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Title: Flipping a Graduate Nurse Practitioner Course

Abstract

The flipped classroom can help achieve better student engagement and higher levels of learning. This project was implemented to determine if flipping a graduate course for nurse practitioner students would improve class preparation, participation, student evaluations, or exam grades. While there was no significant difference in mean scores after flipping, there were more student engagement and positive student remarks.

Preferred presentation format: Concurrent session

Goals/Objectives for the presenter
1. Describe the flipped classroom.
2. Present research findings about a graduate pediatric primary care course that was flipped.
3. Identify topics for future research in this area.

Description

I had been struggling with students in a nurse practitioner (NP) graduate pediatric course for some time because students were not actively involved during class time, not reading the required material, and only studying off of the PowerPoint slides for tests. I had incorporated case studies in the classroom and the students seemed ill prepared to complete them in class and had difficulty completing at home. There were also complaints from a few students that they were not getting the grade they wanted in the course, yet when I recommended reading the text prior to coming to class and to be more engaged they did not comply. The student grades at the time were satisfactory: (a) the average midterm test grade was 85.48, (b) the average final exam grade was 83.93, and (c) the overall average grades were 91.11%. However, even with the grades at an A- average, these students require high level thinking, according to Bloom’s taxonomy, because they must assess, diagnose, and treat sick patients (Krathwohl, 2002).

When I teach these students I remind myself that these students may be my child’s primary care provider and I want them to be great critical thinkers and practitioners. In order to better engage students, improve critical thinking skills, and help students become better prepared to become a nurse practitioner I reviewed the literature about different teaching techniques and decided to “flip the classroom.”
The flipped (inverted) classroom originated in 2000, when economic instructors wanted to change their pedagogy to meet the needs of students with different learning styles. “The inverted classroom means that events that have traditionally taken place inside the classroom now take place outside the classroom and vice versa” (Lage, Platt, & Treglia, 2000 pp. 32). Critz & Knight (2013) implemented the flipped classroom after students in a nurse practitioner course were not engaged and had poor grades. They found improvement in both areas. I was hoping for improved results as well but knew my students’ grades already averaged 91% and could not increase much.

After 2 terms with a flipped classroom I wanted to determine if this made any difference on student engagement, hours spent studying, student evaluations, or grades on class exams and the The IRB at the university where this flip took place was contacted and they did not require an IRB approval. HESI APRN Family Nurse Practitioner Exit exam, pediatrics portion (Elsevier, 2017). Evaluation occurred by looking at midterm and final exam scores, HESI exam scores, hours spent studying, and student evaluations and comments 2 terms prior to the flipped classroom and 2 terms after.

**Quantitative Data**

A t-Test: Two-Sample Assuming Unequal Variances from Excel was used to determine if there was any difference in mean scores between the two groups of students. The first group was from spring term 2013 and 2014 prior to the flipped classroom. The second group was from spring term 2015 and 2016 after the classroom was flipped. The data showed that flipping the classroom did not hurt the student scores, however there was no statistical significance between the groups in any category. This was probably due to the ceiling effect which “is a measurement limitation that occurs when the highest possible score or close to the highest score on a test or measurement instrument is reached, thereby decreasing the likelihood that the testing instrument has accurately measured the intended domain” (Salkind, 2010 para 1).

**Qualitative Data**

Qualitative data were based on comments from student evaluations and personal reflections of the class. Student evaluations suggested that students did like this form of instruction and the activities, but there were some negatives as well. Below are comments after the flip.

- **The written assignments aided in developing efficiency in using the SOAP note format, while requiring the student to support their chosen treatment plan with scientific evidence and clinical guidelines.**
- **I liked doing learning assignments in class as a group. It helped me a lot to apply book knowledge to practice and be able to ask questions.**
- **I liked the variety. I learned a lot from this class. The weekly quizzes made me read ahead of class and as a result I feel like when the lecture was being presented, I was just absorbing more information.**

Personally, I really enjoyed the flipped classroom over the traditional method. Students were much more engaged. When completing case studies in class, it was loud because of all of the talking and interaction. Students worked through the case studies, asked and answered questions. I observed while we were discussing information that the students had a deeper understanding about the topic through nodding heads and how they verbalized their understanding of the topic. An unexpected finding was that the class time was more fun in the flipped classroom because students seemed to enjoy talking about a topic, they asked appropriate questions, and showed greater interest. There was a lot of work up front to get ready for the course, but it was worth the time and effort to see so many students...
actively involved during class. At one time an accreditor for our program came in my class, and she told me she had never seen such an interactive class before.

Overall, I feel flipping the classroom was a worthwhile change. Students were more engaged in the class and there was a slight increase in the amount of time students prepared for class (1 hour and 10 minutes) although not statistically significant. When reviewing the literature prior to flipping the classroom, there was information about undergraduate nursing courses being flipped, but not graduate courses. Since flipping the classroom and completing this study, there was one article published for a graduate pediatric NP course (Critz and Knight, 2013). Their course had much better findings in the data, however, they had low grades and negative feedback prior to starting. Before flipping my course students had good overall grades, and my faculty evaluations were positive. The areas that I was looking to improve (student engagement and class preparation), actually occurred. An unexpected outcome was the enjoyment I experienced because of the student engagement.

Limitations

A limitation to the study was students were already doing well in the course prior to flipping the classroom possibly causing a ceiling effect. Another limitation may have been bias because this was my own class. I also did not do a controlled study having one course receiving the standard method of teaching and one getting the flipped classroom to compare. Lastly, this study took place in a graduate NP class, therefore the information is not generalizable to all courses.

Comments

This study benefits nursing and educators because it shows the flipped classroom is an effective teaching method for graduate nurse practitioner students. Students were more engaged and I felt they were getting a more in-depth understanding of the process for patient assessment, diagnosing and creating a treatment plan. I recommend that other measures be used in further research to study student engagement and critical thinking. Another recommendation would be to complete a controlled study comparing the flipped classroom to a traditional style classroom. I also suggest using a flipped classroom in different types of graduate nurse practitioner courses to determine if this is good pedagogy for all classes since there is little literature for graduate nurse practitioner courses.

References


Salkind (2010). Encyclopedia of Research Design. DOI: http://dx.doi.org/10.4135/9781412961288.n44