

Title:

Case-Based Learning in a Flipped Classroom to Promote Critical Reasoning

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Session Title:

Innovative Teaching Strategies

Slot:

Q 08: Sunday, 30 July 2017: 3:30 PM-4:15 PM

Scheduled Time:

3:50 PM

Keywords:

case-based learning, critical reasoning and flipped classroom

References:

Benner, P., Kyriakidis, P. H., & Stannard, D. (2013). *Clinical wisdom and interventions in acute and critical care: A thinking-in-action approach* (2nd ed.). New York, NY: Springer Publishing Company.

Honeycutt, B. (ed.). (2016). *Flipping the college classroom: Practical advice from faculty*. Madison, WI: Magna Publications, Inc.

Kaddoura, M. A. (2011). Critical Thinking skills of nursing students in lecture-based teaching and case-based learning. *International Journal for the Scholarship of Teaching & Learning*, 5(2), 1-18. doi: <https://doi.org/10.20429/ijstl.2011.050220>.

Nilson, L. B. (2016, October 24). Teaching critical thinking: Some practical points. *Faculty Focus*. Retrieved from http://www.facultyfocus.com/articles/effective-teaching-strategies/teaching-critical-thinking-practical-points/?utm_campaign=shareaholic&utm_medium=printfriendly&utm_source=tool.

Abstract Summary:

This presentation will demonstrate and analyze the use of unfolding case scenarios in a flipped classroom model with student learning outcomes to achieve higher-level thinking and critical reasoning.

Learning Activity:

LEARNING OBJECTIVES	EXPANDED CONTENT OUTLINE
The learner will evaluate the correlation between using a flipped classroom model and student learning outcomes.	Evidence-based recommendation for transforming didactic pedagogy
The learner will explain the use of case scenarios in developing problem-solving skills to promote higher level learning outcomes.	Evaluation of student learning outcomes after using case scenarios to facilitate problem-solving.
The learner will identify and integrate teaching strategies that promote critical reasoning in nursing students.	Designing and implementing a flipped classroom using case-based teaching strategies

Abstract Text:

Purpose: The aim of this project was to determine if case-based learning in a flipped classroom model promoted critical reasoning in senior level nursing students enrolled in an undergraduate Baccalaureate Nursing program.

Background: There is an ever-growing need to change the pedagogy of nursing education to meet the demands of highly-technological and dynamic healthcare systems with more complex, diverse and higher acuity populations (Kaddoura, 2011). Nurse educators are challenged to bridge the theory-practice gap to ensure that new nurse graduates are well-quipped with the skills to critically reason through patient situations that require sound clinical judgment (Benner, Kyriakidis, & Stannard, 2013; Kaddoura, 2011). In meeting these challenges, nurse educators must transform the classroom, shifting teaching and learning paradigms (Benner, Kyriakidis, & Stannard, 2013; Nilson, 2016, October 24). The classroom environment must promote and support student engagement through deeper, more meaningful learning that foster critical reasoning (Kaddoura, 2011). A flipped classroom creates an environment in which students actively engage with content, thereby stimulating and encouraging higher level thinking (Honeycutt, 2016). The use of case scenarios promotes the development of critical reasoning through open-ended and unfolding situations that require students to interpret, analyze and synthesize the most salient patient data to support clinical decisions (Kaddoura, 2011; Nilson, 2016, October 24). Case scenarios also provide a format for students to explore alternatives, describe rationales that support their decisions, receive feedback from their peers and faculty, and promote a greater awareness of their own cognitive reasoning (Kaddoura, 2011; Nilson, 2016, October 24).

Methods: Case-based learning within a flipped classroom model was used to teach critical care content to senior level nursing students. Quantitative data was compiled using a pretest-posttest design with student results from Assessment Technologies Institute (ATI) Medical-Surgical Proctored examination before and after a senior-level critical care course. Qualitative data was also analyzed through student evaluations at the end of the course.

Participants: Convenience samples from four different cohorts (total n=48) in pre-licensure Baccalaureate Nursing programs were used to evaluate student learning outcomes.

Results: A pretest-posttest was performed from ATI Medical-Surgical Proctored examination percentages before and after the critical care course. The t-test results indicated statistical difference in students' performance for all four cohorts with *t* values ranging from 2.24 to 5.38. The resultant *p* values were less than 0.05. Themes from student comments in course evaluations ranged from wanting "more lecture" to "challenging" and "Hard work but very rewarding."

Conclusion: Quantitative and qualitative data suggests that integrating case-based learning within a flipped classroom model may be effective in promoting deeper and more meaningful learning to enhance critical reasoning.