Results Rep ort

Dr. Philip Huling

Department of Mat hematics and S tati stics

ǲ    ǳ

M ath 1510 Ȃ Calc ulus I

Fall 2016, Spring 2017, and Summer 2017

The goal of this experi m ent was to crea te a fli pped classroom for a Ca lculus I

The biggest issue is that I was never aware which microphone it was using. Most of
the time even when the audio was being captured by the iPad, the videos were of
decent quality.

I was able to develop a much better classroom environment with more discussion
and interaction.
The technology did prove useful when giving review sessions outside of the
normal class schedule. Some students were unable to attend these review sessions
due to work or other commitments and this allowed them to still view these
sessions. One session lasted over an hour and half with students asking lots of great
questions. With the technology, I was able to capture this in its entirety and post in
YouTube for students to view. Both students who did attend and those who did not
attend said that they found this video especially useful.
 The biggest lesson I learned is that studentǯ
switch their learning methodology. I am unsure if a fall semester section would have
been more receptive to the change or not. It is possible that first semester college
students would be more willing to try something different.
 If I were to try a flipped classroom again, I would definitely make sure to do
more research in advance about ways to make the experience work. I feel as if I had
the pieces needed for the students to su3sh.im0 1 1ce 90.02424242Wlbm u suss(e im0l(chf)3cilI)4(ttae)-2(p)-3(hi)ahad

cell phone pictures. This has proven to be a big win for everyone. Mathematics is a
very difficult discipline to typeset. It can be done very professionally using specific
scientific word processing programs, but it can be, at times, quite time and labor
costly as it requires basically a computer code language to generate any non-trivial
expressions. Mathematicians can email this code with little issue between one
another, but not many undergraduate students, and especially very few freshman,
would be able to parse the information. The iPad Pro allows me to take their
handwritten work, circle what is wrong and annotate on the image just as if I had a
real pen on real paper. This has opened up a vastly larger ability for me to help
students electronically. In the past, I would often tell students in email what I could
based on the limitations of just typing and encourage them to come see me in office
hours for further discussion. Now, I can give as much feedback as I want with
minimally more effort than if they were sitting in front of me. In addition, I have used these innovations very successfully in my online
Calculus section. As students submit work electronically, the ability to annotate that
work electronically and send it back to them in a time manner has been invaluable.
This has allowed me to make the experiences more similar to a traditional course. In closing, I think it is important to reiterate that a lot of success has come
ϩ$㆐䨑⛯뺷ᄦᆒᄒ棱௠