

Leveraging Zoom Features in a Synchronous Online Web Design Course

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Introduction/Need for Innovation

Agricultural communication instructors teach many skill-based classes, such as writing for publication, graphic design, print layout, web design, and photography (Cannon et al., 2016). Skill based learning outcomes include skill compilation over time and automaticity in performing these skills (Kraiger, 1993). Instructors evaluate skill-based knowledge through assignments that apply this skill, such as using coding techniques being used to build a web page. A comprehensive study reviewed the major challenges students face when learning web design. The study found students' help-seeking behavior increased in the second week of class, when the instructor introduced HTML coding for the first time (Park, 2011). For many students, learning coding can feel like learning a new language. In fact, the literature often refers to HTML, CSS, and JavaScript as "languages" (Park, 2011). At the core of effective class instruction are collaboration (both student-student and student-instructor), active learning techniques, and prompt feedback (Chickering & Ehrmann, 1996). These characteristics are particularly important to replicate in online classrooms to provide high quality learning experiences (Tanis, 2020).

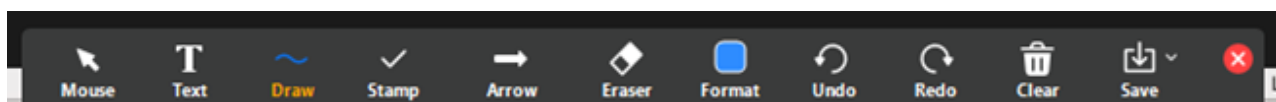
During the 2020-21 academic year, an undergraduate web design course that previously had been taught face-to-face had to move to an online course due to COVID-19 safety protocols. In the traditional face-to-face course delivery, the instructor and teaching assistant would float around the classroom to provide feedback and correct issues students had when completing activities. When the class moved to an online-only modality, the inability to see and correct students' issues as they worked through the pre-recorded tutorial videos was a major limitation. To overcome this, students were required to attend a virtual class session each week where they could get help on assignments, ask questions, and work through any issues they had encountered. In order to provide individualized attention to their web projects and mimic the personalized interaction of a classroom, we leveraged several features of Zoom.

How it Works

During each of the synchronous class sessions, students with questions were asked to share their screen through Zoom. This widely-used aspect of Zoom allows everyone to see the project from the student's computer and was used to facilitate student-student feedback and instructor-student feedback. Once the screen was shared, the instructor could use the "View Options" screen in Zoom to access additional features and tools. One feature was the Annotate Tool (Figure 1), which allows users to add text, lines, and stamps to the shared screen. This allowed us to highlight concerns or point to areas where we needed students to focus attention.

Figure 1

Zoom Annotate Toolbar



Another beneficial feature was the “Request Remote Control” option, which allowed the instructor to take remote control of the student’s computer. For remote control, the student had to allow Zoom to have access to their computer. This is a fast process and only had to be completed one time in the system preferences. From that point forward, each time the instructor asked to take remote control through Zoom, the student had to approve it. This provided an additional level of security. Once the instructor had remote access, she was able to scroll to specific lines of code or correct issues while explaining to the student why the change was needed.

Results to Date/Implications

These Zoom features were utilized in two semesters of the web design course. Students often said they would have preferred to take the course in a face-to-face classroom. However, being able to use these Zoom features allowed them to see mistakes being corrected and to learn from each other. The Annotate tool was used throughout the semester but was particularly useful the first few weeks of class as students became comfortable working in Dreamweaver and needed help navigating the new coding platform. The Remote Control function was used more as students became comfortable in the software but needed direct assistance with coding or file management. Students often expressed their appreciation for having their issues corrected in a timely manner so they could continue making progress to meet deadlines. For the instructor and teaching assistant, using these Zoom tools provided a more interactive way to address student concerns while still maintaining the social distance required due to COVID-19 safety protocols.

Future Plans/Advice to Others

As this course moves back to a face-to-face setting in the future, these tools will continue to be used during virtual office hours and help sessions. We will no longer need students to meet in person to get help troubleshooting issues. Instead, we can simply set up a Zoom session and quickly address concerns, which is more convenient for them and the instructors. We could also record a session where a common issue is corrected and share the solution with other students.

If others want to utilize these Zoom features, it would be helpful to test them in advance and gain comfort using them. We encountered initial issues with the Annotate tool such as a slight lag time between the instructor drawing on the student’s screen and it appearing for them, as well as the Share Screen toolbar hiding areas of the computer screen. However, it is a small learning curve, and these issues can be easily overcome. Using these tools can quickly make a positive impact to help students overcome the learning pains encountered in web design classes and many other online skills-based communication courses (i.e., graphic design, photo editing, layout, etc.). In fact, this type of synchronous feedback can be useful to students in a variety of classes.

Costs/Resources Needed

The instructor will need access to more advanced features of Zoom. This may be a limitation if the university is not providing the “Licensed Education” level of Zoom access, which starts at \$1,800/year (Zoom, 2021). A good internet connection is also required for all parties to allow for the screen sharing and utilization of these tools.

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