Title: Integrating Virtual Simulation into the Curriculum: An Exploratory Study

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Session Title: Simulation Research: Informing Best Practices in Nursing Education
Slot: D 17: Friday, 28 July 2017: 10:45 AM-12:00 PM
Scheduled Time: 10:45 AM

Keywords: active learning, reflection and virtual simulation

References:


Abstract Summary: The focus of this paper is to discuss findings of an exploratory study on how faculty used and integrated virtual simulation in nursing curricula. Results were incorporated into the development of curriculum implementation guides; evidence-based resources for faculty development and integration of virtual simulation across the curriculum.

Learning Activity:
LEARNING OBJECTIVES | EXPANDED CONTENT OUTLINE
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1. Discuss findings from an exploratory virtual simulation study that informed the development of faculty guides for effective curriculum integration. | a. Pilot study survey findings b. Pilot study focus group themes
2. Discuss the active learning principles guiding the use of virtual simulation across the curriculum to achieve student learning outcomes. | a. Deliberate practice theory/situated cognition b. Pedagogical Considerations c. Teaching Strategies d. Effectiveness of virtual simulation

Abstract Text:

Simulation can take many forms, including human patient simulation using manikins and/or standardized patients, virtual and computer based simulations, simulation done to teach psychomotor skills, or role play (Society for Simulation in Healthcare, 2015). Simulation is grounded in the use of story. The many and varied patient simulation scenarios capture unique, time limited, clinical encounters within the context of nursing practice. Learning in simulation allows for situated cognition – or learning in context – and has a greater chance of being recalled and then transferred to new learning situations (Forneris & Peden-McAline, 2006).

Virtual simulation provides a unique learning opportunity for nursing students to interact with a patient in a safe, realistic environment that is available anytime, anywhere. Virtual simulation engages students through the evolving clinical stories of patient encounters. The problems encountered in these patient stories focus the student on the process of thinking as opposed to the process of learning factual knowledge. Contextualizing practice focuses student attention on the patient – a strategy that keeps students’ thinking open and curious (Benner, Sutphen, Leonard, Day, 2010). Simulation as a teaching strategy is based on the theory of deliberate practice and thus engages students with the opportunity to repeat an activity continually to achieve mastery. The literature supports that simulation-based education with deliberate practice is effective in achieving specific clinical goals (McGaghie, Issenberg, Cohen, Barsuk, & Wayne, 2011).

Learning in context is a concept at the forefront of contemporary educational reform. Passive learning approaches are being replaced by experiential learning, i.e., active learning approaches whereby students become the center of the teaching and change from mere consumers of education to engaged active learners (Jeffries & Clochesy, 2012). The National Council of State Boards of Nursing (NCSBN) landmark, multi-site, longitudinal, study explored the role and outcomes of simulation in pre-licensure clinical nursing education in the United States (Hayden, Smiley, Alexander, Kardong-Edgren & Jeffries, 2014). The study concluded that there is substantial evidence that simulation can be substituted for up to 50 percent of traditional clinical experiences under conditions comparable to those described in the study. Simulation as an active learning teaching strategy is informing nursing education on the direction needed for educational transformation.

Unique challenges exist for today’s nurse educators to devise and thoughtfully integrate teaching strategies that move from highly structured to self-directed learning and reactive thinking to critically reflective proactive thinking. Contextualized learning brings classroom and clinical together; simulation engages learners with diverse perspectives to reflect and reframe the understanding of practice, bringing thinking and doing together. Thoughtful and intentional use of simulation across the curriculum, thus encompassing virtual simulation, holds great promise in moving nursing education forward transforming the way students learn and faculty teach.
This paper will discuss the findings of an exploratory study on the use of virtual simulation with faculty from a variety of programs of nursing. The focus of the study was to determine how faculty used and integrated a trial period of virtual simulation in their nursing curricula. Findings from this exploratory study inform nursing education best practice emphasizing the importance of 1) the use of context in the teaching-learning process; 2) active learning that shifts the teaching from a cognitive to a relational approach, where learners and faculty construct knowledge, attitudes, and skills collaboratively (Cheng et al., 2015). The findings from this study were used in the development of faculty curriculum implementation guides; a National League for Nursing evidence-based resource to assist faculty in acquiring the foundational knowledge needed to ensure thoughtful integration of virtual simulation across the curriculum and engage in education best practices.