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Teaching and Learning during COVID-19: Making It Work with Zoom

Due to the threat of COVID-19, colleges and universities are facing decisions about how best to continue teaching and learning while keeping faculty, staff, and students safe (Hodges, Moore, Lockee, Trust, & Bond, 2020). Most institutions have opted to cancel all face-to-face classes and have mandated that faculty move courses online to help prevent the spread of COVID-19 (Hodges et al.). From the online platforms being used to continue teaching and learning, there are several that are most popular. Instructors have selected to deliver asynchronously using Canvas, Blackboard, and D2L.

To deliver synchronously, Zoom has been a popular choice.
Each of these online platforms yield significant benefits (Kim, 2020). Zoom integrates seamlessly with many Learning management systems (LMS). Zoom has many innovative features that can help instructors deliver engaging online lessons. The features include the chat feature, videos, sharing of screens and recorded lessons. You can annotate the screen, while sharing, and use the whiteboard feature. Prior to developing Zoom lessons for delivery, instructors are encouraged to decide online learning designs and the options listed in Table 1.

Table 1

Online Learning Design and Options

Online Learning Design	Options
Instructor Role	Active, small or none
Student Role	Listen or read, complete problems or answer questions, explore simulation and resources or collaborate with peers
Pacing	Self-paced, class-paced or class-paced with some self-paced
Online Communication	Asynchronous, synchronous, or some blend of both
Source of Feedback	Automated, teacher, peers or both teacher and peers
Pedagogy	Expository, practice, exploratory or collaborative

Zoom provides video, telephone and online chat through a cloud-based peer-to-peer software platform. It is used for teleconferencing, telecommuting, distance education, and social relations. The website connects the video calls of up to 100 individuals for a session. To join a session users can log in on the website or download the program for Mac or PC. For smartphone users, it can be downloaded for the application (app) for Android or iOS. Instructors have found Zoom useful for teaching and learning in a range of agriculture topics.

Zoom can be held in large of small group sessions or smaller session such as one-on-one sessions which allows teachers to provide students with in depth instruction. During one-on-one sessions instructors can bolster a student's confidence, by giving them more freedom to ask questions and delve into discussions that they might never approach in a full-class setting (Benningfield, 2020).

The steps below provide instructors with how the Zoom session can be delivered regardless of the topic being delivered:

1-Ask what students know about the topic or problem being introduced (prior knowledge);

2-Describe in detail the topic or problem;

3-Outline the steps to address the topic or problem;

4-Assess the steps to solve topic or problem;

5-Discuss the possible pros and cons to solving the topic or problem; and

6-Make concluding remarks on what was found when solving the topic or problem.

Assessment

The assessment of student learning can occur instantaneously during Zoom sessions.

Zoom allows polling which is a feature for meetings and allows users to create single choice or multiple choice polling questions during sessions. Instructors can launch the poll during the lesson and gather responses from students to assess learning. The feature allows one the ability to download a report of polling after the session ends. Polling can also be conducted anonymously, if there is no need to collect student information with the results (Zoom, 2020).

The Question & Answer (Q&A) feature allows instructors to conduct "real time" assessments such as posing oral questions to assess student learning. With the public Q&A feature, students can answer each other's questions which provides engaged interactions (Zoom, 2020).

Another assessment can occur during breakout sessions allows group work and or presentations to occur in smaller groups especially if the course enrollment is high.

During COVID-19, instructors are faced with selecting the most effective and efficient ways for teaching and learning in online platforms to continue students being provided with the best most appropriate lessons as possible.

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