarily in the area of teaching but rather to meet requirements for clinical practice in a focus area, some practica courses may have focused on both clinical and teaching practice.

There may have been tradeoffs between the number of required practicum credit or clock hours and specific courses (such as leadership, navigating healthcare institutions, or scholarship) for those already possessing a master's degree.

The lack of national guidance about the number of practica, credit, or clock hours required to become a nurse educator is of concern and may account for the variation in number of practica, credit, or clock hours noted in this study. Master's degree programs in nursing that prepare nurse practitioners (Advanced Practice Registered Nurse Consensus Work Group & the National Council of State Boards of Nursing APRN Advisory Committee, 2008), clinical nurse leaders (National Organization of Nurse Practitioner Faculties, 2009), and nurse administrators (AACN, 2013) all have practicum or clinical experience requirements that have been specified by individual professional organizations or certifying agencies. The Clinical Nurse Leader certification requires 300 to 400 supervised practicum hours (AACN, 2013), while the Family Nurse Practitioner certification requires a minimum of 500 supervised practicum hours for credentialing by the American Nurses Credentialing Center (2016), but no requirements for practicum hours have been specified for MSN Ed or PMC programs by either the agency (i.e., NLN) offering the certification exam for nurse educators or by accrediting agencies (AACN, 2015; ACEN, 2015). Some states, such as California, require nurse educators to show proof of clinical specialty training as well as clinical experience prior to teaching nursing (Faculty - Qualifications and Changes, 16 CA ADC § 1425). Finally, 473 or 89% of programs in this study listed a practicum requirement and included the total number of credit or clock hours associated with the practicum; however, few described practicum goals or included sufficient information in the course description to identify content that

contributes to attaining the nurse educator competencies. Clear learning outcomes for practica, identified in course descriptions or as course outcomes, would assist in identifying content in the practica that contributes to attainment of the NLN Core Competencies.

Interdisciplinary Course Requirements

In the current study, the investigator found requirements listed by 31 programs requiring 23 courses from a school of education with an additional 8 courses from a school of education-related field. Using these numbers, approximately 7%–10% of interdisciplinary courses were required from a school of education, and include both MSN Ed and PMC programs. This finding is consistent with Ruland and Leuner (2010).

In the current study interdisciplinary courses were not electives. It is unknown why these courses were chosen for these programs. Using courses from other disciplines may be the result of a lack of nursing expertise in that area, or the courses may be used to improve interdisciplinary knowledge. However, using courses not specifically designed for nursing or the NLN Core Competencies also may explain why some competencies were not evidenced in this study.

Preparation for the Certified Nurse Educator Exam

The investigator typically found statements that indicated the program prepared the graduate to take a certification examination listed in the program introduction or overview. Successful achievement of the CNE credential validates the advanced practice expertise accomplished by nurse faculty (Cannon & Boswell, 2016). Schools should identify that their programs prepare students to take the CNE. This indicator demonstrates that the program prepares the student to attain competencies in all aspects

of the faculty role. In addition, the Advanced Practice Registered Nurse (APRN) Consensus Work Group & the National Council of State Boards of Nursing APRN Advisory Committee (2008) indicated that programs should ensure students are eligible to take the certification examination, but in this study, only 196 (37%) programs indicated the program prepared students for the CNE. This finding could be the result of that the information was not identified on the program website or that the certification guidelines were not used as a curriculum map.

Core Competency Attainment

MSN Ed Programs

The current study's investigator compared the MSN Ed programs found online by Ruland and Leuner (2010) in 2009 to the courses indicated in the NLN Certification Criteria and the AACN Master's Essentials (2011). Although the criteria used for comparison of these programs were not identical, some similarities were observed. The investigator found courses on curriculum development, teaching strategies or instructional design, evaluation methods, instructional technology, and adult learning in both studies (AACN, 2011; Ruland & Leuner, 2010). Facilitate Learning, Participate in Curriculum Design and Evaluation of Program Outcomes, Use Assessment and Evaluation Strategies were evident in the MSN Ed programs evaluated by Ruland and Leuner (2010). Because Ruland and Leuner utilized the AACN Master's Essentials as a guide for their study, all NLN Core Competencies were not evident in their study.

Ruland and Leuner (2010) called for discussion and transformation of the MSN Ed curriculum, yet the current study noted minimal improvement. Moreover, the paucity

of research on nurse educator preparation is crippling the ability of graduate program administrators to apply research to change.

PMC Programs

In the PMC programs, the study investigator found that four of the NLN Core Competencies—Facilitate Learning, Participate in Curriculum Design and Evaluation of Program Outcomes, Use Assessment and Evaluation Strategies, and Pursue Continuous Quality Improvement in the Nurse Educator Role—were evident in more than 85% of the PMC programs. However, the remaining four NLN Core Competencies were evident in less than 39% of the programs. These remaining competencies included Engage in Scholarship, Facilitate Learner Development and Socialization, Function as a Change Agent and Leader, and Function within the Educational Environment.

Comparison between the MSN Ed and PMC programs revealed that PMC programs provided less evidence for competencies of Engage in Scholarship, Function as a Change Agent and Leader, and Function within the Educational Environment than did MSN Ed programs. The remainder of the competencies were evident in both programs with the MSN Ed program always providing greater evidence.

These findings may be related to MSN Ed programs that did not identify *specialty* courses; therefore, all required courses for the degree were included on the websites. The findings may be related to the fact that the average PMC was only 15 credit hours in duration compared to 19 for the MSN Ed. Additionally, the PMC is designed to build upon a master's degree and focus exclusively on the role of the nurse educator; therefore, courses that support the competencies of Engage in Scholarship and Function as a

Change Agent and Leader may have been eliminated by the programs assuming the initial master's degree provided preparation in these areas.

Discussion of the Findings Pertaining to Each Competency

The NLN Core Competencies are considered the standard of practice and preparation associated with the role of the academic nurse educator and were identified in courses connected with the programs of study. This study found representation of all eight NLN Core Competencies in the course descriptions of MSN Ed and PMC programs. However, some were well represented while others were not. The following sections discuss findings of each of the core competencies and discusses them individually.

Competency I: Facilitate Learning

The competency of Facilitate Learning was the most frequently represented competency in both MSN Ed and PMC programs. Inclusion of courses supporting this competency in the MSN Ed program are recommended by the AACN Master's Essentials (2011), the IOM (2011) report, and Benner et al. (2010). A very small percentage of the programs did not provide evidence of this core competency.

This competency should be well represented by schools as it is a familiar and expected skill for educators. At a minimum, educators must be able to assist students to learn.

Competency II: Facilitate Learner Development and Socialization

The competency of Facilitate Learner Development and Socialization was not addressed well in MSN Ed or PMC programs. This competency is linked to Facilitate Learning but concentrates on the ability of the nurse educator to adapt teaching to student

needs and diversity, to assist students to learn how to learn, and to socialize them to the professional nursing role.

This is an advanced skill that is difficult to master in a strictly classroom setting. Experiential learning in the didactic or clinical setting while working with nursing students may provide better support for this competency. In addition, specific course learning outcomes pertaining to experiential learning in the clinical or didactic teaching course may provide better evidence that this skill is being taught to novice nurse faculty. Inability to teach to a diverse student population will severely limit success of the student nurse and satisfaction in the nurse educator role.

Competency III: Use Assessment and Evaluation Strategies

The competency of Use Assessment and Evaluation Strategies was well represented in course descriptions for PMC programs and MSN Ed programs. This competency, referred as Educational Needs Assessment, was recommended by the AACN Master's Essentials in 2011. Evaluation and assessment is an expected content area in nursing education programs; thus, this core competency is familiar, understood, and commonly addressed. Themes related to evaluation of clinical, didactic, student learning outcomes, and portfolios were identified in this competency as well as self-assessment by the nurse educator.

This skill is crucial to student, program, and instructor success and to ascertain achievement of student, course, and program learning outcomes. This skill is imperative for program success and mandatory for national nursing program accreditation standards found in AACN or ACEN. Often, assessment was tied to both evaluations of students and evaluations of the program or curriculum.

Competency IV: Participate in Curriculum Design and Evaluation of Program

Outcomes

Content related to the competency of Participate in Curriculum Design and Evaluation of Program Outcomes was represented well within PMC and MSN Ed programs. Most programs contained a separate course for curriculum design, but often the content was combined with evaluation as previously noted. This competency was well met because it was recommended for graduate educators by the AACN Master's Essentials in 2011 and is considered an essential part of an educator role.

This competency is imperative as a fluid guide to nursing programs seeking and maintaining national accreditation status. Nursing faculty must be educated in these skills to achieve national certification that requires continuous review and feedback of the curriculum at the class, course, and program levels. This skill is well represented as nursing programs continually seek to improve the curriculum and achieve national certification for their programs.

Competency V: Function as a Change Agent and Leader

In the competency of Function as a Change Agent and Leader, leadership skills were not well represented in course descriptions found in this study, although these skills are identified as critical by the AACN Master's Essentials (2011), IOM (2011), Benner et al. (2010), and NLN Outcomes and Competencies for Nursing Graduates (2010). This competency was not well represented in MSN Ed programs and even more poorly represented in PMC programs. The difference between MSN Ed and PMC programs might be explained by the fact that MSN Ed programs require more credit hours for the education specialty than does the PMC, and the MSN Ed includes more instruction in the

realm of leadership as part of the overall MSN Ed degree. In addition, perhaps PMC programs assume the role of leader has been previously covered in the original master's degree achieved by the student.

Competency VI: Pursue Continuous Quality Improvement in the Nurse Educator Role

The competency of Pursue Continuous Quality Improvement in the Nurse Educator Role was well represented in MSN Ed and PMC course descriptions. Programs supporting this core competency frequently provided this content within a course in lieu of a specific course with this sole focus. The investigator noted the presence of growth in the nurse educator role, in addition to references of lifelong learning on the websites. Because these subject areas were covered in multiple courses, this core competency was well represented in the curricula of the MSN Ed and PMC programs. Additionally, faculty development, which enhances the role of the nurse educator, was recommended by Benner et al. (2010) and the IOM (2011).

Quality improvement in the role of a nurse educator promotes continuous education for all who teach. Creating a course where no improvements are made semester after semester is not beneficial to the profession or to the student. Encouraging faculty development in all aspects of the nurse faculty role will stimulate growth in nursing education.

Competency VII: Engage in Scholarship

The NLN Core Competency of Engage in Scholarship was poorly represented in MSN Ed programs and PMC programs. This competency primarily focused on understanding and using research data followed by producing research or participating in

scholarly activities. Few programs required both production of and use of scholarly work even though creating and using research was listed as an essential function by the IOM in 2011 and QSEN in 2012. The evidence for attaining this competency may be found in practica courses or other learning experiences that might not have been included in a course description.

Implications for poor representation of this competency include an inability to use evidence to support specific nurse education concerns. In addition, nurse faculty are not equipped nor expected to produce research related to nursing education. Propagation and proliferation of research to improve nurse educators or nursing education is already limited as noted in this study and without adequate provision of this competency, this is predicted to continue.

Competency VIII: Function within the Educational Environment

Competency VIII had the lowest percentage of representation noted in all PMC and MSN Ed programs, even though IOM (2011) and QSEN (2012) indicated these skills are necessary at the graduate level. Navigating in an institutional environment is complex; complete with political and social implications that must be negotiated with sensitivity and skill. Very few MSN Ed or PMC programs indicated ways to provide student interaction supporting this competency.

Without understanding the nuances of effective navigation within the educational environment, nurse faculty may not be prepared to promote the nurse education program or the nurse education profession within higher education. Fair representation of nurse faculty and adequate acquisition of resources for the nursing program may be at risk without proper education with this competency.

In conclusion, one-half of the eight NLN Core Competencies were well represented in both the MSN Ed and PMC programs; the other four were represented in less than half of the programs. Thus, even though credit, practica, clock, and clinical hours for MSN Ed and PMC programs continue to increase, all of the core competencies still are not being represented.

Strengths and Limitations of the Study

Strengths

Research studies have inherent strengths, based on the design or subject studied. Strengths for this study included one investigator collecting and analyzing data, resulting in no data contamination from other investigators, as well as consistency in core competency selection. Another strength was the manual web scraping technique. Locating information on public websites eliminated social bias found with program surveys. The program and course description information was either available online or it was not.

Limitations

Several limitations are inherent when using existing data for research purposes. An initial limitation of this study was the lists obtained from the AACN (2015) and ACEN (2015) websites. These lists may have been incomplete or incorrect and may have been outdated. Another limitation involved problems with program websites that may have caused sites to be temporarily inaccessible or were under construction when accessed by the investigator. The investigator revisited non-functional websites at least one additional time to attempt data retrieval. The investigator listed programs with

continued problematic websites where research data were not accessible as broken, and data were not collected.

Another limitation in this study was the use of only the course description to determine if a nurse educator competency was addressed in the course. Course descriptions typically have word limits and therefore may not be inclusive of all learning outcomes to be attained in the course. The study did not include a review of syllabi or course materials.

The studies, on which the 2005 NLN Core Competencies of Nurse Educators were based, were reviewed from 1992 to 2004 (Halstead, 2007). Since that time, much more research has been published, yet the role of the nurse educator has not been updated in the description of the NLN Core Competencies of Nurse Educators. The competencies, used for curriculum development, do not reflect current healthcare trends and modern academic nurse educator practice. This also is a limitation of this study.

Subjective, investigator error in choosing the appropriate core competency or competencies for each course description was an additional limitation of the study. However, the pre-study surveys completed by expert nurse educators and the investigator minimized this inherent limitation.

The investigator discovered other limitations during the actual process of web scraping. Discrepancies noted by the investigator among various online course and/or program descriptions made determination of exact requirements for the MSN Ed or PMC program difficult, if not impossible. Difficult website navigation limited available information from some websites. Practica hours were measured by clock hours, credit hours, and various forms of both, and the lack of consistency made comparison difficult.

The investigator was unable to obtain course descriptions on some university websites using the available search system when authentication was required; this caused some programs to be eliminated from the study. Eliminating programs resulted in the true number of MSN Ed programs to be not reflected in this study. Finally, this study reviewed only the course descriptions, not information typically found in course syllabi such as specific expected course outcomes that may have provided additional support for the NLN Core Competencies. Specific learning outcomes, particularly for practica courses, limited the information gleaned for this study.

Recommendations

The NLN Core Competencies for Nurse Educators (NLN, Certification Commission, & Certification Test Development Committee, 2012) must be used to develop and evaluate nurse educator curricula. The accrediting body for nursing education has identified eight specific competencies that comprise the role of the nurse educator. The implications derived from this study revolve around reconstructing courses and curricula for MSN Ed and PMC programs by representing all NLN Core Competencies throughout these programs. This study is the first to evaluate the presence (or absence) of the NLN Core Competencies in courses required in MSN Ed and PMC in nursing education.

Recommendations for Administrators and Educators

Several recommendations for improving the application of the NLN Core Competencies of Nurse Educators are offered for administrators and educators:

1. Faculty should develop program and courses with descriptions that are more specific to the NLN Core Competencies, while at the same time

including updated and evidence-based content in the curriculum where the NLN core competencies may be outdated. Where appropriate, faculty should delineate whether the program prepares students to sit for the CNE.

2. Schools of nursing should update their websites frequently to maintain accuracy, especially during program or curricular changes. Websites should be user friendly and easy for students to navigate.
3. Administrators and educators offering MSN Ed and PMC programs should revise graduate courses and associated curricula to satisfactorily reflect and represent all eight NLN Core Competencies for nurse educators. Using the NLN Core Competencies as a curriculum guide for both the MSN Ed and PMC programs should help to achieve this goal. Recent evidence provides direction for curriculum revision and should be reviewed for application to individual MSN Ed and PMC courses and curriculum as part of a curriculum review.

This study identified competencies that were not fully met in the reviewed programs and provides direction for further curriculum development in these areas. Facilitate Learner Development and Socialization may be more difficult to measure or to define in terms of course descriptions because the competency includes content about how faculty facilitate the development of professionalism and self-discovery in their students as well as teaching students of diverse races, cultures, languages, and learning styles; this competency may be conveyed in practica experiences. Acquiring the associated knowledge, values, and skills noted in this competency will only become more necessary as the diversity of nursing students increases. The pursuit of scholarship and

grant writing is usually part of the nurse educator role in large institutions so it is logical to include the core competency of scholarship in the competency of improvement in the nurse educator role. Additionally, production and use of research findings is paramount to promoting and advancing nursing education. Integrating these concepts into courses and curricula with associated structured practica is indicated to adequately reflect the NLN Core Competencies not readily noted in this study. Integrating concepts and skills in nursing education will assist nurse educator students to become salient in the nurse educator role as suggested by Benner and colleagues in 2010.

Leadership is a skill that must be exhibited and practiced by master's prepared nurses. Mentoring by other leaders has been studied and found to be advantageous to aspiring leaders in any venue (Kerlin, 2016; Pascal, Sass, & Gregory, 2015; Tummons, Kitchel, & Garton, 2016). In order for nurse educator students to learn these skills, MSN Ed and PMC programs should provide structured internships, not observational experiences or practica, with a nurse leader in the educational environment. This exercise will build not only leadership and networking skills among students but also will allow nurse educator students to experience the nuances of politics and collaboration required in the educational institution. Combining core competency concepts and providing structured practica experiences are recommended to promote salience of the nurse educator role and achievement of the NLN Core Competencies.

Recommendations for Accrediting Agencies and Certifying Bodies

None of the accrediting agencies or certifying bodies for the MSN Ed or PMC in nursing education have, at this time, recommended a minimum number of credit or practica hours necessary to achieve the NLN Core Competencies for nurse educators. This should be determined and recommendations made based on research evidence.

1. Credit and practica hours are being completed, with wide variation, without evidence of competency attainment. Although all competencies are not required to be an effective nurse educator, at this point, only 50% are being adequately represented by courses in MSN Ed and PMC curricula as noted in this study.
2. The NLN Core Competencies were last updated by the NLN in 2012 based on a practice analysis. Perhaps a revision of the competencies is in order including a more powerful statement regarding the use of the NLN Core Competencies as a curriculum guide to encourage inclusion of all competencies during MSN Ed and PMC curriculum revision.

Recommendations for Future Research

This descriptive study can provide a foundation for future studies about the use and impact of the nurse educator competencies in curriculum. Future areas of inquiry could include the following:

1. Given the inherent limitations of web scraping, use of a different sampling method is recommended. This study can be replicated to include syllabi containing course and student learning outcomes that can identify and provide additional information regarding evidence of the NLN Core

Competencies. Additionally, determining specific learning activities and outcomes, noted in practicum course syllabi, may provide additional evidence of the NLN Core Competencies reinforced in the clinical setting.

2. Further exploration of the four NLN Core Competencies that were not well represented (Facilitate Learner Development and Socialization, Function as a Change Agent and Leader, Engage in Scholarship of Teaching, and Function Effectively in the Organizational Environment) may reveal how to better include this content in the nursing education curriculum.
3. Further study can explore the relationship of total credits in program to competency attainment for programs containing the 3Ps in curricula and those that do not. Since these courses are still recommended for inclusion in the MSN curriculum by AACN, further evidence can be obtained about best practices for integrating them into the MSN ED.
4. Research is needed to determine the appropriate number of credits or clock hours that should be required to achieve the NLN Core Competencies.
5. This study revealed a wide range of hours for a practicum and a variation in how credit hours were determined; it is imperative to obtain more information about the practicum experience.
6. There is insufficient evidence about the relationship of number of credit hours for the total MSN degree and the MSN Ed focus area including the practicum hours to competency attainment; further study is needed here.

Conclusion

No prior studies have specifically examined curricula of master's degree programs preparing nurse educators (MSN Ed) or programs that offer a post-master's certificate (PMC) in nursing education in the U.S. This study described MSN Ed and PMC in programs in the U.S. that prepare nurse educators and reviewed the nurse educator preparation courses to determine the presence of NLN Core Competencies in those courses that prepare graduates for the academic nurse educator role.

All eight NLN Core Competencies for nurse educators are not represented in MSN Ed and PMC programs. This study found that only half of the competencies are being adequately ($\geq 85\%$) represented by courses in MSN Ed and PMC curricula. Results from this study show that the number of new MSN Ed programs is slowing and required curricular credit and practica hours continue to increase while evidence of all eight NLN Core Competencies remains elusive. Recommendations noted in this study may be used to support curricular change in graduate nurse educator programs that support incorporation of the NLN Core Competencies.

Summary

This study described educator competencies reflected in MSN Ed and PMC in nursing education programs in the United States. The recommendations for MSN Ed and PMC programs provided in this study can be used for discussion and consideration during curriculum review. Now is the time to implement the change we need to see. Time has lapsed since the Ruland and Leuner (2010) study, the IOM (2011) recommendations, the Master's Essentials (2011), and "Educating Nurses" report by Benner et al. (2010), yet minimal changes have been noted in nurse educator curricula.

As nurse leaders, we must improve nurse educator preparation to increase the number and expertise of current and future nurse educators. At this time, the core competencies, the CNE exam, and professional self-regulation are all we have to ensure the advancement of nursing education, to transform healthcare practice, and take an active role in *The Future of Nursing: Leading Change, Advancing Health* (IOM, 2011).

Appendix

Web Scraping Data Sheet

College or University Name	Nursing School Web address	City, State	MSN Ed (1) or PMC (2)	1. Facilitate learning 1= Yes, 2= No, 3= N/A	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	6. Pursue continuous quality improvement in the nurse educator role	7. Engage in scholarship	8. Function within the educational environment	Webiste states: Prepares graduate to take CNE exam (Y/N)?	Total number of credit hours to complete/NSG hrs	Total number of Practicum hours required	Clinical Practicum hours	Didactic Practicum hours	Completely Distance Accessible	Number of credits from outside nursing: School/area	Number of Electives in MSN Ed or PMC Ed/Free(F) or Specified (S)	Comments
1		Anchorage, AK	1	1	2	1	1	1	1	2	2	1	45	120	1	1	2	0	0	
			2	1	2	1	1	2	2	2	2	1	15	120	1	1	2	0	0	
2		Dover, DE	2	1	1	1	1	2	2	2	2	2	15	90	1	1	1	0	0	
3		Albany, GA	1																	No information available on website: sent in circles no program/course info available.
4		Milledgeville, GA	1	1	2	1	2	2	1	1	2	1	39/17	3	1	1	1	0	0	17 credits for the Ed specialty
5		Thomasville, GA	1	1	1	1	1	1	1	2	2	2	36/12	90	3	3	2	0	0	MSN Ed and PMC Ed specialty courses not identical
			2	1	1	1	1	2	2	2	2	2	12	90	3	3	2	0	0	
6		Peoria, IL	1	3	3	3	1	1	3	3	3	2	36/15	300	1	1	2	3/education	0	May choose between 2 Education courses for a total of 3 credit hours. Instructional theory vs curriculum theory and development.
			2	3	3	3	1	3	3	3	3	2	15	300	1	1	2	3/education	0	Curriculum theory and development is required; no choice in education course.
7		Peoria, IL	1	1	1	1	1	1	1	1	1	2	45/15	448	1	1	2	0	0	
			2	1	1	1	1	1	1	1	1	2	15	384	1	1	1	0	0	
8		Mishawaka, IN	1	1	2	1	1	2	2	2	2	2	36/15	186	1	1	2	0	0	
9		Terre Haute, IN 47809	1	1	2	1	1	2	1	1	2	1	37-40/25	135	1	1	2	0	1/S	
			2	1	2	1	1	2	1	1	2	1	14	135	1	1	2	0	0	

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CURRICULUM VITAE

Ann Fitzgerald

Education

<u>Institution</u>	<u>Degree Awarded</u>	<u>Date</u>
Indiana University, Indianapolis, IN	PhD	2017
Indiana University, Indianapolis, IN	MSN	2002
Bethel College, Mishawaka, IN	BSN	1998
Purdue University North Central, Westville, IN	ASN	1986

Academic/Administrative Appointments

Associate Professor	March 2004–present
Ancilla Domini College, Donaldson, IN	
Director, Division of Nursing and Health Sciences	March 2004–present
Ancilla Domini College, Donaldson, IN	
Adjunct Faculty	August 2002–March 2003
Bethel College Nursing, Mishawaka, IN	

Clinical Experience

Phlebologist, Nurse Practitioner	February 2003–March 2004
Decatur Vein Clinic, Indianapolis, IN	

Presentations

Fitzgerald, Ann. (2013, August). *Motivation in teaching and learning*. Presentation at the
Ancilla College Opening Faculty Meeting, Donaldson, IN.

Fitzgerald, Ann. (2008). *History of nursing*. Guest speaker presentation at the History
299: History of American Women, Ancilla College, Donaldson, IN.

Fitzgerald, Ann. (2009, September). *Blood cholesterol: What does it mean to you?*.
Presentation at the Culver Township Senior Center, Culver, IN.

Publications

Fitzgerald, A., Turner-Brown, A. D., Roddel, J., & Sheilds, T. (2004). Sclerotherapy for
varicose veins. *ADVANCE for NPs&PAs*, 12(7), 65–68.

Professional Honors and Activities

Operation Round Up Program, Chair
Marshall County REMC
Marshall County Leadership Class XI
Graduate

Who's Who among American College Students
Three Time Recipient

Boy Scout Troop 239, Tyner, IN
Badge Leader

Professional Memberships

Independent Colleges of Indiana	2005–present
National League for Nursing	2005–present
Northern Indiana Organization of Nurse Executives	2006–present
Sigma Theta Tau, Alpha Chapter	2007–present

Licensure and Certification

Indiana State Board of Nursing	1986–present
National League for Nursing, Certified Nurse Educator	2007–present