The Flipped Classroom

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The New Flipped Classroom

Abstract

The flipped classroom is a relatively new approach to how lessons are presented to students. Traditionally, the student is introduced to the subject matter through a lecture during the normal class time. After class the student will engage with the material through reading and exercises related to the material as homework. In a flipped classroom, the student introduces themselves to the material through recorded lectures or other formats, as homework, and then they engage with the material through exercises in the classroom, where the instructor is available to assist the student or answer questions. If implemented properly, this teaching strategy can provide a means for instructors to better utilize limited face-to-face time with students both in the classroom and in the lab.

Keywords: flipped classroom, Constructivist Theory, active-learning, student centered, teacher centered
Traditional classroom practices are no longer effective, and teachers need to develop new strategies and skill sets that are different from the traditional classroom. The focus of today’s classroom is developing students with higher order thinking skills, communication skills, and effective use of technology that will be needed in the modern day workplace. The flipped classroom alters the traditional classroom by delivering instruction online outside of the classroom and moving homework into the classroom (Kong, 2015).

In a traditional classroom setting students are normally lectured to for thirty minutes to an hour. Lectures have been long criticized as ineffective in helping students gain vital knowledge and skills. As well as research has shown that students’ attention span declines after 10 mins of lecture, and if it returns they will only retain 20% of what was taught (Gilboy, Heineichs, & Pazzaglia, 2015). The goal of the 21st century classroom is to have teachers be more strategic in the planning of their lesson where the class will become more student centered. The flipped classroom model offers this best. Bill Tucker, writing for Educationnext.org, provides a very good description of the flipped classroom concept:

While there is no one model, the core idea is to flip the common instructional approach: With teacher-created videos and interactive lessons, instruction that used to occur in class is now accessed at home, in advance of class. Class becomes the place to work through problems, advance concepts, and engage in collaborative learning. Most importantly, all aspects of instruction can be rethought to best maximize the scarcest learning resource – time. (Tucker, 2012) The flipped classroom learning strategy was birthed from two chemistry teachers,

The flipped classroom relies heavily on the use of visualization, especially videos and presentations, and can strongly support the generation of creative ideas (Abdulrahman & Al-Zahrani, 2015). Fortunately, with the ease of access of multimedia and applications where teachers can develop lessons that can be viewed at students leisure teachers can go without increasing contact time or sacrificing course coverage. In order for content to be taught at home,
teachers would create videos of themselves teaching or explaining concepts. These instructional videos could be made using various free screencast applications such as Jing or Camtasia, and then uploaded to the internet (Wan, 2014).

The diversity of students and their varying learning styles and abilities makes it hard for teachers to make sure all students understand the concepts being taught in the class. Since its inception, teachers have used this tool to help differentiate and personalize instruction (Clark, 2015). Lage, Platt, and Treglia (2000) noted that a mismatch in a students’ learning style and a teacher’s teaching styles can result in students learning less. Moreover, in classes where various teaching styles, student achievement increased. The modern approach of flipped classrooms allows students the freedom to learn at their own pace in a way they are most comfortable with.

The theories that are consistent with flipped classroom is the behavioral (Hawks, 2014) constructivist learning theory (Hawks, 2014) (Wan, 2014). Behaviorism focuses on teacher centered instruction. The foundational content in the form of drills, lectures, and tutorials are received prior to class in the flipped model. Constructivist theory on the other hand, takes place when the student is pulling on prior knowledge while actively engaged and interacting in the learning process. Hawk (2014) stated constructivism supports shorter, more frequent assessments to assess progressive increases in knowledge retention and critical thinking ability rather than fewer, more comprehensive exams. As a result, teachers have increased opportunities to identify errors in student thinking and provide helpful feedback.

When active, student centered learning is taking place, students take ownership of their learning, with the teacher and student becoming collaborators thereby deepening the understanding of the content. Flipped classroom challenges the student. When challenged to think, examine, integrate, analyze, apply, evaluate, and synthesize, students become more eager
and willing to delve more deeply into content-rich texts and readings leading to quests to construct new knowledge and expand their comprehension (Lumpkin & Achen, 2015).

As students are being challenged in the classroom, students are also becoming creative thinkers. In a study conducted by Schultz, Duffield, Rasmussen, and Wageman (2014) one student reported, “I get really embarrassed if I ask a question...when everyone else seems to understand it except me. I was not embarrassed to rewind the videos because no one was there to watch me do that.” Second, students felt there were two opportunities to learn the material, once via video and once during class.

According to Brame (n.d.), “flipping the classroom” means that students gain first exposure to new material outside of class, usually via reading or lecture videos, and then use class time to do the harder work of assimilating that knowledge, perhaps through problem-solving, discussion, or debates. The flipped classroom model helps to increase student engagement, and steers clear of the “one size fits all’ way of doing things (Strayer, 2011). Flipped classroom distinguishes itself from other models in that it initiates collaboration among peers and the teacher prior to class solidifying that students will engage on higher level cognitive processes (Westermann, 2014).
References


