Students Connecting Critical Appraisal to Evidence-Based Practice: A Teaching–Learning Activity for Research Literacy
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ABSTRACT
This article describes the implementation of an innovative research literacy teaching–learning activity. The Research in Practice Challenge activity promoted the importance and relevance of evidence-based practice with second-year nursing students in an undergraduate research course. Students appraised the evidence within policies and practice guidelines identified by managers in practice. Collaboration among students, faculty, managers, and the librarian enabled completion of the activity. Essential skills of identifying research problems in practice, searching the literature, and critically evaluating evidence were applied. Ultimately, students were asked to respond to the question: “Does this policy or guideline need revision, and how, based upon current evidence?” Effectiveness of this activity was garnered from the students’ responses to course evaluations and analysis of teaching notes. Course evaluation revealed that students valued how the activity highlighted the relevance of research literacy for their practice. Further recommendations for research literacy teaching and learning are suggested.

In a time of unprecedented information overload, access to and interpretation of evidence for clinical practice remains an elusive goal for many nursing students. Opportunities to cultivate the skills necessary to search, appraise, and apply evidence for practice are essential to providing informed care. This article describes the implementation and analysis of an innovative learning activity within an undergraduate research course in a school of nursing. The learning activity was designed to advance applied research literacy skills for students and relied heavily on collaborative teaching in the context of everyday policy and practice. This course is offered to students in health and community practice disciplines; however, all the students in the semester participating in this learning activity were in the second year of a bachelor of nursing program. In this article, we describe the background of the course and learning activity, describe the Research in Practice Challenge learning activity in detail, summarize the evaluation of the learning activity, and pose questions for implementation and further study.

Background
Various definitions of concepts relative to literacy currently can be found in the literature, such as critical health literacy (Chinn, 2011), information literacy (Sorensen et al., 2012), and research literacy (Nolan & Behi, 1996). The focus of this article is on the concept of research literacy. Research literacy is the ability to locate, understand, and critically evaluate evidence for application in practice (Nolan & Behi, 1996). Evidence-based nursing practice is the integration of best research evidence with clinical expertise and patient values, and literacy in the language of research becomes essential for this evidence-based practice (Alleyne & Jumaa, 2007; Bernard, Nash, & O’Brien, 2005; Melnyk & Fineout-Overholt, 2010; Shorten, Wallace, & Crookes, 2001). Despite the importance of the topic in contemporary nursing practice, research courses are among the least popular in the nursing curriculum and are therefore a challenge for faculty to teach (Janke, Pesut, & Erbacker, 2012). Students rarely see the relevance of learning about the research process, often describing research courses as a distraction from their primary purpose of learning about nursing practice. Thus, this current environment makes teaching research to undergraduate nursing students, who want nothing more than to be in the real world of clinical practice, even more of a challenge.

Establishing the connection between evidence and knowledge in actual nursing practice requires a collaborative effort.
Clinicians and managers are intimately aware of problems in the practice arena; health reference librarians hold expertise in research and information literacy; and faculty are able to make the connections between these different stakeholders, as well as focus students on critically appraising the evidence. Together, all are important collaborators in the process of teaching research literacy skills to nursing students (Janke et al., 2011; Miller, Jones, Graves, & Sievert, 2010).

In the literature, learning activities that brought together librarians (Bernard et al., 2005; Janke et al., 2012), clinicians, and managers (De Cordova et al., 2008; Kennel, Burns, & Horn, 2009) to seek solutions to policy and practice questions were a way to enliven research literacy learning. Janke et al. (2012), for example, described a collaborative service-learning project to promote information literacy with third-year undergraduate nursing students. Janke et al. (2012) addressed the importance of working collaboratively with the librarian, teaching faculty, and students to assist students with acquiring the literacy skills necessary for evidence-based nursing practice.

**A Teaching and Learning Innovation: The Research in Policy Challenge**

Over the course of one semester, the implementation of an innovative experiential research literacy learning activity, the Research in Policy Challenge, was critically evaluated. Course evaluation data from standardized university surveys with narrative responses were reviewed alongside the reflective practice notes of teaching faculty.

In 2008, developers of a second-year Research for Health and Community Practice course at a Canadian university sought to assist students to gain foundational research literacy skills for searching, interpreting, critically appraising, and using evidence in practice. The course recognized learning to be a relational process whereby learners are engaged in the social construction of knowledge and practice. Learning strategies for the course were guided by social learning theories of situated learning and focused on the learning that occurs in communities of practitioners engaged in dialogue (Lave & Wenger, 1991), with an emphasis on evidence-based practice (DiCenzo, Guyatt, & Ciliska, 2005). Students registered in the course routinely formed small groups of three or four to engage in in-class learning activities that enabled students to immediately apply new learning about evidence in and for practice.

This approach to a shared and engaged practice of research literacy extended into actual practice settings in another effort to situate and contextualize research learning. Professional nursing management colleagues were seeking the latest evidence on problems they were experiencing in practice, and students were seeking to understand the process and application of evidence for practice—spawning a perfect collaboration. This collaborative learning activity also connected students to health reference librarians, who assisted in the literature searching process, and faculty, who mentored students in the practice of critical appraisal of the evidence for practice.

In a final graded teaching and learning activity, the Research in Policy Challenge, students actively engaged in testing their research literacy knowledge to search and appraise the latest evidence to update policies or guidelines identified by nurse managers. For example, for the course being currently evaluated, policies or guidelines were submitted by nurse managers from mental health, public health, and acute maternal–child practice areas and included: (a) a suicide risk assessment and documentation and policy; (b) guidelines for public health nurses for screening, response, referral, follow-up, and documentation regarding family violence; and (c) a policy and procedure for the clinical management of hospitalized women with breech presentations.

Step one of the learning activity required students to write their appraisal of evidence in the existing policy or guideline. They then met with the health reference librarian to conduct a systematic search of the literature on the topic. Students provided a critical review of existing evidence within the policy or guideline and, similarly, in step two, reviewed any updated or more recent evidence to inform the updates of the policy or guideline. Students were asked to review the literature in this way, and then, in step three, to respond to the question: “Does this policy or guideline need revision, and if so, how, based upon current evidence?”

Alongside their critical appraisal of the research informing the policy or guidelines for practice, students were tasked with a fourth step of writing a summary of their recommended policy changes for practice and documenting these in a policy brief for the nurse managers. In class presentations of these policy briefs, students had an opportunity to vote (yes or no) on whether they believed the evidence for policy and guideline change was suitably convincing to be considered for implementation by management.

**Discussion and Recommendations**

Although the learning activity was supported by librarians and faculty, students found searching and critiquing evidence concerning the policies and guidelines to be challenging. Nonetheless, they highly valued the support of the librarians and asserted the activity was a good example of how they could work collaboratively to resolve questions of policy and guideline directions within their future nursing practice. They also explained how this activity raised their confidence to communicate their recommendations for evidence-informed nursing practice. Students voiced that the Research in Policy Challenge was an opportunity to “make research real.” One student stated in her evaluation of the course that “I am not doing my own research…but I am involved in research every day through guidelines and procedures and policies—I get it now.” Overall, through the learning activity, students reflected on their increased appreciation for evidence-based practice. They could envision themselves locating appropriate supports to search and appraise the research to inform policy and guidelines in their ongoing nursing practice. The course review revealed that this situated learning activity was a useful strategy for student learning about evidence-based practice.

**Conclusion**

Research literacy is essential for nursing practice, and it is critical that nursing students receive the necessary foundational skill preparation in their professional education to link research literacy to their everyday practice. However, basic literacy and
approaches to application of best evidence are largely assumed, with undergraduate nursing students often engaging in more sophisticated learning activities related to research proposals and methods. Rather, we propose activities that engage students in the critical appraisal of evidence for and with nursing practice, including the Research in Policy Challenge.

Collaboration among nursing students, faculty, librarians, and clinical practitioners and managers has been found to be an effective teaching–learning strategy to enhance the relevance and contextual reality of searching for, and critically appraising, evidence for policy and guidelines. The innovative way to teach research literacy skills through the Research in Policy Challenge activity demonstrates how creative partnerships and situated learning are crucial to engaging students in learning about research. Questions for future implementation and study of context-based and situated research literacy learning include:

- What are the outcomes of this course and learning activity for nursing practice? How do we know whether teaching and learning in this way makes a difference in research utilization in later nursing practice?
- What is the optimal role of collaboration with health reference librarians and nurse managers in research literacy training?
- What are the benefits to the practice environment? How can nurse managers and clinicians evaluate outcomes?
- What more needs to be done to enhance the research literacy of our students and nurses in practice?

References


