

Panel: What COVID-19 is Teaching Professors: Pandemic-Level Changes in our Classrooms

Hollis Greenberg
Wentworth Institute of Technology
Boston, MA, USA
greenbergh1@wit.edu

Tim Preuss
Minnesota State Community and
Technical College
Moorhead, MN
tim.preuss@minnesota.edu

Dan Bogaard
Rochester Institute of
Technology
Rochester, NY, USA
dan.bogaard@rit.edu

C. Derrick Huang
Florida Atlantic University
Boca Raton, FL, USA
dhuang@fau.edu

Cara Tang
Portland Community College
Portland, OR, USA
cara.tang@pcc.edu

ABSTRACT

With the swift appearance of COVID-19 in the U.S., colleges and universities were left scrambling to adjust courses while students went home to far-flung time zones. As faculty, we were left pondering questions, such as: How do we teach this subject online? Do the online skills we have apply to our traditional students?, Do we have to re-write our syllabi?, What technology is available to us immediately? Should we teach synchronously or asynchronously? And what is Zoom anyway? The panel will discuss and share changes in teaching and what worked (and what didn't) during our pandemic-era teaching.

CCS CONCEPTS

- Social and professional topics-Computing education

KEYWORDS

Computing education, Computing degrees, Course delivery, Online methodology

1. INTRODUCTION

Professors are used to predictability. Every semester lasts 15 weeks, courses follow the same cadence, and term prep can start months in advance. However, COVID-19 has taught professors that nothing is as it was before and we must be flexible. Our comfort zones have been thrown out the window as we learn new video conferencing software, learn the ins and outs of our LMS's, and adjust to teaching students from outside the classroom. Just as we did in the classroom, we needed to pivot our lessons to adjust to the changing conditions and the current needs of our students.

Before COVID-19, some professors were experienced in the "online" teaching modality. The term "online delivery" has

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multiple meanings; it can denote an asynchronous delivery, synchronously delivery, or even be used in a hybrid methodology.

Just as faculty skill levels differ, so do the learning styles and needs of our students. Some students struggle with organization, others prefer to learn at their own pace, and yet others grapple with the difficulty of internet connectivity or from being in a different time zone from campus. How were we going to make learning work, very quickly, for all of our students?

Below you hear from both 4-year university and community college faculty in geographically dispersed areas of the United States, where COVID infection levels ranged from rampant to barely negligible.

2. DAN BOGAARD, ROCHESTER INSTITUTE OF TECHNOLOGY

While Rochester Institute of Technology is indeed in New York State, Monroe County has been relatively blessed with only a 454 confirmed rate per 100k [1] population at the time of writing (June 2020). While it is still a high number when compared to much of the country, it is a lower number when the northeastern section of the country is examined.

My personal introduction to the new reality happened during RIT's spring break, while I was visiting family in Florida. While I did manage to scramble back in time, RIT had declared that spring break was extended a week to give faculty some time to plan – after which all courses were moved to a distance-based learning model (either asynchronous or synchronous).

Having had experience teaching online courses, I was still a bit worried about the speed at which it was needed to turn around materials – especially in a technically-based course. In the past, I would have recorded lectures that walked students through issues – but this time I tried something different, a self-paced, document-based learning where the students were able to asynchronously learn the material. The results, while preliminary, were much more positive than I would have guessed.

3. HOLLIS GREENBERG, WENTWORTH INSTITUTE OF TECHNOLOGY

Wentworth Institute of Technology (WIT) is located in the heart of Boston, Massachusetts where, at the time of writing (June 2020), there have been 105,395 confirmed cases and 7,576 COVID-19 deaths. [1] Immediately WIT cancelled all in-person classes,

following spring break, and gave faculty three days post-spring break to re-tool courses to work online.

As an experienced online instructor, I was not worried about teaching online. However, I knew I had to set up my courses differently for our traditional student body, rather than how I previously taught online adult learners. During this three-day period, I learned new-to-me tools, such as Microsoft Teams and Zoom, and continued (and in some cases, began) using a flipped classroom approach with my courses. I pre-recorded my lectures using Panopto software and uploaded these to our LMS. I held live classes for interactive class discussions. As our newly re-tooled classes began, I found I craved, more than ever before, interaction with my students.

4. C. DERRICK HUANG, FLORIDA ATLANTIC UNIVERSITY

Florida Atlantic University (FAU), one of the twelve state universities in Florida, serves a 6-county region in South Florida with currently over 30,000 students. FAU transitioned to all remote classes on March 16 and decided to remain so until the end of summer. Extensive support was provided to both faculty and students during the transition, and follow-up adjustments have continued to be made ever since.

I was minimally impacted because I only taught online and lecture-capture courses during the spring semester. It was expected that everything would continue as previously planned. However, I discovered that, even in online courses, students ran into trouble keeping up with the schedule when the campus was closed. Because FAU has a large population of first-generation or under-privileged students, access to required software, additional hardware (such as webcam), and reliable Internet service became a problem. Additionally, students were under stress due to family member sickness or job loss. As a result, even online courses had to adopt a number of measures to accommodate many personal emergencies and exceptions. The most important lesson, I found, was that guidance for students, especially nontraditional ones, is even more critical than the teaching or technologies used.

5. TIM PREUSS, MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

Minnesota State Community and Technical College (M State) is located in Detroit Lakes, Fergus Falls, Moorhead, and Wadena, Minnesota. I teach at the Moorhead campus, across the river from Fargo, ND. As of this writing (June 2020), Clay County Minnesota (Moorhead) has one of the highest rates of infection outside of Minneapolis/St. Paul area. Cass County North Dakota (Fargo) has the highest rate of infection for North Dakota. [1] The Minnesota State system extended spring break for two additional weeks for preparation for learning distance teaching by faculty. During the extended spring break, a variety of resources became available to faculty.

Upon the request of a colleague, I began recording all my lectures and labs. Before the pandemic, students would attend class in person, remotely connect during class and/or watch the class recording. After the extended spring break, the recordings continued without the in-person class option. The pandemic did

require changes in class workload, because of a shortened semester and student issues. Completing the semester was difficult. Despite all the resources, students found it difficult to focus on school work because of the rapidly changing situation at the time. Greatly diminished student/instructor interaction became the norm after spring break.

6. CARA TANG, PORTLAND COMMUNITY COLLEGE

Portland Community College (PCC) is the largest post-secondary institution in Oregon, serving nearly 73,000 students at four campuses in the Portland metropolitan area. When COVID-19 struck, PCC was in the last week of classes for the Winter quarter. Instructors were encouraged, but not required, to hold final exams online. For the Spring quarter, PCC moved to 100% remote operations. The plan for Summer and Fall as of this writing (June 2020) is for most programs, including the Computer Information Systems (CIS) program, to remain in remote operations.

The CIS department at PCC serves a little over a thousand students each term, with about 30% of course sections typically offered on campus and 70% offered online. There is an online version of all CIS courses except two: a hardware trouble-shooting course and a data communications course that involves working with physical cables and equipment. Despite the majority of our students taking online classes, we have students who strongly prefer the in-person experience and benefit from courses held on campus with the computing resources and tutoring services available in on-campus labs. Challenges for us in the current environment include serving well those students who desire the in-person experience, and quickly creating remote versions of our hardware and data communication classes which have never been taught online before.

7. CONCLUSION

A common theme throughout our experiences is that neither in-person nor online courses were able to continue as planned. Online teaching varies with delivery method (asynchronous or synchronous) and use of synchronous time is more important than it was in the classroom. Some students struggled with reliable internet connectivity, and we noted that traditional students do not transition well to taking courses full-time remotely from their home (non-school) settings. Even non-traditional students have suffered with sickness, employment changes, and other family dynamic changes during the COVID-19 pandemic. "And even in the cases that students are not taking on addition responsibilities, living in quarantine can have a tremendous impact on individuals' psychological well-being, including elevated risks of anxiety, depression, and insomnia." [2]

Many faculty have noted the need to be flexible and to check in with our students. The bottom line is nothing is 'normal' anymore. How can we best adjust to the new 'normal'?

8. REFERENCES

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