Special issue: Innovative Teaching Personal Essays

Wacom Leads to a More Efficient Classroom Model

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No printer at home, no office on campus, online submissions, and not enough hours in the day. My first time teaching mathematics courses online, I saved all of my students' assignments to a USB drive, printed them from work, and then scanned the annotated versions to send to my students. There had to have been a more efficient way. I had software on my computer that would allow me to comment on students work, but writing mathematical notation with a mouse was more time consuming than printing out the documents to provide written feedback, not to mention it was extremely illegible to write math with a mouse. So what could I do? I didn't own a tablet, I was still in grad school, and funds were low. I was on the hunt for some sanity and came across the Wacom tablet.

The Wacom tablet is under a hundred dollars and is also the best investment of my career. It was the first semester our department offered online courses, and I was determined to help my students understand mathematics the best way I knew how. This meant I needed to be able to show them the steps involved in a legible manner. The students and my sanity, combined, made it completely worth purchasing this device on my own.

My second year teaching online, Blackboard, our college's learning management system, added an inline grading tool. Thanks to my Wacom tablet, I can now comment on students' online submissions in a quick and effective manner. No more wasting time or paper, saving and

printing documents. It is small, lightweight, and I don't even notice it in my laptop case. I carry it with me everywhere, and if I have Wi-Fi, I can grade. What else can I use this for?

Since then, I have integrated the Wacom tablet in the classroom on a daily basis. No more students asking me to move out of the way when I write on the board, as now they are able to see everything I write on the projector screen, no matter where they sit in the room. I have always handed out guided lecture notes to my students. Although I noticed that students thought about the processes that were occurring, they still tend to fall behind in taking notes. Instead of worrying about keeping up with writing notes, I want my students to ask questions about the math concepts as they occur. Since I have integrated the use of the tablet in my classes, my students have become more involved in class and tend to stop me and ask more questions. In addition, as there is no more having to creating separate filled-in versions of the problem sets, there is more time saved on my part. I can save the notes from class, and they are identical to what I covered in the lesson. No matter how prepared I am, students always have questions. There are times that I may cover material from a previous class that isn't on the guided lecture notes. This dilemma is not a problem because I can insert my document into Microsoft OneNote and have all the extra pages and room I need. This allows me to save the final document as a PDF and share it with my students. The learning curve for the Wacom tablet is minimal. The improvement of classroom engagement has not only sustained the use of this device but also generated additional innovations for its use.

More recently, I began teaching using the flipped classroom model, creating videos that correspond to my guided lecture notes. There is nothing worse than watching a video and having to wait to see what was written on the board until after the speaker moves out of the way. The Wacom tablet allows me to create videos that capture my voice and what I write at the same

time. Students can check out some of the videos I created on my website. Furthermore, during class, the students work on problems, and I am able to write out the solutions in digital format for them to review.

One issue that arose with the Wacom tablet was that it required software being installed on the computer, which wouldn't be a problem normally, but the IT department at my college has policies that made this impossible by the start of the semester. Therefore, I decided to bring my laptop with me and hook it up to the projector, which solved that problem. I already installed the software on my laptop for grading, so now regardless of the classroom I teach in, I can use my Wacom tablet. I decided this would be easier than worrying about the classrooms having the software every semester.

I have also incorporated the Wacom tablet into my online courses. Not only for online grading but also for answering students' questions and online office hours. I am able to depict problems for students and show them steps without having to waste time formatting. This is such a time saver. However, I must still teach students the symbols that correspond to the keyboard, as they won't necessarily have an easy way to write mathematical notations at home. Now if I could only make them mandatory for students and have financial aid to cover the costs.

I never realized all the benefits that would stem from purchasing this simple piece of technology. I knew there was technology that allowed you to write on a touch screen so I assumed there was technology that was compatible with older computers. So on that hunt, I found the Wacom tablet. As a graduate student and now an adjunct, utilizing my personal resources for the benefit of the students was a given as my department did not offer a computer to use for online teaching. A few barriers could be the cost, IT policies, and hand eye coordination. However, these obstacles seem trivial compared to the benefits the students and I

both acquired from the implementation of the Wacom tablet. This is an example of integrating

the Wacom tablet as an innovative teaching device whereby students can spend more time

listening and absorbing the course information. I treasure my Wacom tablet and hope that you

find it as useful as I do. You can purchase them at Best Buy, on Amazon or directly from the

manufacturer.

References

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