Appreciation of the Research-Practice Link: Authentic Learning Environments for Writing-Intensive Nursing Courses

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Abstract

Undergraduate students often perceive a disconnect between research and nursing practice. To support student understanding of this relationship, an innovative, authentic learning environment was created in a writing-intensive, capstone-level nursing course. Authentic learning environments couple real-life situations/simulations with personal, experiential learner engagement. Students completed pre- and post-surveys assessing their beliefs about and confidence in using research to inform practice. Quantitative and open-ended qualitative responses were analyzed with inferential statistics and conventional content analysis techniques, respectively. Findings suggested the learning environment increased student confidence and facilitated connections between research and practice, supporting continued use and further evaluation of this approach.

KEY WORDS Authentic Learning Environments – Baccalaureate Nursing Students – Research-Practice Link – Writing Assignments

Using research findings to address clinical questions and transform evidence-based practice is a key competency for baccalaureate nursing students, aligning with the BSN essentials (American Association of Colleges of Nursing, 2008). Nevertheless, BSN students often perceive a disconnect between reviewing research and nursing practice. In an effort to increase students’ appreciation of research and its importance to nursing practice, an authentic learning environment, aligned with constructivist, experiential teaching methods (Phillips, 2018), was created in a senior-level nursing course.

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Authentic learning environments rely upon learning contexts that simulate future career responsibilities; they include clinical simulations, practica, and applied assignments. By aligning class assignments with “real-life” future elements of one’s chosen career, authentic learning environments can motivate students and enhance their learning (Brownell, Price, & Steinman, 2013; Cant & Cooper, 2010). For example, nursing student participation in simulated clinical experiences increases confidence and competence in providing clinical care (Cant & Cooper, 2010). Thus, creating authentic learning environments with real-world assignments may also effectively foster student learning in courses that do not involve “hands-on” clinical/practicum experiences. Studies in nursing education have reported improved research attitudes and awareness among BSN students who completed theses (Lundgren & Robertsson, 2013; Uysal Toraman, Hamaratçıl, Tülü, & Erkin, 2017), but not all students are required or have the opportunity to write theses. For these nonthesis students, it is unknown if using authentic learning environments in BSN writing courses could result in similar positive outcomes.

In a senior-level, writing-intensive, nursing capstone course, an innovative, authentic learning environment and assignment were created to engage students in conducting a literature review to identify and synthesize evidence related to clinical intervention efficacy. Students prepared their reviews as manuscripts, much like literature reviews published in professional, peer-reviewed nursing journals. Each student selected an appropriate “target journal” and used the submission guidelines and stylistic format while participating in a scaffolded writing process with regular peer and faculty feedback. Students submitted their manuscripts to an online student journal created for the course, which simulated submission to a professional journal.
By intentionally connecting students’ capstone writing projects and the knowledge and skills employed by nurses in delivery of evidence-based practice, the authentic learning environment created for this course aimed to provide an essential component of BSN education (American Association of Colleges of Nursing, 2008). Course faculty expected/anticipated students’ participation would enhance their beliefs about the research-practice link, increase confidence in using research evidence to inform practice, and improve the value students placed on research.

**METHOD**

Following institutional review board approval, online surveys were sent to all BSN students enrolled in the capstone writing course ($N = 133$). The surveys, sent at the beginning and end of the course, included a letter of invitation containing all 12 elements of informed consent. Participation was voluntary, was not connected to the course grade/assignment, and was anonymous, with no collection of demographic data to reduce perceived “risk.” Surveys were completed outside class time.

Before survey administration, all items were reviewed for face validity by five faculty with research expertise to ensure items and corresponding scales represented study constructs. Fifteen items within four quantitative scales were retained to operationalize the research-practice link and students’ confidence in using research to inform practice. A three-item scale measured students’ general beliefs about using research in nursing practice. Another three-item scale measured students’ personal beliefs about communication, writing, and research in nursing. A four-item scale measured students’ personal beliefs about communication and research in their own practice. A five-item scale measured students’ confidence to utilize research in their practice. Item responses were summed within each scale to calculate scale scores.

Three qualitative, open-ended items were included on the postcourse survey to invite students to provide additional context about their experiences in the authentic learning environment. These items included: Please describe, using just a few words, what it was like to see your paper in final journal manuscript form in the classroom journal. How did you connect the work that we did in class to your future career as a nurse? What are your honest thoughts on the creation of the manuscripts and their inclusion in the classroom journals?

Descriptive statistics and Cronbach’s alphas summarized scale responses. Independent t-tests examined pre- and postcourse differences in scale scores. Conventional content analysis techniques were used to analyze open-ended, qualitative responses (Hsieh & Shannon, 2005). Two investigators independently read, coded, and employed higher order categories to organize qualitative responses to each question. Coders and a third investigator adjudicated coding/categorizing differences by consensus.

**RESULTS**

Survey response rates were 68 percent (90/133) and 56 percent (75/133) pre- and postcourse, respectively. Scale Cronbach’s alphas indicated internally consistent scales; two Cronbach’s alphas were low at precourse but improved postcourse (sample items, with Cronbach’s alphas and mean score, can be found in a table as Supplemental Digital Content available at http://links.lww.com/NEP/A161). Across three scales, beliefs were not significantly different pre- and postcourse. However, student confidence in utilizing research in practice was significantly higher postcourse.

Response rates to qualitative items were 65 percent (49/75), 60 percent (45/75), and 53 percent (40/75). When asked to briefly describe the experience of seeing the classroom journal, student comments were generally positive and organized into three categories: The Look, Feelings, and Sharing. The Look category identified comments about the authentic format and how the format helped students envision themselves as nursing professionals who could contribute to evidence-based practice. For example, “It was nice to see the review look like a journal [article] and is more motivating to publish.” The second category, Feelings, described the way students felt upon seeing the journal (e.g., “neat,” “proud,” “cool,” “awesome,” “meh”) or about completing the work (e.g., “satisfying,” “accomplished,” “rewarding,” “unreal”). The final category, Sharing, described students’ desires to share the project with others. One student wrote, “It was so neat! I immediately sent the link to my mom, who printed it out and shared it with her friends.”

Students were also asked to connect this work to their future nursing careers. Three categories were derived that captured the range of student responses: Clinical Practice, Using Research, and Broadening Skills. The first category, Clinical Practice, described students’ expectations of applying this literature review process as a nurse to guide practice. As one student explained, “I know how to access research and how to identify problems in practice that can be examined using current research.” In contrast, another student stated, “I haven’t connected it yet but will use it as a launching point for how I plan my future in nursing practice.” The second category, Using Research, represented students’ plans to apply specific course content and knowledge of their literature review topic to influence their practice. To illustrate, one student wrote, “I did my research [review] paper on patient discharge education. As a nurse, I will be sure to implement adequate discharge education into my patient’s care to prevent readmission.” The final category, Broadening Skills, comprised skills and work strategies learned and used in the project specific to future practice, exemplified in this response: “I connect the work we did in class to my future career as a nurse by utilizing the skills I learned. These include…time management, critical thinking, being organized, and perseverance.”

Lastly, students commented on the process of creating a manuscript and publication in the student journal. These comments were categorized as positive, neutral/mixed, or negative. Students who focused on “the positives” spoke in ways similar to this student’s response: “I am glad the classroom journal was included, as it was one way the hard work was brought to life and likely inspired some students to pursue publication.” A mixed response, one including both positive and negative reactions toward the project, is exemplified by the student who wrote: “I think that it was a very cool idea to make the classroom journals, but unfortunately I think they added some extra stress.” Finally, a typical negative response suggested the classroom journal was unnecessary. One student shared, “I personally do not feel the classroom journal added very much to my experience with the class. The final product was enough for me.”

**DISCUSSION**

Principal findings from this study suggest students felt more confident in their abilities to use research in future nursing practice, and most students appreciated the authentic learning environment. Quantitative results suggest students’ beliefs about research and writing within
the nursing field and about the value of research for their clinical practice, they were not significantly different postcourse. As senior BSN students, they had been exposed to evidence-based practice content previously, as evident with precourse scores nearing the scales’ upper ranges. It is possible the high precourse scores contributed to a “ceiling effect,” with little margin for positive changes in scores. Nursing students’ confidence in their abilities to utilize research in their own practice, however, was significantly higher after the opportunity to identify and synthesize research evidence to address clinical questions in an authentic learning environment. The increase in confidence was similar to the increased confidence found in biology students who participated in an authentic learning environment (Brownell et al., 2013). Using authentic learning environments may be critical interventions for nonthesis BSN students because increased student confidence is a key indicator of future use of research and evidence-based practice, and nursing students often lack this confidence (Ryan, 2016).

Our qualitative findings suggest students’ perceptions of the authentic learning environment shaped their thinking about “being professional” and “accomplished.” It seemed the process of completing the project inspired them to use research in their nursing practice and provided experience to use in future publishing efforts. Because of the breadth/variation of the student responses, it is important to remember no single teaching strategy will be successful for all students.

Although our findings provide cautious support for further evaluation/use of authentic learning environments to facilitate BSN student writing education and there has been some attention to student writing in doctoral programs (e.g., Conn et al., 2017; Gazza, Shellenbarger, & Hunker, 2013), there has been less attention and research related to writing by BSN students. Yet, there is appreciation for mentoring BSN students in scholarship/research and writing for publication and its profound impact on students and their subsequent nursing practice (Worcester, Webb, Proctor, & Barton-Burke, 2008). Thomas (2017) highlights the need to engage nurses in efforts to disseminate new ideas to advance practice and describes the importance of the breadth/variation of the student responses, it is important to remember no single teaching strategy will be successful for all students.

In conclusion, this study showed no changes in student beliefs about the research-practice link, yet student confidence in their ability to apply research findings to practice was improved. Moreover, most students found the innovative, authentic learning environment positive and important for facilitating connections between research and future practice. Thus, findings of students’ increased confidence with positive responses suggest continued refinement, use, and evaluation of our innovative approach are warranted in future semesters.

REFERENCES