Flipped Learning: A Response To Five Common Criticisms

by Alan November and Brian Mull of November Learning | NovemberLearning.com

Over the past two years, the Flipped Learning method has created quite a stir. Some argue that this teaching method will completely transform education, while others say it is simply an opportunity for boring lectures to be viewed in new locations.

While the debate goes on, the concept of Flipped Learning is not entirely new. Dr. Eric Mazur of Harvard University has been researching this type of learning since the early '90s, and other educators have been applying pieces of the Flipped Learning method for even longer.

It is our opinion that one of the reasons this debate exists is because there is no true definition of what Flipped Learning is. The method is often simplified to videos being watched at home and homework being done at school. If this is the definition, then we should all be skeptical. Instead, we should look closer at Dr. Mazur's work. The components he includes in his implementation make for a thoughtful, rigorous experience. Dr. Mazur has a video describing his integrated Flipped Learning and Peer Instruction methods, but the major points are:

- Students prepare for class by watching video, listening to podcasts, reading articles, or contemplating questions that access their prior knowledge.
- After accessing this content, students are asked to reflect upon what they have learned and organize questions and areas of confusion.
- Students then log in to a Facebook-like social tool, where they post their questions.
- The instructor sorts through these questions prior to class, organizes them, and develops class material and scenarios that address the various areas of confusion. The instructor does not prepare to teach material that the class already understands.
- In class, the instructor uses a Socratic method of teaching, where questions and problems are posed and students work together to answer the questions or solve the problems. The role of the instructor is to listen to conversations and engage with individuals and groups as needed.

With the above framework in mind, we tapped Twitter to learn what educators say are the downsides to implementing the Flipped Learning method, and we have provided our opinions that address the five major criticisms.

IMPLEMENTING THE FLIPPED LEARNING METHOD MAKES ME, AS THE TEACHER, MUCH LESS IMPORTANT.

This could not be further from the truth! In a Flipped Learning environment, the teachers are more important than ever. If they have provided students with an array of rich resources and have set up opportunities for students to think deeply and question what they have learned at home before coming to class, these teachers are going to see that there are a wide array of new questions that arise that might never have come up during a standard class period. In these cases, teachers are really going to need to know their stuff, and they are going to need to be able to individualize on the fly—quite possibly five, 10, or even 20 times in a class period.

Also, they are also going to need to figure out what the right questions are to ask when students come to class. These questions are going to have students address their misconceptions about and apply their knowledge concerning what they have learned on their own. During a conversation with Dr. Mazur, he shared that this is the most difficult, but also the most crucial, part.

In addition to providing an avenue for students to access their learning material at home, technology will play a crucial role for the teacher in the coming years. Smart systems are currently being designed that are going to help teachers learn more about their classes than ever before. For example, Dr. Mazur's Learning Catalytics software allows students to engage with application problems during class. Students respond to these problems using their individual laptops, smart phones, and tablets. The system then keeps track of all responses and intelligently points students to other classmates with whom they can debate their responses. The system records all of the responses over the entire span of the course, allowing a teacher to visualize the learning and the struggles of all students.

KIDS DO NOT WANT TO SIT AT HOME WATCHING BORING VIDEO LECTURES ON THE WEB. AT LEAST IN THE CLASSROOM, THEY GET SOME KIND OF INTERACTION WITH ME AND WITH THEIR PEERS. THIS IS JUST A LOT OF EXCITEMENT OVER BAD PEDAGOGY.

We completely agree that simply watching a boring lecture video will not get kids excited about this process. However, is the fact that there are bad examples of lecture videos a problem with the model—or with the implementation of the model?

Certainly, there are opportunities to improve these resources in ways that ramp up interaction and pedagogy. To begin, do not replace an hour-long classroom lecture with an hour-long video. Audio and video should be used in short, five- to 10-minute segments, and there should be opportunities for students to interact with the information in these videos in a variety of ways. Some teachers are experimenting with unique ways of doing this. For example, by including links within YouTube videos, Jac De Haan demonstrates how a teacher can basically quiz students and provide them with immediate feedback and explanation within the same video. Ramsey Musallam also has a method he uses that combines video clips with Google Forms to gather feedback from his students. Both of these methods can be used as part of a cycle of inquiry.

Also, give students a voice in this process. Provide them with several videos made by different teachers who present with different styles. Ask students to evaluate what they like and what they do not like. Have students produce video that teaches some of the content being taught in class. Look at what they do that excites or turns off their classmates. Over time, you will learn what has the biggest impact, and your students will appreciate having the opportunity to have their voices heard.

Make sure you provide more than just video. You are going to have students who want to watch video, but you are also going to have students who would rather look at a concept map or read a bit of text. Mix it up and keep your students guessing. You do not have to have all of this material from the start; you can build your library over time.

We all know how students like to interact with one another as well. Challenge students to create Skype study groups that meet on occasion to discuss their thinking on topics about which they are learning. Have them reflect on how these discussions are changing their thinking.

Finally, keep your eye out for the amazing resources that we are going to gain access to over time. For example, there is initial work being organized by Chris Anderson who runs the famous TED conference and website to create educational resources tapping some of the best minds in the world.

MOST OF MY KIDS DO NOT EVEN HAVE INTERNET ACCESS AT HOME. THERE'S NO WAY THEY CAN WATCH ALL OF THIS VIDEO.

While this statement is true in many places, there are a variety of options in how these resources can be shared with students.

First, schools should provide opportunities outside of the standard school day for when the school library is open, allowing students to use school computers. In addition, there should be a loaner program in place where devices can be checked out for an evening's use. This loaner program might include smaller, less expensive devices such as iPod Touches and various types of tablets. And while on the topic of smaller devices, while many students do not have computers with internet connections at home, we do find that instead, many have other digital devices that connect to the internet using cell towers.

Taking these ideas a bit further, audio and video material can be burned to DVDs so they can be accessed on students' home DVD players. The price of these players have come down so much that they are in almost any home. Furthermore, schools might work with local libraries and community centers to make access to this material very easy for students. We can agree that it will be quite important for teachers and school leaders to understand their communities and think creatively about ways to create equitable environments for learning.

WHERE IS THE ACCOUNTABILITY? HOW DO I EVEN KNOW IF KIDS ARE WATCHING THE VIDEOS?

There have always been concerns about students not completing the work they need to complete at home. Flipped Learning will not be the magic potion that fixes this issue. However, if we look again at Dr. Mazur's method, he does have accountability built into the process. He requires every student to submit reflections, questions, and concerns before each class period. Teachers should be posting thought-provoking questions that guide students as they explore the at-home material. The work at home should not be without some sort of focus. Additionally, in class, there should be a tremendous amount of interactivity among students as the teacher circulates around the room. If the teacher sees there is a student not taking part in the conversation, this can be easily addressed.

To continue, we would guess that a large majority of students who do not do their work at home are not doing it because they are either bored and feel like the work is there simply to keep them busy, or they are struggling and do not understand the work. So to address accountability, teachers also must think through these issues.

If students are bored, they need to be presented with resources to explore at home that go deeper into the topics the class is learning. They need to be given more advanced issues that require them to make connections with others outside of the school building and around the world. The teacher, who we already said will be more important than ever, is going to need to individualize work for these students. The teacher also should provide more opportunities for these students to create additional resources for the rest of the class to use that might further assist those who are struggling. The key to motivating students who are bored is to honor the knowledge they have, challenge them to dig deeper, and not hold back their potential. If you take a look at Khan Academy, you will see that students can chart their own path through curriculum and receive instant feedback from problems they tackle on the site. This real-time, self-directed journey through curriculum certainly can help some students with boredom and frustration.

Students who are struggling require a different approach, and as Greg Green, principal of Clintondale High School, told us, "[The Flipped Learning method] eliminates the learning obstacles that all students face when they are practicing without an expert." Struggling students need to be offered

safe places where they can ask questions and share their confusion anonymously and without ridicule from peers. This type of environment can be set up within different social response tools, like Edmodo, Schoology, or Nimbus (powered by Schoolwires). They also need more time and individual attention to learn material. With the resources created for the Flipped Learning method, students can watch or listen over and over again while pausing the content, working a bit, and then playing more. Then, as students do their "homework" at school, teachers can immediately address problems as they are walking around and listening to conversations. Teachers know the students who are struggling, and they can give these students the attention they need. Through this process, as students see success, their confidence and work ethic usually skyrockets.

AS A TEACHER, I DON'T HAVE THE TIME OR THE EXPERTISE TO PRODUCE ALL OF THE VIDEOS REQUIRED TO TEACH LIKE THIS.

Schools are going to need to be very smart about how they address this concern. In our opinion, not all teachers should be making these videos for their classes. School leaders need to find those who have the highest abilities in combining the subject knowledge they have with their ability to present this knowledge in the most creative, engaging ways—even if these teachers are not in their own schools.

Two chemistry teachers who are early pioneers in using the Flipped Learning method, Aaron Sams and Jonathan Bergmann, have already figured this out. They quickly learned that they each have different strengths that motivate individual students in unique ways, so they teach using a team approach. Even though one teaches AP chemistry and the other teaches regular chemistry, they alternate who produces the content for each class. They understand that their students appreciate the different teaching styles. At Clintondale, Greg Green agrees as well. In a recent podcast, he told us that he does not care where the videos come from. Whether from his school, from another state, or even somewhere on the other side of the globe, his goal is to have the best teachers he can find teaching his students every single day.

The other key point to remember is that an entire school should not jump into teaching this way with two feet. Begin by finding a core group of teachers who might be interested in experimenting with this method. Charge them with trying a Flipped Learning lesson once or twice a week. As a leader, meet with these teachers regularly so that you can learn about the successes and issues that arise. Over time, these teachers will be starting a library of content that they will be able to use as a base for years to come. With success, more teachers might become interested. They should be encouraged and given the professional development they need at that time to get started. They also should be partnered with the pioneering teachers, who can serve as mentors.

Creating tutorial videos is certainly not for every teacher, but there are other components that can involve every teacher. Remember that the really important component of this process is to develop high-level, engaging questions that serve to deepen thinking and address misconceptions. These other teachers can help in the development of such questions. They can then use these questions in their classes, whether they are "flipping" or not. Also, they can be taught how to scour the web to find high-quality resources that have already been produced and can become resources for all teachers. Through this team approach, all teachers in the community can be involved in ways with which they are comfortable. (By the way, students also can be tapped to locate high-quality resources from around the world.)

CONCLUSION: MAKE THINKING 'VISIBLE'

One of the most important concepts in teaching is creating opportunities to make thinking visible. When teachers can really see the thinking of their students, they can provide these students with the support and encouragement they need to be successful. We believe that by using the thoughtful approach to the Flipped Learning method described at the beginning of this article, teachers have an amazing opportunity to gain insights into where students are struggling.

To hear more about how the Flipped Learning method has impacted students, teachers, and entire schools, we encourage you to listen to Dr. Mazur's BLC11 keynote, as well as our podcasts with Greg Green, Aaron Sams and Jonathan Bergmann, and Bob Goodman. We are sure you will enjoy them.

In addition, we invite you to attend the 2012 Building Learning Communities conference being held in Boston during the week of July 15th. Here, you will be able to take part in sessions and discussions with Aaron Sams, Jonathan Bergmann, Greg Green, and Eric Mazur. You will also be able to attend Chris Anderson's keynote. During this keynote, Chris will be showcasing the new TED-generated content to support student learning. Learn more and register at http://www.blcconference.com.

About November Learning

Alan November has been an education technology consultant since 1995. Since then he has helped schools, governments and industry leaders improve the quality of education through technology. In 2004 Alan expanded November Learning to include a team of educational specialists and a wider range of educational materials. The November Learning Team is a highly specialized group of educators. We have a range of expertise in educational issues, with a primary focus on community building and technology integration. The November Learning Team is dedicated towards supporting and challenging teachers and students to expand the boundaries of learning.

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