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abstract

The use of backward design is an effective strategy to create innovative and transformative programs. This article describes the use of backward design to create an effective graduate program to prepare nurse educators. Two cohorts of graduates provided feedback regarding program outcomes. Respondents were all working in an educator role after graduation, in both clinical and academic settings. Overall, respondents reported agreement in their ability to perform as effective educators in each of the eight National League for Nursing core competencies for nurse educators. This innovative use of backward design has proven effective in educating the next generation of nurse educators to be leaders in a digital world. [*J Contin Educ Nurs.* 2021;52(12):554-557.]

The United States faces a national nursing shortage, and there has been a call to educate more than 200,000 new nurses through 2026 to fill newly created positions and replace retiring nurses (American Association of Colleges of Nursing [AACN], 2020a). Most nursing programs are increasing the enrollment of undergraduate students to address the nursing workforce shortage (AACN, 2020a). However, nursing programs are facing a shortage of faculty, and this will intensify as a large portion of senior faculty become qualified to retire in the next five years (AACN, 2020b). Efficient preparation of nursing faculty proficient in high-impact, evidence-based teaching is necessary to ensure students' success. To that end, nursing educators must be creating graduate educational programs that are innovative and transformative.

Today's nurse educators must enter the workforce with a robust skill set that includes leadership competence and technology integration to promote teaching excellence. The use of backward design is an effective strategy to create innovative and transformative programs. Backward

design is a curriculum strategy that focuses on beginning with the desired end goals (Bowen, 2017; McTighe & Wiggins, 2012). Evidence suggests that skillful deployment of backward design in nursing education results in competent practitioners who have a meaningful impact on students, patients, and colleagues (Tornwall, 2017). The purpose of this article is to describe how faculty used backward design to create an effective master's in nursing education (MSN-Education) program.

CALL TO TRANSFORM

To address the nursing workforce shortage, the nursing department within the authors' university decided to increase enrollment of undergraduate students. However, the department faced a shortage of full-time faculty. To ensure the success of the undergraduate nursing students, efficient onboarding of qualified full-time nursing faculty proficient in high-impact, evidence-based teaching was necessary. One solution was to reopen the MSN-Education program suspended several years ago due to lack of enrollment.

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The program used a hybrid approach to accommodate today's learners. Students met on campus once a month for face-to-face class seminars. The remainder of the month, students engaged in online learning activities. The faculty trusted using the backward design framework to transform the outdated curriculum to meet the needs/skill set of today's students. Based on the essential competencies relevant for transfer to practice, a clear focus on learner-centered outcomes resulted in a redesigned and relevant curriculum.

BACKWARD DESIGN

Backward design is a mindful planning sequence of curriculum strategy (Wiggins & McTighe, 1998). The sequence includes three stages. Stage One is to identify the desired goals, Stage Two is to determine acceptable evidence, and Stage Three is to plan the learning experiences and instruction (Bowen, 2017; Wiggins & McTighe, 1998).

The curriculum planning committee progressed through the three stages of backward design in the following ways. The focus was on what graduates of the MSN-Education track should know, understand, and demonstrate. The committee achieved Stage One by identifying the qualities of high-impact nurse educators. High-impact practices of quality nurse educators include leadership, technology, and communication skills. The evidence used to organize Stage One was to incorporate the eight National League for Nursing (NLN) core competencies for nurse educators (NLN, 2005) and the AACN essentials for master's education in nursing (AACN, 2021) as the framework for the program. The intentional use of both standards of practice ensured that each graduate obtained the core knowledge and skills essential to function in various nurse educator roles. Going forward, the planning committee recognized the complementary nature of the two standards and agreed that the high-impact practices of leadership, technology, and communication skills were embedded within the eight NLN core competencies. Therefore, the eight NLN core competencies became the program outcomes.

After the learning outcomes were determined, the faculty developed the courses within the curriculum. The newly designed MSN-Education track incorporated the eight core competencies with the embedded leadership, technology, and communication themes. The creation of three practicum courses addressed leadership skills. The faculty developed two technology courses to improve baseline technology skills requisite of nurse educators. Also, faculty developed two theory and research application courses that culminated in students completing a thesis or research project under direct faculty supervision that enriched communication skills.

Stage Two was the development of assessment strategies to determine the achievement of the desired outcomes. The

use of criterion-based rubrics provided proof of competencies achieved through assessing performance tasks, students' self-assessment/reflection, and other evidence-based projects (McTighe & Wiggins, 2012). Throughout the program, these strategies demonstrated a leveled, comprehensive evaluation of both formative and summative approaches to demonstrate outcome achievement of the eight NLN core competencies.

The final stage, Stage Three, consisted of selecting teaching and learning strategies for each course. **Table 1** depicts the process related to one of the program learning outcomes (NLN Core Competency VIII) and its congruence between acceptable evidence for outcome attainment and the development of authentic evidence-based learning activities.

COURSE DESCRIPTIONS

One of the greatest strengths of the MSN-Education program design was the creation of the three practicum courses. The first practicum course (135 hours) designed was a precepted experience in a clinical setting with direct contact with patients, such as a community-based setting, an inpatient facility, long-term care, or home health. This practicum allowed students to focus on a population of interest and develop a deeper understanding of the nursing educator's role in advanced direct care. This clinical experience allowed the students to use the knowledge gained in the science-driven courses (advanced physiology/pathophysiology, health assessment, and pharmacology) to develop clinical proficiency.

To foster their understanding of functioning as a change agent and leader, students identified their leadership strengths by exploring and identifying their leadership style. Students then reflected on their leadership strengths to plan their future professional goals and experiences within and beyond the program. This opportunity facilitated students' grasp of leadership theories and strategies observed. The result was a foundation for future experiences where new approaches could be tested and adopted.

During this practicum, students created evidence-based policies, were actively involved in interprofessional committees to improve the quality of outcomes of care, and applied teaching/learning principles to design, implement, and evaluate educational endeavors. These focused clinical experiences strengthened the students' ability to analyze current health care, interprofessional trends, and technology along with standards for relevancy to the nurse educator role. Students engaged in scholarship by sharing these practicum experiences via a professional digital poster.

The second (90 hours) and third (135 hours) practicum courses occurred within the academic setting and allowed the students to function in the educational environment. During these semesters, students worked with an experienced

TABLE 1
PROGRAM OUTCOME EXAMPLE OF BACKWARD DESIGN APPLICATION

Stage One: Program Learning Outcome	Stage Two: Acceptable Evidence ^a	Stage Three: Learning Activities and Instruction
Student will, upon completion of the program, function within the educational environment (National League for Nursing Core Competency VIII)	Clinical evaluation tool (practicum I, II, and III)	Guided preceptorship in clinical and academic settings overseen by course faculty mentor
	Reflective journal (practicum I, II, and III)	Self-reflection based on criterion-based rubric Coaching from faculty to stimulate further thought/discussion/synthesis based on student reflection
	Discussion board questions	Online written response that addresses questions that reflect synthesis of course materials using additional peer-reviewed resources Coaching from faculty to stimulate further thought/discussion/synthesis based on student response
	Monthly seminar (all courses)	Selected textbooks/readings to support course learning outcomes Faculty-facilitated dialog to promote discovery in pursuit of course learning outcomes
	Digital portfolio (all courses)	Creation and maintenance of a digital portfolio to reflect current evidence of student work Periodic peer review to enhance effectiveness and aesthetics of presentation
	Team simulation project (technology I and II; practicum II and III)	Design, create, and implement a clinical simulation event for a group of student learners Incorporation of educational technologies to promote active learning encounters in nurse educator practice settings

^aAll assignments used criterion-based rubrics for evaluation.

nurse educator to apply leadership concepts by learning how to integrate nursing education theories and teaching/learning strategies to facilitate learning and safe clinical practice in the classroom and clinical setting. The students used established and innovative educational processes to design and implement educational offerings that incorporated critical thinking and creative use of technology and resources.

These on-site practicum courses provided an immersion experience that allowed students to engage with nurse educator mentors in the clinical and academic settings. All three experiences were verified, documented, and evaluated via a self-reflective journal every two weeks throughout each semester. Guided reflective questions and associated rubrics ensured that learners' journal entries addressed each of the eight NLN core competencies and provided evidence of their attainment of a strong nurse educator skill set.

The two technology courses refined students' technology skills. The courses focused on applying theoretical frameworks associated with technology-enhanced learning, understanding the legal and ethical issues of health care technology, and evaluating the effectiveness of technology

integration to achieve learning outcomes. A culmination of the technology courses was realized through a team project to create, implement, and evaluate a high-fidelity simulation experience. The simulation was designed for first-semester MSN-Education students enrolled in the Advanced Assessment course. Through this activity, students realized the use of technology, instructional design principles, and leadership skills. This project allowed students to practically apply the skills to four of the eight competencies and facilitated learning, learner development, and socialization; use of assessment and evaluation of teaching strategies; and participation in curriculum design and evaluation.

Communication skills were addressed explicitly in the curriculum through two research theory courses and the completion of three credits of a thesis or research project. The two research theory courses focused on examining methodology, interpretation strategies, and application of the research process in both quantitative and qualitative approaches. Under direct faculty supervision, students completed either a thesis or an integrative research review. These activities ensured evidence of communication competency skills related

to the NLN core competencies of implementation of nursing research and the scientific-analytical processes.

Throughout the program, students maintained a digital portfolio. Significant projects and assignments were uploaded to provide evidence of student work. The digital portfolio substantiated mastery of each core competency. The digital portfolio also gave graduates a competitive edge when seeking employment because it demonstrated evidence of a comprehensive nurse educator skill set.

OUTCOMES

Several strategies were used to ensure that students achieved the skills of high-impact, quality educators. First, completing the three practicum courses under preceptor and faculty guidance ensured that students performed as influential leaders and educators in the clinical and academic settings. Second, the simulation team project at the end of the technology course sequence ensured that students had the skill set to design, implement, and evaluate technology integration with a group of learners. Third, students performed a research project to complete the program. The research project was a thesis or a focused integrative review supervised by a graduate faculty member. This activity ensured that students obtained the essential communication skill of writing through the appraisal and integration of evidence. At multiple time points and through multiple activities, student outcomes were measured and verified by faculty. These observations confirmed the attainment of the eight NLN competencies.

After two cohorts of students had graduated, invited alumni provided feedback regarding program outcomes. The university's Institutional Review Board granted an exemption to publish responses. Respondents were all working in an educator role from six months to one year after graduation, in clinical and academic settings. Overall, respondents reported agreement in their ability to perform as effective educators in each of the eight NLN core competencies.

One respondent stated, "The courses taught us not only how to be educators but also how to think like educators." This statement supported both the practical and theoretical design of the curriculum. Another graduate stated, "The program prepared the students well for (our) future careers in leadership and education. The digital part in this program was a huge plus." This statement strongly supported the intentional curriculum design and achievement of program outcomes. Yet another student summarized the experience by stating, "This program really did a great job of preparing me for the many roles and responsibilities of a nurse educator. From curriculum development to policy, to learning theory, to practicing simulation and hands-on lab and classroom-style teaching, I really felt like I got a well-rounded education that prepared me thoroughly."

CONCLUSION

Nurse educators require a robust skill set of leadership, technology, and communication. Evaluation and feedback from graduates of this program provided an internal perspective of outcomes. The program benefited through validation of the effectiveness of the backward curriculum design. Continuing nursing education certification is a third approach that may demonstrate mastery of nurse educator skills. While this program does not require students to achieve certification, they are encouraged to continue their educational journey and seek this distinction.

Using the eight NLN core competencies, this program has contributed to nursing's journey to establish standards of excellence for nurse educators. Graduates enter the next phase of their career as nurse educators with a strong skill set. Other authors have used the eight NLN core competencies to measure competency attainment in nurse educator programs (Byrne & Welch, 2016; Kalb & Skay, 2016; Ortelli, 2016). This program used the competencies as a compass to help guide a curriculum redesign. The innovative use of backward design has proven effective in educating the next generation of nurse educators to be leaders in a digital world.

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