Pandemic Adventures: Hard to Convert Courses

By Wheeler North

Not every course lends itself to being converted to the online or distance education modality. This may be due to students needing to master a high degree of hand skill and physical manipulation, substantially expensive and specialized equipment and facilities, safety hazards, or required face-to-face interaction as an element of the academic experience. These courses can be found in any discipline, but are most common among laboratory or activity classes. Nevertheless, not being labeled as such doesn't limit the problem to these courses. Many of the classes we teach have components that are constrained by being forced into a distance learning environment.

The San Diego Community College District is providing access to return to face-to-face learning for several essential programs. Since the colleges are officially closed, students in these programs have had to deal with a lack of support and physical services that would normally be provided in person, including drinking water and access to food.

Due to pandemic requirements, all individuals arriving on campus must be identified each day in the event an outbreak occurs and the college needs to implement contact tracing. Classroom and lab capacity is halved at best due to physical spacing needs. Some degree of cleaning must occur between each group.

Then there are the academic questions: What elements of the course must be kept face-to-face and what parts can be moved to online? Which of the allowable modalities now best suit the way we are trying to serve our students and what is it going to take to convert? For my program we've always kept lecture and lab courses separate with a prerequisite and co-requisite function to allow greater schedule flexibility for our students. However, with this new quasi-blended mindset being imposed for an unknown duration, it may be more functional to revise these paired courses into one lecture and laboratory hybrid course.

Many of us in this predicament are not yet savvy online faculty. As such, our ability to determine the ratio of face-to-face instruction to online is going to be rough and will require adjustments over time. As we get better we may discover ways to improve the online experiences or even shift more online simply because we've had the time to develop activities that do justice to the academic experiences and rigor we strive for. So, the next question is how can we reform our curriculum for online learning? Or, should we continue to meet face-to-face and consider possibly moving back and forth as the pandemic surges regionally?

For example, one course I teach is a lab focused on aircraft ignition and starting systems. When we were first told to convert all of our classes online, my immediate reaction was that it will not be an effective transition. I worked on getting district agreement to give my students in-progress grades with the objective that we would finish as soon as face-to-face instruction became possible again.

I had initially determined at least two of the class' eight projects could not be completed virtually because the students needed an aircraft engine and ignition system in hand. The intricacies of overhauling a magneto and then timing two of them correctly to an engine cannot be simulated. But as I began to learn some of the online teaching tools I came to realize that maybe I could transition some of the other projects to an online experience.

As I began to look at other classes, I realized I could have the students engage in some online activities that were academically comparable. For instance, students need to familiarize themselves with several circuits and a spring-loaded coupling system that airplanes use for starting under cold conditions. I decided I could use videos, images, research, writing, and quiz exercises to be reasonably confident that they could successfully perform maintenance on these systems under supervision.

Now that I've finished that class, I'm considering online enhancements to those two projects that must be face-to-face in the event we close down again. If I can reduce the amount of time face-to-face is required, then recovery will be that much easier. And the good news is that each of these resources is an excellent addition to the face-to-face version of each project, so the effort is not lost once we beat this pandemic.

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Of course, part of this requires cultural acceptance that we're not going completely back to the way it was, possibly ever. While this is certainly a topic each of our colleges needs to discuss, we are already in the reality of planning for next spring. In spite of the amazing technologies like CCC ConferZoom, many colleges are struggling with moving governance and decision-making to remote venues. The long-term implications for how we build relationships and rapport, critical to sound policy-making, have yet to be understood. How we support students and instruction is entirely dependent on decision-making that comes from regular in-person interaction. Many of our best decisions start from these simple conversations that happen due to proximity. For example, my college is operating with a new college president who few have actually met in person. Kudos to the guy for trying, but I can assure you it is complicating things. We all know the communicated tone is always greatly impacted by the means of transmission. Spoken versus email, or even spoken in person versus spoken-Zoom, begets wildly different results.

My goal for sharing this conversation is to inspire some critically important dialog that we should all be having. Standard operating protocols need to be in place for determining how colleges reopen, reclose, for what level of on-campus scrutiny needs to occur to provide safety for ourselves and our students, and for a host of other unforeseen but inevitable changes. Academic capacity is being compromised on numerous levels, so we must discover, adjust, and adapt. And we must accept that things are different and will likely remain so.