Ventura College Sabbatical Leave Proposal

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Ventura College

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Instructor's Sabbatical Leave Status
Full Time Hire Date: August 10, 2015
Previous Sabbaticals: 0

Sabbatical Project Background

Part 1: What I learned from creating my own instructional videos during the lockdown.
In the beginning of the Covid-19 crisis, most if not all instructors at Ventura College were given one week to transition all their classes to an online format. This put tremendous pressure on teachers and students alike. We had several challenges and questions. How does an instructor communicate (teach) the subject material to the students without being in the classroom? I believe that was the biggest challenge, and it was my main focus.

I decided to make instructional videos for the courses that I was teaching, namely statistics (Math V44 at Ventura College) and first semester calculus (Math V21A at Ventura College). I used Canvas studio to make these videos. Our math department chair asked myself and another math instructor to do a training for the math department faculty on how to transition their classes online since we all only had one week. My part of the training mainly focused on teaching math instructors that they could make instructional videos, how to make them using Canvas studio, and strategies that I learned along the way.

I ended up creating videos for literally all of the required subject material for the two courses that I was teaching (statistics and first semester calculus). In other words, all of my lectures and required subject content for those courses are on video and embedded in my Canvas courses. It was immensely labor-intensive to create these videos. In fact, it took far more time and effort to create these instructional videos than all other online teaching duties combined (such as setting up Canvas, creating assessments, grading, etc.). Due to the time and effort it took, I was concerned about the amount of value that it would be to students. In other words, was all this time and effort even worth it? It turned out the time and effort really paid off after all. I have received so many positive comments from students regarding my online classes and the students always mention the videos that I created in particular. Time and time again my students gave me and give me positive feedback on the instructional videos that I created for them. I was and am so glad that the videos were valuable to the students, especially since it took a colossal effort on my part. I have continued to use the videos in my online and hybrid classes, with great effect. Students in my hybrid math courses have also mentioned how they love the videos I created for them.

I have learned a lot about making instructional videos by experience. Most importantly, I have learned they are effective and have value. I have improved through experience the instructional quality and production quality of my videos. I still have so much more yet to learn.

Part 2: Additional Challenges in Math Education caused by the Covid-19 epidemic. Because students at all levels (including K-12) were not able to attend classes in person, math education on all levels has fallen dramatically over the past 2 years.

In a New York Times article: *"The Pandemic Erased Two Decades of Progress in Math and Reading. The declines in the national test scores spanned almost all races and income levels and were markedly worse for the lowest-performing students. Student test scores, even starting in first, second and third grade, are really quite predictive of their success later in school, and their educational trajectories overall," said Susanna Loeb, the director of the Annenberg Institute at Brown University, which focuses on education inequality."*
https://www.nytimes.com/2022/09/01/us/national-test-scores-math-reading-pandemic.html
New York Times, September 01, 2022

In an article in the San Diego News Tribune: *"Public school students' math performance in San Diego Unified, California and across the country suffered their steepest declines in more than two decades after two turbulent years of the COVID-19 pandemic, 2022 national standardized test scores released Sunday night show. But despite the hardships of the pandemic, students' reading scores in San Diego Unified and statewide managed to hold steady with 2019 levels."*
https://www.sandiegouniontribune.com/news/education/story/2022-10-23/student-test-scores-fell-naep-pandemic
-San Diego Union Tribune, October 23, 2022

In yet another article, this one from Chaulkbeat: *"Students in fourth and eighth grade saw unprecedented declines in math and significant dips in reading achievement between 2019 and 2022, according to the results of national exams given last school year and released Monday. The declines were broad-based — affecting students in every state and every region of the country."*

"The results point out and confirm that this is a pretty massive hit to student achievement in our country," said Scott Marion, a testing expert and member of the board that oversees the tests."
https://www.chalkbeat.org/2022/10/24/23417139/naep-test-scores-pandemic-school-reopening
Chalkbeat, October 23, 2022

Math education and math performance being negatively impacted from the crisis we faced during the years 2020 through 2022 are well-documented around the country. Unfortunately, this is causing a ripple effect for years to come.

Part 3: What we have learned from the effects of AB 705: AB 705 took effect January 1, 2018. The purpose of AB 705 was to ensure that students are not placed into remedial courses that may delay or deter their educational courses that may delay or deter their educational progress unless evidence suggests they are highly unlikely to succeed in the college-level course. Assessment instructions and placement policies have serious implications for equity, as students of color are far more likely to be placed into remedial courses; students placed into remediation are much less likely to reach their educational goals.

If we cannot rely on assessments, then it seems virtually impossible to provide strong evidence suggesting a student is unlikely to succeed in a college-level math course. The fact remains however, that there are those students who find themselves in math courses they are indeed underprepared for.

While AB 705 has its advantages, like all changes, it has its disadvantages as well. Math builds on itself. In order for a student to be successful in college algebra (Math V04 at Ventura College), it was and is important for students to understand the material from intermediate algebra (previously Math V03 at Ventura College). In order for students to understand intermediate algebra, it was and is important for students to understand the material from introductory algebra (previously Math V01 at Ventura College).

Because we do not offer these developmental courses in the way that we used to, math instructors are finding more and more students who are underprepared for the college math course they find themselves in. This puts pressure on underprepared students placed into college algebra (Math V04 at Ventura College) especially, as they simply do not have the prerequisite math skills to be truly successful, setting them up for failure and also putting tremendous pressure on the instructors of college algebra. This creates a ripple effect that carries over to subsequent math classes, all the way through calculus and beyond. When a student does not have the developmental math skills to be successful, where or who do they turn to? How can they hope to get the information and requisite instruction they so desperately need?

Furthermore, because of the challenges outlined above in part 2 (by the negative effect of the Covid-19 crisis), any negative effects potentially arising from AB-705 have only been exacerbated.

Statement of Purpose

Component 1: Create instructional videos for several math courses we currently teach. I will create a complete set of instructional videos for the following courses we currently teach: college algebra (Math V04 at Ventura College), plane trigonometry (Math V05 at Ventura College), and precalculus (Math V20 at Ventura College). I will share all these videos on the department Canvas shell for other math instructors to use if they choose. I will organize these videos by topic to make it easy for the user to find the video appropriate for them. I am also happy to share all these videos with VCCCD so that math instructors that teach at other colleges in our district could use them if they choose to.

Component 2: Create instructional videos for developmental math courses we previously taught. I will create a complete set of instructional videos for the topics of introductory algebra (previously Math V01 at Ventura College) and intermediate algebra (previously Math V03 at Ventura College). I will share all these videos on the department Canvas shell for other math instructors to use if they choose to, or if they simply want to make those videos available for their students. I will organize these videos by topic to make it easy for the user to find the video appropriate for them. I am also happy to share these videos with VCCCD so that math instructors that teach at other colleges in our district could use them if they choose to.

Value of the Sabbatical Project to: Students, Ventura College, and the VCCCD (District)

Component 1: Instructional videos for courses we currently teach

Online courses: Instructors could use the instructional videos for online courses they teach.

Hybrid courses: For courses that meet once per week, there's no way for the instructor to fit in all the course material in one course meeting per week, as that is half the time of a face to face course. Half of the instruction is online. With a library of instructional videos, an instructor could have the students watch instructional videos at home to supplement what they do in class. In addition, there are some instructor who do not like to use class time for traditional lecture. For example, some instructors prefer to use class time to have the students work on exercises in groups. There's nothing wrong with that, but like with anything, there's downsides. Some students may want or need lecture style explanations of certain mathematical concepts. Having the instructional videos would allow them that. In addition, any gaps in concepts not covered in class could be covered by the instructional videos. This way the student gets the benefit of more explanation in the videos to complement the more interactive learning they do in the classroom.

Face to face courses: The instructional videos can also be useful for courses that meet face to face twice per week. Suppose an instructor is sick or misses class for any reason. For most of our math classes, we have a lot of content to cover throughout the course of the semester. Missing one or two classes can greatly impact the pacing of the course and it is easy to get behind quickly. Instructors could use the videos as a backup for days they have to cancel class. In addition, there's some instructors who like to do group work, flipped classroom, or other models which restrict the amount of time they can explain concepts in class. With a library of videos, these instructors can offer their students the best of both worlds. If a student wants more explanation, they have a library of videos organized by topic to get the further explanation they are wanting or needing.

Component 2: Instructional videos for topics from developmental math courses we previously taught: Having a library of instructional videos for the developmental courses we used to teach will be of great use to instructors and students. If a student is woefully unprepared for the math class they find themselves in, an instructor simply does not have the time to teach them all the prerequisite topics the student is supposed to know going into the class. We know that for the reasons explained above (Sabbatical Project Background Part 1 and Part 2) that we expect more students underprepared for the math class they find themselves in than ever. Having a library of videos for these developmental math topics would give the instructor a valuable resource that they could offer the student. The student can watch the videos, and if they have questions, the instructor's time could be used more effectively clearing up any confusion in one to one help during office hours or by email rather than having to try and teach them the entire topic (for a prerequisite topic they are supposed to know going into the class).

I believe it would be highly beneficial if the students had a library of instructional videos for these developmental math topics so that they have a solid resource to refer to. Even for students who are mostly prepared for the course they are in, many times there is a math weakness or gap somewhere. It would be beneficial for them to be able to watch an instructional video to fill their particular gap in understanding. They may not need to learn all the prerequisite topics, but if they

could receive instruction on the topic that they in particular need (perhaps the student just needs a refresher on how to convert a fraction to a percentage for example), this could help the student greatly.

To the Instructor
I have become increasingly interested in instructional video content creation. I have room for improvement and there's still so much for me to learn. I have already invested in a better microphone, camera, and lighting.

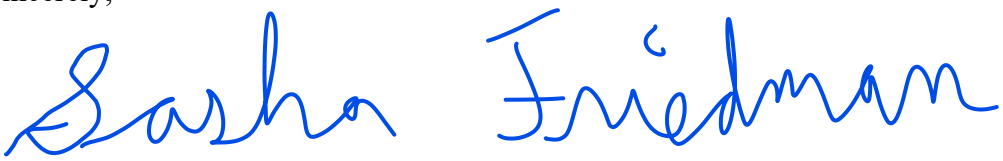
In addition to having the instructional videos available for math courses I teach (face to face, hybrid, and online), I am interested in growing as a teacher by creating videos for math courses I do not normally teach and for the developmental courses that we used to teach. I am also looking forward to growing as a teacher by learning more about how to create better videos both in content presentation and production. Quality video creation is a labor-intensive endeavor and I like a challenge.

Ventura College classes directly affected by this Proposal

- College Algebra (Math V04 at Ventura College)
- Plane Trigonometry (Math V05 at Ventura College)
- Precalculus (Math V20 at Ventura College)
- Elementary Statistics (Math V44 at Ventura College)
- First semester Calculus (Math V21A at Ventura College)

Thank you for your consideration.

Sincerely,



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