Chapter 20

Time Well Spent: Flipped Classrooms and Effective Teaching Practices

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ABSTRACT

Good teaching practices are the crux of student education and require constant evaluation to meet current generations’ learning needs. Flipped classrooms have sought a foothold in higher education to provide opportunities for deep learning through the delivery of content online prior to attending class while having activities related to processing and applying the information during class. Using a large-scale, multi-institution study of faculty teaching flipped courses, this study empirically links flipped procedures to other forms of effective educational practice and additionally focuses on the motivations and impacts on the faculty side of this pedagogical practice. Findings indicate numerous learning and development benefits for students with implications for supporting and motivating faculty across disciplines, faculty identities, and course types.

INTRODUCTION

A new generation of student beckons a new learning environment and many scholars point toward flipped classrooms as a solution (Bishop & Verleger, 2013; Gannod, Burge & Helmix, 2008; Roehl, Reddy & Shannon, 2013). Flipped classrooms have sought a foothold in higher education to provide opportunities for deep learning through layering course material throughout each class session (Du, Fu, & Wang, 2014; Herreid & Schiller, 2013), which is known to reinforce the importance of cumulative knowledge and application (Lang, 2016). Although flipped practices can take many forms, there are a few common indicators. Often faculty provide students with study questions while viewing at-home modules
to help process the content as they normally would during class. Students do not often ask questions in large lectures, and few students reported missing the opportunity to do so while taking a flipped course (Foertsch et al., 2002). Additionally, collaborative learning is frequently a component of a flipped class (Gannod et al., 2008; Foertsch et al., 2002). This class structure professionalizes students by providing skills they will need in the workforce (Foertsch et al., 2002).

Good teaching practices are the crux of student education (Bain, 2004), and require constant evaluation to meet current generations’ learning needs (Seemiller & Grace, 2016). Assessment of flipped classrooms have historically had mixed results; however, the active learning component makes it a strong contender for modern higher education (Nilson, 2016; Roehl, Reddy & Shannon, 2013). However, little is known about faculty perspectives related to flipped courses as well as the link between course design and student engagement. The study seeks to weigh the costs of a flipped classroom to the benefits by answering the following research questions:

1. What kinds of faculty and in what types of courses are more likely to be flipped?
2. What factors most strongly motivate faculty to flip their courses?
3. How does the amount of time faculty spend on teaching-related practices differ in flipped and traditional courses?
4. How does having a flipped course relate to effective educational practices?

BACKGROUND

Student engagement is defined in higher education as the time and effort students put forth toward meaningful educational opportunities (Kuh, 2009). Often the onus is placed on students, yet faculty have a shared role in creating environments conducive to student learning (Chen, Lattuca, & Hamilton, 2008; Lester, 2013). Faculty engagement in the teaching and learning process is vital to success. Umbach and Wawrzynski (2005) found frequent student-faculty interactions during courses was positively related to increased student perceptions of a challenging, active, and collaborative learning environment. Moreover, the students report higher social and personal development when having more frequent faculty interactions in classrooms (Umbach & Wawrzynski, 2005). These insights are promising as flipped-designed courses free up time for increased student-faculty interactions in classes.

Evidence has demonstrated the success of flipped classrooms (Bergmann & Sams, 2012). “The flipped model puts more of the responsibility for learning on the shoulders of students while giving them greater impetus to experiment” (Educause, 2012, p. 2). Ambrose and company (2010) found students who reflect on their ability to solve a problem are more likely to study and achieve the outcome. Moreover, if students do not achieve the outcome that is set for them, good learners will try a new strategy and likely succeed after another attempt. By having to teach themselves outside of class, students may more thoroughly master content. In addition, the flipped classroom design has shown to yield significant improvements in student self-efficacy as compared to a traditional classroom design (Thi Thai, Wever, & Valcke, 2017).

Researchers posit the effects of a flipped classroom could teach students study-skills that are beneficial to their success in other courses (Bauer & Haynie, 2017). Thus, the outcomes are assumed to be moderated by self-monitoring as literature shows students who have high levels of the skill are more successful (Ambrose, Lovett, Bridges, DiPietro, & Norman, 2010). This is likely since flipped classrooms
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