

Chapter 10

Totally Flipping Instruction Advantages, Alternative Models, and Challenges of a Flipped Classroom in K–12 and Higher Education

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ABSTRACT

The flipped classroom approach is becoming more widespread across K-12 and higher education classrooms. This blended learning instructional model has been found to be effective in engaging learners, creating active learning experiences, and providing students continual access to course materials. By completing these types of active learning experiences, students receive personalized learning opportunities that are more conducive to their academic needs. Through this instructional approach, educators are considered guides on the side instead of a sage on the stage. There are a vast array of advantages and disadvantages to integrating flipped classroom approaches. However, researchers have discovered that flipped classrooms are effective instructional methods that are well received by students but need to be designed carefully to ensure that learners review all required course materials prior to completing in-class activities.

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INTRODUCTION

Flipped classrooms have become more commonplace and popular in K-12 schools and university settings. The *flipped classroom* is a blended learning instructional approach focused on dedicating shared classroom time to active learning activities with more direct applications of concepts than the traditional lecture format (Baggaley, 2015). The traditional approach to schooling in the U.S. involved educators serving as the “Sage on the Stage” (King, 1993) to disseminate knowledge to the masses of students. This conventional approach has been up-ended by technological advances, such as wireless internet connectivity, powerful search engines, and vastly populated public archives (e.g. open source materials, podcasts, YouTube videos) that enable access to conceptual, basic information virtually anytime and anywhere on personal, mobile devices (e.g., phone, tablet). For example, the creation of Khan Academy by Salman Khan (Sparks, 2011) established libraries of recorded lessons to watch at the learner’s pace. Through repositories like the Khan Academy, each learner has access to organized and focused information that is explained orally and oftentimes illustrated visually as well. In these mediums, the learner is able to pause content delivery to address interruptions, rewind content to refocus or receive desired repetition, and skip forward to focus on selected topics (Schultz et al., 2014). Assessing basic knowledge outside the classroom (before the next class session), teachers are able to focus on student engagement and active learning exercises in the classroom – essentially “flipping” the traditional model on its head.

A true flipped classroom approach results in a more individualized academic experience in which students are encouraged to read, listen, and watch instructional materials at their own pace outside of class time. Students then use hands-on, practical activities during class time resulting in a more differentiated student learning experience. With the flipped classroom approach to instruction, there is a pedagogical switch in how students first access course materials (Lopes & Soares, 2018) followed by guided practice to engage their learning process. When the instructor-centric or more static content (lectures) is delivered outside of class, students can engage in active learning during class time, whether that is in person or in a synchronous virtual meeting. With this educational model, educators are mindful of their instructional practices and rethink how to effectively guide practice and support students’ active construction of knowledge and skill. Researchers have discovered that students generally have positive attitudes toward active learning activities that accompany most flipped instructional approaches in comparison to passive, traditional, lecture models (Bergstrom, 2011; Seery, 2015). Likewise, active learning has been found to result in lower academic failure rates and higher levels of student performance (Freeman et al., 2014). In this chapter, we provide a comprehensive overview of the history, advantages, examples of approaches in K-12 and higher education settings including alternative models that address emergencies such as COVID-19, and challenges of implementing a flipped classroom instructional approach.

BACKGROUND

The Flipped Classroom

Flipping the classroom, also known as inverting a classroom (Lage et al., 2000), is considered a *pedagogy-first* approach that involves students initially gaining exposure to new course content outside their classes (e.g., videos, pre-recorded lectures, readings) and then engaging in active learning experiences during in-class instruction (e.g., collaborative group projects, learning stations, debates, experiments;

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