



Flipping around the classroom: Accelerated Bachelor of Science in Nursing students' satisfaction and achievement



Majeda M. El-Banna^{a,*}, Malinda Whitlow^a, Angela M. McNelis^b

^a The George Washington University, School of Nursing, 45085 University Drive, Innovation Hall, Ashburn, VA 20147, USA

^b The George Washington University, School of Nursing, 1919 Pennsylvania Ave, NW, Washington, DC 20006, USA

ARTICLE INFO

Keywords:

Accelerated Bachelor of Science in Nursing (ABSN)
Flipped classroom
Active learning
Innovative pedagogical approaches

ABSTRACT

Background: The flipped classroom approach is based on shared responsibility for learning by students and teachers, and empowers students to take an active role in the learning process. While utilization of this approach has resulted in higher exam scores compared to traditional approaches in prior studies, the flipped classroom has not included learners in Accelerated Bachelor of Science in Nursing (ABSN) programs.

Objective: To examine differences on exam scores and satisfaction of teaching between a 3-week flipped and traditional classroom approach.

Design: Mixed methods, crossover repeated measures design.

Settings: Private school of nursing located in the eastern United States.

Participants: 76 ABSN students.

Methods: Two separate sections of a Pharmacology course received either 3-weeks of flipped or traditional classroom during Period 1, then switched approaches during Period 2. Two exam scores measuring knowledge and a questionnaire assessing satisfaction of teaching were collected. Focus groups were conducted to learn about students' experience in the flipped classroom. Descriptive statistics, Wilcoxon rank sum test, and stepwise linear mixed model were used to analyze quantitative data. Focus group data were transcribed, coded, and categorized in themes.

Results: Students in the flipped classroom achieved significantly higher scores on the first Pharmacology exam than students in the traditional classroom, but there was no significant difference on the second exam. Three themes emerged from focus groups on student perception of integrating the flipped approach: don't fix what isn't broken; treat me as an adult; and remember the work is overwhelming.

Conclusions: Both traditional and flipped classroom approaches successfully prepared students for the Pharmacology exams. While results support the use of the flipped approach, judicious use of this instructional pedagogy with dense or difficult content, particularly in accelerated programs, is recommended. Instructors should also provide students with enough information and rationale for using the flipped classroom approach.

1. Introduction

Alton (Alton, 2016) recognized that nursing students experience challenges when applying pharmacology concepts to clinical practice. According to Honey and Lim (2008), nursing students experience a decline in pharmacology knowledge, and the need for more understanding of medication management remains an area of concern. Manias and Bullock (2002) also proposed that nursing students are not well prepared to apply and manage medications outside of the classroom setting. Additionally, current pharmacological and parenteral therapies entail 12–18% of United States National Council Licensure Exam (NCLEX) test questions assigned to each client needs category and

linked to nursing practice analysis (National Council of State Board of Nursing). This substantial pharmacology content on the NCLEX has driven the need for improving learning within nursing programs.

The Institute of Medicine (IOM) (2001) addressed the need for the creation of new health profession education models to prepare the future healthcare workforce, and the two-year Carnegie study of nursing education recommended transforming nursing education by shifting from passive teaching strategies to active strategies that provide opportunities for students to immerse in content and use clinical reasoning skills (Hawks, 2014). Historically, the lecture-based classroom was the traditional method of content delivery in higher education, yet, this passive modality has been challenged by recent studies reporting

* Corresponding author.

E-mail addresses: melbanna@gwu.edu (M.M. El-Banna), mlw7b@gwu.edu (M. Whitlow), angelamcnelis@gwu.edu (A.M. McNelis).

the need for more dynamic methods to engage students and improve learning (Missildine et al., 2013a). One frequently used approach is the flipped classroom, which empowers students to take an active role in the learning process (Tune et al., 2013; McLaughlin et al., 2014). The flipped classroom has been shown to increase students' attention, engagement, and interaction time with their teacher and peers, and provides opportunities for receiving real-time feedback (McLaughlin et al., 2013; McGowan et al., 2014).

Innovative strategies to deliver pharmacology content could enhance nursing students' understanding of how medications are applied to specific case scenarios and better prepare students to transition from the classroom to the clinical arena as students and later as practitioners. In academia, for students to learn and remain engaged, the use of active-oriented learning strategies could assist with difficult content (Brame, 2016). The flipped classroom approach is one such strategy that may address retention of pharmacology concepts by changing the classroom format from a lectured-focused delivery to a student-centered delivery where students are responsible in active learning of course information (Mehta et al., 2013). Shared responsibility by the student and instructor, mutual accountability, and reflection of how information is delivered and learned can be used to increase student understanding of content and satisfaction of their learning experience (Kuh, 2003; Chickering and Gamson, 1989).

2. Background

In the flipped classroom, students are exposed to content prior to classroom attendance through media, such as text or other written materials and audio and/or video recorded materials (Sierra, 2010). Pedagogically, adopting a teaching method based on a shared responsibility for learning by students and teachers should facilitate academic excellence and better prepare students for their future career as they transition to clinical practice (Sierra, 2010). The benefits of pre-work allows students to engage with the material as needed based on their pace of learning. In class, students participate in interactive activities, such as small group discussions and case scenarios, to apply the concepts learned. In this way, the instructor spends classroom time on higher level application of knowledge and problem solving - an essential component for decisions in clinical practice (Young et al., 2014). Flipped classroom strategies are built on the well-established principles of active learning, including students learning from and supporting one another in collaborative assignments and projects (Hamdan et al., 2013), and receiving immediate feedback from peers as well as teachers (Hacker and Tenent, 2002; McCollough and Gremler, 1999). It was posited that Pharmacology is one course that would benefit from interaction and the use of higher-order thinking to build the skills to recognize medication side effects and tailor medications to their patients' needs.

The flipped classroom model is not a new approach to the delivery of course material; however, there is scant evidence about its use in nursing compared to other health disciplines (Sharma et al., 2015a), or for what specific content the approach best facilitates learning. Only two studies found demonstrated that nursing students had better achievement on exams in pharmacy courses using the flipped classroom approach compared to students in a traditional classroom (Munson and Pierce, 2015; Sisk, 2011). A systematic review, including five studies and 934 participants, evaluated the approach and reported that some students were satisfied with the flipped classroom; however, it was not known if it improved academic performance (Betihavas et al., 2016). Other studies demonstrated that students lacked enthusiasm for the approach despite higher final exam scores (Simpson and Richards, 2015) and that increased student tension was potentially related to increased workload outside of the classroom (Critz and Knight, 2013).

Although extant literature supports the effectiveness of the flipped classroom (McGowan et al., 2014; Missildine et al., 2013a; Munson and Pierce, 2015) and similar instructional interventions such as team-

based learning (Sisk, 2011), there is limited evidence supporting the use with ABSN students. Accelerated baccalaureate programs are for adults who previously completed a bachelor's or graduate degree in a non-nursing discipline. These fast-track programs typically take between 11 and 18 months to complete, and prepare students for licensure as a registered nurse (RN). In past studies, students enrolled in these programs had significantly higher GPAs, academic performance, and standardized test scores than students in traditional BSN programs (Payne and Mullen, 2014), and, thus, may respond differently to flipped classroom methods. Therefore, the purpose of this study was to evaluate the flipped classroom approach in a Pharmacology course of an ABSN program. More specifically, the study sought to answer the following questions:

1. Are there differences on student exam scores between the flipped and traditional sections?
2. Is there a relationship among demographic variables and exam scores for each section and classroom approach (flipped or traditional)?
3. Is there a relationship between satisfaction and classroom approach (flipped or traditional)?
4. What are student perceptions of learning in a flipped classroom?

3. Methods

3.1. Setting

The study was conducted at a private school of nursing located in the eastern United States. Data were collected February through April 2016 from a convenience sample of ABSN students ($N = 76$) as they completed their first semester Pharmacology course.

3.2. Design

Evidence suggests gradual integration of the flipped approach (1–3 weekly class sessions in the semester rather than weekly throughout the whole course) (Beaten et al., 2013; Sharma et al., 2015b) is the best strategy for facilitating a smooth transition for both instructors and student. It allows for the opportunity to learn from the experience by either building on successes or planning to overcome problems during future classes. Prior to integrating the flipped classroom in the course, the instructor was trained, supervised, and mentored by experts in this pedagogical approach. To increase control, one instructor taught both sections so that the procedures used for the flipped classroom were similar and consistent. This study implemented a crossover repeated measure design and its strength was to allow the participants to serve as their own control, which will decrease the influence of confounding covariates and require fewer subjects than other repeated measures designs. In this crossover repeated measures design, 76 ABSN students enrolled in two separate sections of the Pharmacology course received three weeks of flipped classroom during the semester. Students in both sections started the first 6 weeks of the semester with traditional classroom instruction that was predominantly lecture-based using PowerPoint presentations, and by the end of this period students completed an exam (called the baseline exam). After six weeks of traditional classroom, students in Section 1 ($n = 36$) were taught using the flipped classroom approach for three weeks (period 1) while Section 2 ($n = 40$) continued with the traditional instruction and by the end of this 3 week period, students completed exam 1. Then, during the next 3 weeks (period 2), the instruction in Section 1 returned to the traditional classroom while flipped classroom was used in Section 2, and by the end of this 3 week period students completed exam 2. Additionally, focus groups were conducted with students after completion of their flipped classroom experience to explore their perceptions of the approach and how it did or did not facilitate their learning.

Download English Version:

<https://daneshyari.com/en/article/4940675>

Download Persian Version:

<https://daneshyari.com/article/4940675>

[Daneshyari.com](https://daneshyari.com)