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Large group simulation: Using combined teaching strategies to connect classroom and clinical learning

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Abstract
A growing disconnect exists between what students learn in the classroom and how they use nursing concepts to provide safe and effective care in a clinical setting. The purpose of this article is to share a large group simulation teaching and learning strategy that combines unfolding case studies, low-fidelity simulation, and PowerPoint® to facilitate active learning and the integration of classroom and clinical learning in an associate degree nursing program.

Introduction

The Carnegie report of nursing education reported nurses are undereducated for the demands of present-day nursing practice (Benner, Sutphen, Leonard, & Day, 2010). A growing disconnect exists between what students learn in the classroom and how they use the knowledge to think critically and problem solve effectively to provide safe and competent patient care. The Carnegie report recommends providing students with more opportunities to practice the integration of professional nursing knowledge and skills into the care of increasingly complex patients (Benner et al., 2010). This requires educators to shift from teacher-centered, lecture-focused classrooms to student-centered, active learning environments that are cost-effective and efficient and emphasize collaboration, critical thinking, and decision-making skills (Day, 2011; Della Ratta, 2015; West, Usher, & Delaney, 2012). The purpose of this article is to share a large group simulation teaching and learning strategy that combines unfolding case studies, low-fidelity simulation, and PowerPoint® to facilitate active learning and the integration of classroom and clinical learning in an associate degree nursing program.

Active Learning in Nursing Education

Nurse educators have the formidable task of teaching expanding nursing knowledge, psychomotor skills, and professionalism to diverse student populations in order to prepare them for practice in dynamic health care environments. In addition, a growing number of students are requesting interactive educational experiences where opportunities are available to practice the application of theoretical concepts to clinical practice (Stanley & Dougherty, 2010). When nurse educators use active learning strategies to teach content, students have opportunities to develop their critical thinking, problem-solving, and reflection skills (Dewing, 2010). Active learning promotes student engagement and improves learning, retention of material, and transfer of knowledge and skills into practice (Dewing, 2010; Gleason et al., 2011).

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Despite the evidence that students learn better when they are engaged in the learning process, nursing education continues to focus on content where faculty rely on traditional lecture and PowerPoint® methods to implement content-loaded, time-constrained curricula (Day, 2011; Della Ratta, 2015). This results in passive student learning, and students have few, if any, classroom opportunities to practice applying nursing concepts learned to situations they will encounter in clinical practice.

Background

A review of student course evaluations from a small urban community college nursing program revealed student requests for increased interactive classroom learning experiences to practice the application of nursing knowledge in simulated clinical situations. In an effort to meet the needs of the students in the nursing program and incorporate recommendations from the Carnegie report (Benner et al., 2010), I developed and implemented a large group classroom simulation active learning strategy to teach freshman nursing students in an associate degree nursing program. The strategy is practical and combines common teaching and learning modalities: unfolding case studies, low-fidelity simulation, and PowerPoint®. Various studies have detailed the effectiveness of the use of these strategies independently or paired; however, information regarding the concurrent use of all three of these methods to organize a large group simulation is not evident in the literature.

Teaching and Learning Strategies

Unfolding Case Studies

The use of unfolding case studies is a popular interactive teaching and learning strategy. Unfolding case studies present a clinical scenario of a patient whose condition or disposition changes over time. Utilization of this strategy assists students to develop critical thinking and problem-solving skills because data on the patient is limited and revealed only as the case unfolds (Day, 2011; Reese, 2011; Shellenbarger & Robb, 2015). This provides a sense of unpredictability and challenges students to use learned classroom theory to prioritize care and make decisions based on limited patient information, similar to the reality of actual nursing practice (Shellenbarger & Robb, 2015). Unfolding case studies are flexible and can be individualized to highlight specific concepts or areas of nursing, and they can be designed to accommodate large groups of students within various types and levels of nursing courses (Day, 2011).

Low-Fidelity Simulation

Technology continues to expand in both health care and nursing education. In a review of the literature by Cant and Cooper (2010), twelve studies identified the use of simulation as a valid teaching and learning strategy. Simulation experiences can be low-fidelity to high-fidelity based on the technology involved and degree they match reality (Cant & Cooper, 2010). Literature reveals that simulation has a positive impact on student learning and assists students to integrate classroom theory and clinical application (Lasater, Johnson, Ravert, & Rink, 2014; Yuan, Williams, & Fang, 2012).

Simulation provides real-life interactive experiences, although, it can be time intensive and expensive to implement and utilize in nursing programs. Barriers to simulation include cost, faculty and facility resources, and fear of technology (Howard, Ross, Mitchell, & Nelson, 2010; Kisner & Johnson-Anderson, 2010); however, not all simulation modalities require the same resources. Low-fidelity simulation is an example of a cost-effective, low-resource type of simulation that can be effective in promoting student learning (Sharpnack & Madigan, 2012). This simulation modality uses common, inexpensive static mannequins. It lacks the interactive capability found in high-fidelity human patient simulators; yet, this modality does provide students with opportunities to practice skills and transfer learning to practice (Lasater et al., 2014; Sharpnack & Madigan, 2012; Yuan et al., 2012). The literature reveals that students are satisfied learning from simulation that involves any degree of fidelity (Tosterud, Hedelin, & Hall-Lord, 2013) which that supports the use of low-fidelity simulation in nursing programs where resources may be limited.

PowerPoint®

PowerPoint® is an example of presentation software that uses projected slides to present visual and auditory content. Students evaluate the use of PowerPoint® positively, and research suggests that this technology increases attention span and interest; engages listening, thinking, and participation; promotes learning; and enhances comprehension of course material (Hill, Arford, Lubitow, & Smollin, 2012).

The literature cites many benefits of using PowerPoint®; yet, educators continue to be challenged to use this technology in ways that stimulate students to respond and participate actively in classroom learning. By incorporating PowerPoint® with alternative active learning strategies, educators use this technology most efficiently to improve classroom learning experiences (Hill et al., 2012).

The use of unfolding case studies, low-fidelity simulation, and PowerPoint® as instructional strategies is not new; yet, combining these modalities increases student engagement and provides opportunities for teaching to a variety of learning styles. Combining strategies encourages active learning in the classroom and is one way to assist large groups of students in connecting learned nursing concepts to clinical application.

Getting Started

I developed an unfolding case study that incorporated low-fidelity simulation and PowerPoint® to teach associate