

Transitioning an in-person course to an online environment

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The following is intended to lay out a process for the conceptualization of how a conventionally taught course may be transitioned to a virtual environment. It is not intended as a software manual but as an aid to design, based on my experiences (both bitter and rewarding) with online teaching. This document is a working document and I plan to revise and update it periodically.

Alan

Preliminaries

Modes of interaction

Synchronous (S): Mode of interaction where the students and teacher convene at the same time (i.e. scheduled class time). In an online context the teacher and students convene remotely and communicate via online software such as Zoom or YuJa. Text-based chat-rooms are another form of synchronous engagement.

Asynchronous (A): Mode of interaction where the professor distributes/uploads material (readings, writing assignments, podcasts, Powerpoints et al, videos, etc.) and the students are given a time range to read, absorb and respond to the material. Every time we assign homework we are engaging in asynchronous activity. In an online environment the asynchronous approach works much the same where all exchange and deadlines are handled electronically. An additional benefit is that quizzes and exams can be given asynchronously quite easily in Canvas.

An online course may be conducted entirely synchronously, or asynchronously, but a hybrid version where both modes are engaged may be the most effective strategy. For example, material can be uploaded and made available at the beginning of a unit (asynchronous). The teacher then designates a synchronous meeting time to discuss the material, deliver a supplemental lecture, etc. This mode is analogous to assigned readings to be discussed during a designated class meeting.

Software

Canvas: A learning management platform created by Instructure software. The platform essentially manages enrollment, grading and delivery of curriculum and is the platform UCI uses to host both in-person and online learning environments. Most users will spend much of

their early course development learning to navigate the Canvas environment and its toolset. (eee.uci.edu)

Zoom: Zoom is a video, audio, and web conferencing service accessible by the internet (computers, tablets, smartphones) and telephone. Each conference session has one or more hosts and participants. Only hosts need to have Zoom accounts (participants do not need Zoom accounts). All UCI affiliates automatically have a Zoom Pro account. The maximum occupants for a Zoom meeting is 300 participants with unlimited minutes. (<https://www.oit.uci.edu/help/zoom/>)

YuJa: The YuJa Enterprise Video Platform is a media creation and management tool that has been adopted as the technology behind UCI's Replay system for lecture capture and other instructional media creation and distribution. (<https://yuja.replay.uci.edu/>)

Self Assessment

Normative Mode of delivery

What is (are) the model(s) for your “normal” mode of delivery of information?

- | | | |
|-------|---|--------------|
| (S) | - | Synchronous |
| (A) | - | Asynchronous |
| (A/S) | - | Both modes |
- Assigned readings/viewings/listenings. (A)
 - Lectures that articulate, explain and/or distribute information either with or without preliminary reading. (A/S)
 - Small group discussion led by a facilitator (usually you, or the TA) based on a reading or concept presented in lecture. (S)
 - Demonstration of an activity to be replicated with an emphasis on feedback. (S) (A is possible but more difficult)
 - Hands-on experiential learning of technology and/or software. (S)
 - One-on-one coaching and assessment of work (S)
 - Creative assignments with structured, student-centered feedback design (A/S)
 - *Other (A/S)*

Here, I recommend thinking through all of the material you plan to distribute over the course of a normal quarter, the order of their delivery (what comes first, etc.) and cataloguing your modes of delivery for each component. You should encounter something problematic or “high band-width” (meaning a disproportionate amount of labor). At this point reconsider your mode(s) and how they impact the content. For example, if you are used to questions and

answers during your 80 person lectures, perhaps separating the two activities into discrete engagements might make more sense.

Course size

How many students are enrolled? The size of the class is an important determinant for optimal online delivery paths. Although Zoom ostensibly can handle a meeting with up to 300 attendees, the larger the enrollment/# of participants the less functionally interactive the experience is. The number of people that need to be managed is one of the most important determinants as to whether a course largely resides in the synchronous area or asynchronous.

In general, **interactive** synchronous sessions are best served by Zoom. YuJa better supports lecture-based synchronous sessions (teacher expounding to the students) and YuJa serves as the main support for video-based asynchronous teaching because it also serves as the host/server for large video files. The limitation for Zoom sessions is in the number of participants that can effectively participate. One way to accommodate large enrollment classes where interactive synchronous teaching is necessary is to divide the class into smaller sections and have multiple meetings.

Both Zoom and YuJa feature the ability to record the session and to archive the lecture/discussion/masterclass for asynchronous use. Zoom videos must be exported to the YuJa platform as YuJa functions as the (large) video file host for Canvas. Canvas does not have the capacity to support (upload) large files directly, but does support the upload of smaller documents like PDF's.

Homework

What is (are) the model(s) for your Assignments?

- Expository writing (papers) (A)
- Problem set/worksheet/short answer assignments that engage directly with the course content. (A)
- Creative work – artistic expression and/or high-level execution of a skill set. (A/S)
- Collaborative group problem solving, where tasks are resolved or completed and performances evaluated by the students. (Can be take the form of the above 3) (S)
- Individual or group-based problem solving requiring specialized equipment and/or supplies (S)
- Other (A?S)

Homework is an integral part of student assessment. The online environment facilitate the submission and grading of homework in some ways and creates problems in other ways (text and image files are easy; video exchange is difficult;

materials exchange is impossible). If you are already using Canvas in support of your in-person course you are probably using it for the submission of homework. In general, Canvas best supports small file submission, such as PDF or Word documents, .jpg images (under a certain size). Zoom would facilitate the visual observation of a student performance/ presentation. Collaborative assignments can be done synchronously through Zoom. Collaborative assignments can also be done asynchronously quite successfully if they are text-based, where students read, edit and contribute to the group project – think Google doc's. Constant sharing of larger files runs into band width and software limitations quite quickly. *Caveat about problem sets: Problem sets work well and are easy to distribute but students will need to be able to answer the questions within some software or submission may require the student to scan their work. A scanned PDF is usually much smaller than a photo of the assignment but students often don't have access to scanners.*

Examination and evaluation

What type of exams do you construct for your course?

- Multiple choice or true/false or other types of “box checking”?
- Short answer or short essay?
- Complex Problem Set where a specific skill set must be demonstrated?
- Execution of learned work (performing art context usually)
- A combination of the above?

The process of examination, I believe, undergoes the most radical form of transformation when shifting from in-person to online, for the simple fact that it is much more difficult to proctor. The Canvas quiz tool is very effective (if not quite intuitive) in constructing a complex of text-based examination questions. The quiz can open and close at the beginning and ending of the scheduled final exam period, but academic honesty issues remain the single most challenging component to giving exams in Canvas. OIT for example addresses the issue through mitigation techniques – (<https://eee.uci.edu/help/quiz/honesty/>)

There are third party software packages such as Proctoru that proctor online exams although this topic is beyond the scope of this essay. *(editorial comment: If you google search “proctoru cheating” you will see over a million different posts on how to get around Proctoru safe guards, btw.)*

I recommend that rethinking the number and type of examinations you assign, de-emphasizing the final exam, and substituting project-based demonstrations of mastery all will need to be part of your strategy as you design your course. I, for example, use open book approaches in my examinations rather than trying to police their independence from the source material.

Goals

What are you trying to accomplish in this course.

Review the opening paragraph of your syllabus. Can you meet this overarching goal within the online mode of instruction or do you need to revise it in a way that is deliverable given all of the above?

How do your learning outcomes align with synchronous/asynchronous models?

The success of learning outcomes are measured through student demonstrations of mastery. Think through the demonstration. If it were studio piano for example, I would simply move to remote video and watch and listen to the student play, some nuance will be lost but this solution will work. In lighting design, however, how do I see the result of their work if not in the theater? While CAD software may simulate the conditions of live theater somewhat, it may be difficult to actually test the results. Here, what can be demonstrated will have to lead the design of the learning outcomes.

Build flexibility for yourself into your course.

- If you haven't already taught an online course, I would recommend that your syllabus be designed by topic.
- Outline the topics to be covered without being too specific about mode of delivery after the first unit.
- For your very first unit commit to mode of delivery and try to use one new tool as a test of effectiveness. When I first taught online courses I scheduled synchronous chatrooms that no one ever used and I eventually removed them from the course design.
- Schedule a lot of smaller exams on the material as a way of testing the effectiveness of your delivery and the efficacy of the exams themselves.
- Practice your camera technique. You will hate your first video. Make it ahead of time, even if you plan on doing synchronous teaching.
- If asynchronous models are part of your design, think beyond the weekly framework. How much time do you want to spend on each unit? It won't matter if your unit starts on the weekend or not. You can still use scheduled class time for synchronous moments.
- If you plan on delivering lectures asynchronously, don't be constrained by the usual in-class lecture time frame. I have found it much more effective to make several shorter videos (5 to 10 minutes) rather than one longer one. This technique allows students to repeat specific subtopics that they

are struggling with and it allows you to revise your material much more easily.

- Students will be taking class on their phones. Test your material on a phone.