

THE FLIPPED CLASSROOM: THE STUDENT PERSPECTIVE

During the 2013-2014 school year, Ms. Davis and Mr. Wintermute implemented the flipped classroom in Honors Advanced Algebra 480/481 and Accelerated Honors Precalculus 494/495. We asked our students to complete an online survey at the end of the year, rating and describing their experiences in the flipped classroom. Here are some excerpts taken from their online responses:

Q: WHAT WERE SOME, IF ANY, OF THE ADVANTAGES OF THE FLIPPED CLASSROOM?

"I loved that the videos were so easily accessible, and everything in the videos is what we needed to know. The videos covered all the material and I actually felt like I picked up a lot of knowledge, more than I have in any other class."

"Being able to pause the videos and replaying them. Also, which may sound weird, I liked that I could watch the video on my own schedule. In class I do not always feel like listening to lectures or am in the mood to be an avid student, but with the videos I could watch them on my own terms, and so when I felt ready to learn I could watch them."

"I liked the fact that I can go back to the videos and watch them. When I miss a day I actually have the lesson ready for me to watch whenever I can rather than having to ask for someone's notes in class and trying to understand what they wrote. That was really beneficial for me. Also, the fact that I can pause the video at any time, which I did a lot, which helped me because I saw if I could actually solve a problem."

"I liked that I could watch the video again if I didn't understand, and still had teacher help later. Also when I was sick, if I was feeling up to it, or if I was absent for something and had time later in the day I could keep up with the class b/c I could access both hw and notes!"

"You can work at your own pace. It is like a 1-on-1 lesson instead of having a class full of students who work slower than me and have a lot of questions."

"It really helps with being able to go at your own pace with watching the videos and rewinding notes and pausing them and being able to ask in class how to do certain homework questions because they might be too lazy to ask the next day in class and if you don't understand how to do any of the homework, instead of leaving it blank that night, you can ask questions right away."

Q: WHAT WERE SOME, IF ANY, OF THE DISADVANTAGES OF THE FLIPPED CLASSROOM?

"Just the fact that you cannot ask questions to your computer screen right as you are watching it, and you forget over the course of the day what questions you have. Also if you miss a video you feel way behind and way swamped. It is very stressful trying to keep up."

"You can fall behind very easily if you do not watch the videos. If you don't watch the video that means you can't do the homework. Then you have more homework than just the video and the work keeps piling up the more you procrastinate."

"The disadvantages were getting off task during class and not finishing the homework made me a day behind."

"It is really easy to say to yourself oh I'll watch the video later and then never do it."

"The only thing I did not like about flipped classroom was how easily I could get lazy and distracted in math. First semester, I watched videos on time and finished homework on time. For the most part, I also did the same second semester but during softball season I got really lazy. It was during this time that I understood how easy it could be to not do any math homework for a long time, and then learn the entire lesson the night before a quiz which is a BAD way! I got super behind and super stressed and I am glad that I learned from that."

"Getting lazy and not watching the videos."

"If my group was less productive and off- topic, I wouldn't understand the material as much and would sometimes fall behind."

WHAT STUDENTS SAID ABOUT THE FLIPPED CLASS:

"The overall experience of the flipped classroom was great because instead of having a boring, note taking math class, there were many opportunities for us as students to interact with the teacher during class on homework, rather than having to try to work out a day to go in and talk after or before school."

"Flipped classroom is a great way to learn. It allows for easy access for help when a lesson is hard for you learn. It improved my math grade from freshman year by 2 grade levels."

"I showed my friends in other math classes your website and they would watch your videos, and they thanked me because your flip classroom helped them better understand the material."

"I really enjoyed being in your class. The flipped classroom was a great experience. You really helped me understand things I didn't get. You also took out time of your own to make videos for us and gave me your full attention when I needed help which I've never really been able to get at school."

"I liked the flipped classroom because you really take control of your learning, yes you do have to watch the video every night but you'll get the grade you deserve. You get what you put in!"

"It's just such a great system. I'm pretty good at math either way, but flipped class makes it easier to learn, and more importantly, easy to review. There's never that feeling of 'oh no my notes were awful so now I'm going to fail' because you can always go back."

"I loved the flexibility of learning lessons. As long as I watched videos before the class period, I could watch them any time. I had no designated time to learn math which I loved."

"Often before tests and quizzes, I could go back and watch the videos and look at answer keys which allowed me to make sure that I understood the concepts. My friends from other [non- flipped] classes also took advantage of the flipped classroom because they often watched videos on lessons that they did not understand."

"It is nice because you can learn at your own pace and speed up or slow down through the information based off your personal understanding of the topic. Then, you can do the "homework" in class and have the feedback and help from friends and your teacher so that you don't come back the next day confused over problems you did the night before. It requires you to be disciplined enough to learn all the information at home but in the end I think it's a much more effective way of teaching and learning math!"

"Overall, flipped classroom was a great experience for me. Flipped classroom allowed me to learn new math skills for homework and then allow me to practice what I just learned in class and ask my teacher questions. Additionally, it allowed me to understand time management and my grade reflected the effort I put in."

"I think the flipped classroom really separates the students eager to learn and students who show up to class because they have to."

Q: WOULD YOU RECOMMEND THE FLIPPED CLASSROOM TO ANOTHER STUDENT?

"Yes. I really enjoyed the flipped class because a) if you have questions you can ask the teacher right then and there b) you can finish your homework in class which frees up time later on c) the videos are shorter than an average lecture and d) you get to work with friends."

"I highly recommend a flipped classroom because it is a more efficient way of learning. Although it is extra work for the teacher to make the videos it helped me out a lot this year. I could also tell that it helped my peers out too. Having time at home to complete a lessons at my own pace really helped me understand the subject better. If I didn't get what the video was teaching I could rewind it, or come in the next day with questions. The part I love the most is only having to watch a 10-20 minute video for homework. It is very efficient and saves time. The flipped classroom really made me want to learn and excel in algebra."

"Yes. Overall, I enjoyed the experience of a different classroom environment. I felt that I had a lot more control over my grade and my growth as a student. I felt that silly mistakes on exams hurt my grade but other than that, the flipped classroom helped me feel that I was a strong math student, something that I did not feel in 90s geometry. The pace certainly helped me get better grades and the ability to work with a lot more people removed most of the stress from the class."

ADVICE TO FUTURE FLIPPED MATH STUDENTS:

“Watch the videos. They really are helpful. Not only with the math you are currently involved in, but the material continues on throughout other math courses you take and the videos supply great foundation.”

“If you watch the videos, you're setting yourself up to be successful for quizzes/tests, but you have to stay on top of watching the videos. The flipped classroom lets you pause the video and do the notes at your own pace, rather than just rushing through it in class. Also, at school, you get to know your teacher a little bit more because there's more opportunity for a one-on-one question!”

“If you put in the work you need to, this will be the easiest class you've ever taken. Figure out what makes you learn best, and use the videos in the way that's going to contribute the most to that method. That might mean watching one problem and finishing the rest on your own, or it might mean watching and rewatching entire chapters. As long as you learn -- and do so in the way best for YOU, not the kid next to you -- it's all good.”

“My overall experience of using flipped classroom has had its ups and downs but it really does help learning a lot easier, especially math, because you are able to review anything as many times as you want and Ms. Davis is able to answer any questions you are still confused about. My number one advice would be to make sure you always watch the video each night! Once you fall behind, you begin to do more work, it starts to be stressful and you do not perform as well on tests and quizzes. WATCH THE VIDEOS!!”

“Take the videos seriously! Not just watch them to get it done. Take good notes and take advantage of the fact that the lessons are available for you literally at any time!”

“To get the most out of this class, make sure to set aside enough time each night to watch each video and annotate what questions you have as well as if something doesn't make sense because when you think out the class, you'll have more confidence throughout the year.”

“The flipped classroom is definitely a positive learning experience. I felt more comfortable with completing my homework knowing that my teacher was right there to help if I needed it. My advice to younger students would be to come to class with questions prepared after watching the video! If you are confused on material in the video, ask questions the next day in class! The teachers are very open and helpful with questions.”

“The flipped classroom is a really positive experience and there are many ways that you can take advantage of the way this class is taught. Remember to ask questions the next day if needed and your peers are always a good source of help. Re-watching videos always helps with further understanding and if you needed a quick review before a test, it was to your advantage to watch it again. Make sure you keep up with your calendar assignments and the year should go by very smoothly! letting homework and video assignments pile up, really gets overwhelming when left for last minute. Good luck!”

“I really enjoyed the flipped classroom because it allowed me to develop my problem solving skills and answer more difficult questions for new topics. Your teacher is there to answer specific questions on how to go about your homework, giving you more practice on the material. However, it is easy to fall behind on the course so do everything you can to stay on top of the videos and assignments. If you do the work it will reflect in your grade.”

“I thoroughly enjoyed the flipped classroom. A problem is that it's easy to fall behind. If you skip a video for one night, it will be extremely hard to catch up. You will just create more work for yourself. My advice is to just stay on task and get your work done and the class will be a breeze. If you dig yourself into a ditch, the class will become 100x more difficult. The flipped classroom is an experience you could participate in and it would be easy and beneficial, or you could slack off and it would be that much harder for you. Your teacher goes above and beyond to give you all the information and to help you out, you just have to do your part and be willing to accept it.”