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Lemons to Lemonade: Refining an Active Learning Course for Delivery During a Pandemic

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Overview

The Spring semester of 2020 was a time of unanticipated and unprecedented rapid change for higher education in the United States. The COVID-19 pandemic struck the United States midway through the semester forcing colleges and universities to rapidly take courses online with minimal time to prepare. North Dakota was, comparatively, fortunate in that the transition occurred over spring break; however, initially the online period was only supposed to last for two weeks.

This poster presents the process that was used to rapidly change an active learning course, which was designed for in person delivery, over to being held entirely online.

Key COVID-19 Changes

- Use of Blackboard Collaborate and breakout groups for online discussions
- Course project continued online
- Adaptations to project plans required in real world due to COVID-19 were discussed
- Leveraged rapport between students developed in-class
- Many other areas were unaffected due to use of Blackboard for course components

Course Components

- Traditional lecture-style content delivery
- Textbook
- Discussion boards
- In-class discussions
- Course project

In Class to Online

The course resumed online immediately after the spring break in a format that was very close to what was used throughout the rest of the semester. Over the break, multiple video conference solutions were evaluated, including Blackboard Collaborate, Zoom, Google Classroom, Google Hangouts, Prexip, Microsoft Teams, Skype for Business, Second Life, WebEx and Adobe Connect. Zoom and Blackboard Collaborate became finalists due to supporting breakout rooms, which were seen as a key feature.

Prior to the online transition, the course had made extensive use of in-class small group discussions. Similarly, students completed in-class exercises in small groups. The breakout group functionality was integral to maintaining both of these.

Project-Based Approach

The initial design of the course, for the in-person environment, which focused on a project-component based delivery lent itself to the online transition quite well. Because there were no large make-or-break examinations, the benefit of students cheating on exams was significantly reduced, thus reducing any motivation that students might have to do so.

The in-class design of the course used Blackboard to host electronic quizzes, which accounted for a small portion of the grade. This approach was maintained after the transition to the online model. Some in-class assignments became asynchronous.

Still Synchronous

After discussions with the class, the decision was made to continue to offer synchronous sessions at the normal times. The general feeling of students in the class was that the structure was beneficial and they desired the opportunity to interact with their peers.

A plan for accommodating students that were not able to attend synchronous sessions was developed, but was not needed. Additionally, the phone link capability was enabled in Blackboard Collaborate, in case students had returned home to limited broadband. Students occasionally used mobile phones to connect, but typically connected via the web as opposed to a phone call to be able to participate in the video conferencing.

Additional group meetings were also held at independently scheduled times with each group.

Key Technology

- Document camera - allowed writing capture from paper
- Webcam - detached camera location from computer
- Touch screen - for writing on the Blackboard white board

The Lemonade

Because of the nature of the course, focusing on entrepreneurship, the pandemic provided a learning opportunity for students. The students had completed the customer discovery exercise (based on the NSF I-CORPS model), where they talked to those that would be potential customers for their service, prior to the pandemic. This would have been the most difficult element of the initial course design to replicate in the online (or a hybrid) environment. However, when they returned after break amidst the pandemic, many of the things that they had discovered were no longer accurate or relevant.

A key theme upon the return, as part of getting the projects back up and going, was discussing how to adapt business plans. For some groups, the pandemic was an opportunity, because they were developing an online service. One group, focusing on driving restaurant traffic with an app, pivoted to considering how their app could be used to drive delivery and carry-out traffic instead.

Having a change like this was indicative of the real-world environment in a way that is typically difficult to capture in a course. Future offerings of the course may benefit from a simulated change to trigger a similar exercise in pivoting.

Key Outcomes

- Students learned about the entrepreneurial process
- Students learned how software development and business processes connect
- Students got hands-on simulated business experience