

The Flipped Classroom

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One of the newer trends in educational reform is the flipped classroom. It is a necessary change, since the structure that is currently in place has been around since there was a need to have time off to harvest the crops. This new trend emerging in the world of education has the potential to reform the education system for generations to come. Based in technology, the flipped classroom utilizes technology and strives to maximize class time spent with the instructor.

An exact definition of a flipped classroom is a challenge because the concept itself can take many forms. When asked to define a flipped classroom, one of the co-creators of the model, Jonathan Bergman, described that the term “flipped classroom” can be a number of different ideas that change the way the teaching methodology is inverted from its norm (Simba Information, 2011). Basically, the flipped classroom is a pedagogical shift that involves students watching the lecture portion of the lesson outside of class so that the class time with the instructor can be spent in a more engaging way that benefits the students. Watching the recorded lesson at home allows time for engaging activities and questions on assignments to be done during class time with the teacher available for help. Technically, there are a variety of ways to utilize the time spent in class, but in a basic model of the flipped classroom, class time is spent working on the assignment that would traditionally be given for homework. Students can work on assignments and get help from the teacher when it is needed most.

Transforming from a traditional model with the lesson in class and homework at home to a flipped model with the lesson at home and the homework in class does create some concerns,

however. One major concern is the possibility that not everyone has access to the internet or the ability to watch the video lessons that would be needed for the lesson to be successful.

Surprisingly, this is not as common as assumed. By October 2010, over seventy-seven percent of homes in America had a computer and sixty-eight percent of homes had high-speed internet access at home (Economics and Statistics Administration, 2011). Even without internet access, there are still several ways to get the information to the students. For those without computers, the lessons could be burned to a DVD or uploaded to an iPod or other portable storage device. For those with no technology access at home, there is access at their school, a public library or at the home of classmates. There are many solutions that can be created to get the lectures to the students (Simba Information, 2011).

One important component of having an in-class lesson is the ability for students to ask the teacher when they need help with a concept or for more clarification that is needed on a subject. This interaction with the teacher and the student is important for students to grasp the concept of what is being taught. Therefore, the lecture portion of the flipped classroom should do more than just present the facts in a monotone way. In a study from the University of Maryland (2006), researchers tried to determine if there were a statistical significance on test scores from students who were taught via traditional classroom versus online with video lecture versus online with interactive videos (Khang, Zhou, Briggs, & Nunamaker, 2006, pp. 23-24). The results of the research showed that students taught with interactive video scored much higher than those in a standard classroom and somewhat higher than those in the class with a non-interactive video. This suggests that interactivity within a lecture is more valuable for the success of the student. A flipped classroom can be successful using non-interactive video lectures (or those lectures made by someone else, like Sal Khan from Khan Academy), but to get

the most success it should also incorporate interactivity with the delivery of the lesson (from a known presenter, like the student's own teacher).

Allowing the lesson portion of the class to be done outside of the classroom opens up a wide range of possibilities for the time allowed during class. The flipped classroom suggests that the in-class time can be spent working on assignments for the lesson or for extension into more engaging activities than normal class time allows. This provides students with access to the teacher who has the ability to help the students one-on-one or in small groups. It also allows the teacher to see who has a good grasp on the lesson and provide reteach to the entire class if it is needed. As for students who do not “do not do their homework” and miss the lesson, they can be placed in a classroom “station” where they watch the lesson during class, but miss out on the discussion or extension activity during class.

To improve the concept of the flipped classroom, there are several strategies that can be utilized by the teachers. Unfortunately, the flipped classroom is still criticized in that it still relies on the traditional lecture method of teaching that has been used by teachers for many years (Musallan, 2011). However, when used with interactive video methods, Harvard University professor Eric Mazur (who I had the opportunity to hear speak in person two years ago) discusses a style of teaching which tries to provide a depth of understanding of the lesson that is being taught. In a lecture entitled *Confessions of a Converted Lecturer*, Mazur states that through his research, students that are exclusively taught by lectures and reading grasp the elementary concepts that are taught but lack a detailed understanding of the content (2009). Teaching should be more than rote memorization and basic facts. For students to develop a deeper understanding of the content, Mazur suggests the use of peer instruction, a concept that allocates some of the in-class time that should be spent in discussion. Peer instruction allows

students to discuss their answers and defend their choices and helps show that students know their content. The data that Mazur presents suggest there is more than a twenty percent gain in knowledge using this method, which lends itself quite nicely to a flipped classroom.

Flipped classrooms also allow teachers the ability to differentiate their students' lessons. Teachers can split students into groups and have various groups working at different levels of learning based on the students' needs. In a traditional classroom, teachers often have to cater to the middle-of-the-road because there is not enough time for differentiation or one-on-one support. Teaching to the middle often leaves out the slow learners and does not provide enough to challenge for the gifted students. In the flipped classroom, however, teachers do not have to be anchored down by a traditional lesson plan. With the lecture recorded, students can work at their own pace through a lesson while those students that need additional help can get help from fellow students or from the teacher. This style of teaching, differentiated instruction, hinges on the idea that there are several different types of intelligence, in which the flipped classroom model has the ability to utilize them all (Kronowitz, 2007). Offering a variety of different assignments provides each student with a lesson that is best suited to his or her educational needs. This concept can even be extended to flipped learning, where students can move through the content at their own pace and might not even be working on the same unit.

As more and more teachers switch to a flipped classroom model (which exciting as it might be is not the "magic bullet" for education), there are four main hurdles for teachers to overcome, according to Bergmann (Bergmann, 2014). The first idea to overcome is for the teacher to change his or her way of thinking about teaching. This is a pedagogical shift in how information is shared with the students. The second major hurdle is technology. Teachers have to decide which screen-casting software they feel comfortable using as well as whether they will

utilize a learning management system (LMS) or not. The third hurdle for the teacher to battle is time. There never seems to be enough time for teachers as it is and to switch to the flipped classroom, means there will be a huge undertaking of time as everything is set up and established. The final hurdle is training. Early flipping pioneers had to figure everything out on their own, but fortunately, there are many resources now available to teachers to help them radically transform their classrooms from a traditional model to a flipped model (Bergmann, 2014).

The flipped classroom is one of the major transformations of education. It flips the lecture portion and homework portion of a class and makes the lesson the homework and the homework becomes the classroom activity. Teachers can extend the lesson into more a more in-depth approach or can differentiate based on what their students need. Peer instruction and interactivity can create more meaningful ways for students to absorb their knowledge. Detractors argue about lack of technology and the inability to ask questions during a recorded lecture, but advocates argue that there are alternate ways to offer accessibility and questions should be noted while students watch the lesson so they can ask during class. The flipped classroom, even though not the “magic bullet” to reform all education has been growing in popularity and offers some great opportunities to tweak education and enhance student learning.

Works Cited

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