# Evidenced-Based Teaching Strategies that Facilitate Transfer of Knowledge Between Theory and Practice: What are Nursing Faculty Using?[1,2]

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ABSTRACT

The purpose of this mixed-method descriptive study was to explore prelicensure nursing faculty knowledge, beliefs in effectiveness, and use of evidence-based teaching strategies that facilitate transfer of knowledge between theory and practice and facilitators and obstacles to their use. Findings revealed that the top 5 strategies used were (a) reflection, (b) simulation, (c) small groups, (d) case-based learning, and (e) problem-based learning. Implications for nursing education practice are discussed.

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## Introduction

Contemporary nursing education is challenged by the exponential growth of technology, biosciences, and globalization, which impact not only nursing practice but also nursing education (Benner, Sutphen, Leonard, & Day, 2010; Shindell, 2011). More specifically, new nurses emerge from their educational programs facing patient care challenges in the practice setting that are diverse with complicated treatments requiring astute assessments and nursing management calling upon nursing science and knowledge (Benner et al., 2010). The proliferation of knowledge has led to an additive curriculum that fosters linear thinking and teacher-centered pedagogies (Day, 2011; Kahl & Venette, 2010; Shindell, 2011). Traditionally, nursing education has been organized in a linear format, based upon conventional pedagogies where outcomes and competency-based strategies are common (Ironside, 2014). However, conventional pedagogies and past practices are no longer adequate to meet the demands of current practice, which has led to calls for transfor-mation of nursing education (Benner et al., 2010; Ignatavicius & Chung, 2016; Institute of Medicine, 2011).

Reform of educational practice underscores the need for a paradigm shift from traditional pedagogies to ones that are innovative, integrative, and student-centered (Benner et al., 2010). Doing so would better help students with integration, analysis, and synthesis based on evidence that the relationship between knowledge and action is more complex and multidirectional than linear (Benner et al., 2010; Botma, Van Rensburg, Coetzee, & Heyns, 2015). For example, simulation and narrative structures, such as narrative pedagogy are pedagogies of integration (Benner et al., 2010; Jansen, 2015). Simulation is an evidence-based teaching strategy (EBTS) that is associated with transfer of knowledge between theory and practice (Booth et al., 2017; Ewertsson, Allvin, Holmstrom, & Blomberg, 2015; Tschannen, Aebersold, McLaughlin, Bowen, & Fairchild, 2012), and narrative pedagogy fosters students' thinking (Ironside, 2015). Other examples of strategies that are integrative and facilitate transfer are interactive videos and computerized learning (Davidson & Candy, 2016; Wiles, Rose, Curry-Lourenco, & Swift, 2015), reflection (Jayasree & John, 2013), problem-based learning (PBL) with cooperative small group work and role play (Chan, 2012), case-based learning (CBL; Forsgren, Christensen, & Hedemalm, 2014; Lounsbery & Pittenger, 2011), and unfolding case studies (Day, 2011).

However, despite the call for curricula redesign utilizing innovative and integrative strategies, there is limited research as to what

faculty know about and the extent to which they use evidence-based strategies (Brown, Kirkpatrick, Greer, Matthias, & Swanson, 2009; Herinckx, Munkvold, Winter, & Tanner, 2014; Wisdom, Chor, Hoagwood, & Horwitz, 2014). The purpose of this mixed-method descriptive study was to explore prelicensure nursing faculty's knowledge, belief in effectiveness, and use of EBTS that facilitate transfer of knowledge, along with facilitators and obstacles affecting transfer.

## Literature Review

### Transfer

Transfer is the ability to use learned knowledge in a similar or new and novel situation (Mayer & Wittrock, 2006). As health professionals, transfer of knowledge is typically from the classroom to real-life situations, such as the clinical setting, and because not all patient situations can be taught (Botma et al., 2015; Lounsbery & Pittenger, 2011), it is essential to foster students' ability to develop thinking and reasoning skills with the ability to transfer knowledge to new or novel patient situations. According to Kantar (2014), consideration needs to be given to thinking and transfer of knowledge as key educational outcomes of nursing curricula.

### Faculty Knowledge About Evidenced-Based Teaching Strategies

Oermann (2007) suggests nursing faculty often teach as they were taught, which is based on tradition rather than available evidence, or they may be unaware of research that has been done. Oermann suggests that reflecting on current teaching practice allows one to ask if there is a better way to teach and, then, recommends utilization of the literature by using multiple databases to research different teaching strategies to guide their educational practice.

Patterson and Klein (2012) investigated the types of evidence nurse educators used for teaching practice, what factors influenced incorporation of this evidence into teaching, and what process was used to change their teaching practice. The results revealed that databases such as CINAHL, EBSCO, and MEDLINE were the most frequently used sources of evidence for teaching practice (93.7%). The primary evidence that prompted use of a new or different strategy was journal articles. Other sources used were written in-class feedback, course evaluations, student comments, examination data, exposure to new theory, conferences, and colleagues. Barriers consisted of colleagues, administration, students, workload issues, and time. Results from the narrative questions revealed that 25% of the participants identified institutional barriers as a reason for not using evidence-based teaching practices.

### Specific Evidenced-Based Teaching Strategies That Faculty Use

Brown et al. (2009) used a mixed-method descriptive study that employed a researchers' developed tool design to investigate pedagogical teaching/learning approaches and teaching/learning strategies. The instrument included multiple answer checkboxes or drop-down lists that included 40 possible teaching strategies as to the types of innovative teaching strategies used by faculty in nursing education. Analysis of qualitative content identified two themes: teacher-centered and learner-centered. From the drop-down list of strategies, the results revealed that, for more than 70% of the participants, evidence-based, lecture, discussion, case-based, and multimedia strategies were used and integrated into the course in order to engage students. Of these strategies, participants found case-based evidence and client/patient care strategies as most helpful. However, the authors found that although 78% of the participants used lecture as a strategy, only 17% identified it as a method to assist in student

teaching. Other findings revealed that narrative/storytelling, simulation, and case-based were considered most innovative with critical thinking, knowledge acquisition, and independent learning to be essential outcomes of these strategies (Brown et al., 2009, p. 156). Analysis of qualitative content identified two themes: teacher-centered and learner-centered. The findings revealed the faculty role was one of facilitator (88%), whereas active learner (87%) was a role faculty identified for the student. More recently, Staykova, Von Stewart, and Staykov (2017) found that traditional strategies coupled with active, innovative strategies that are student-centered promote student learning.

### Facilitators and Barriers to Use of Evidenced-Based Teaching Strategies

Shindell (2011) investigated factors that affected faculty use of active learning strategies, such as cooperative learning, PBL, and simulation. The results revealed that the greatest barrier to use was time, that is, lack of time for preparation, implementation and faculty development. Additional barriers to use included lack of administrative and colleague support within the organization.

In a descriptive correlational study, Hebenstreit (2012) examined the relationship of innovative behaviors and the perceived level of structural empowerment of baccalaureate nurse educators. The findings revealed that nurse educators perceived themselves to be moderately empowered. Hebenstreit found significant and positive correlations between structural empowerment and innovative behavior. If faculty feel empowered within the organization, it can positively affect the faculty's behavior, attitude and, therefore, their teaching.

## Methodology

### Design

This was a mixed-method design that included a researchers' designed survey composed of a 13-item questionnaire with a total of six open-ended questions that examined prelicensure nursing faculty knowledge, beliefs in effectiveness, and use of EBTS that facilitate transfer of knowledge, along with identifying facilitators and obstacles to their use. Descriptive statistics were used to analyze demographic characteristics, faculty knowledge, belief in effectiveness, and use of EBTS. Correlational data were analyzed using Spearman rank order correlation and chi-square test for independence to analyze any significant relationships (Pallant, 2013). Themes were identified through content analysis of the open-ended questions.

### Participants and Data Collection

Participants were a convenience sample of nursing faculty who taught in prelicensure nursing education programs at the associate and baccalaureate levels in New York State (NYS). A list of all nursing schools and colleges was formulated by using the New York State Education Department website (http://www.op.nysed.gov/prof/nurse/nurseprogs.htm, n.d). The population was defined by creating a database of all nursing faculty with a public e-mail address on the school's website (Birkhead, 2015). Inclusion criteria were current nursing faculty that taught either full-time or part-time in either the classroom, clinical, laboratory, simulation setting, or any combination of each teaching environments regardless of their academic degree or employment status. Upon institutional review board (IRB) approval, representing 68 schools encompassing both associate and baccalaureate programs, there were 1,569 initial e-mails sent to all nursing faculty listed on the database seeking voluntary participation in the study. A total of 115 individuals were excluded from the study for the following reasons: schools needing their own IRB approval,