# Online Asynchronous Microteaching in an Agricultural Education Teaching Methods Course

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## Introduction

During the Fall 2020 semester, the format of course delivery and the semester schedule were both adjusted to mitigate the effects of COVID-19 on members of the Purdue University community. Courses were offered in a Hy-Flex format throughout the semester, allowing students to attend class face-to-face and virtually simultaneously. The university calendar eliminated the two-day October break, and ended face-to-face instruction after the Thanksgiving break so that the final week of classes were delivered virtually. During the Fall 2020 semester, there were 24 students enrolled in the Methods of Teaching Agricultural Education course at Purdue University. Of these 24 students, 15 were slated to complete their student teaching internship during the Spring 2021 semester. Given the constraints of teaching within a Hy-Flex format, and the environment that the majority of students would be student teaching in, the course instructor decided to integrate both face-to-face and online microteaching experiences into the course. Prior to the Fall 2020 delivery of the Teaching Methods course, all microteaching experiences were conducted face-to-face, and the majority of course content focused on facilitating learning in a face-to-face environment. The final microteaching experience of the Fall 2020 semester was adjusted to be an asynchronous, weeklong lesson that was taught the week after Thanksgiving break.

## How it Works

Since many students experienced inconsistent access to high-speed internet after the Thanksgiving break, an asynchronous approach to instruction was deemed to be the most accessible for the majority of students. Across the semester, students explored various teaching technologies through a "Teaching Technology Tool Presentation" assignment in which they demonstrated how to use digital tools like Nearpod, EdPuzzle, Screencastify, and Peardeck. Many students integrated use of these tools into their face-to-face microteaching demonstrations to navigate socially distanced instruction, which helped them be better prepared to use the tools during their virtual microteaching. Course content was updated to include online instructional approaches including asynchronous and synchronous methods and best practices.

To prepare for the virtual microteaching experience itself, each lab section was divided into three smaller groups of three to five students. Students would only microteach their peers within their smaller lab groups. The course instructor provided a scenario prompt that outlined the type of technology typically available, student background knowledge and experiences, and the expectations of the administration in their "school." Teachers were encouraged to plan activities that their students could complete independently across the week, but also to plan for a 25 minute live synchronous session to check in with students. Groups were encouraged to meet for their live session if they had the technology resources to do so, but were not required to complete the synchronous session as part of their microteaching grade. As with the face-to-face microteaching sessions all semester, students were expected to provide written feedback for their "teacher" by Friday at 5 pm. When "teachers" submitted their reflections on how their asynchronous lesson went, they were also required to include the feedback forms from their peers so that their lab instructor could view them.

To prepare for the lesson, students wrote a lesson plan using the 5E instructional model instead of the individual class period template that had been used throughout the rest of the course. Drawing from suggestions from online learning experts (Tucker, 2020), the course instructor designed a new lesson plan template that included both a teacher outline and a student view. Building off of Tucker's (2020) suggestions, the teacher outline included how they would plan to move their

students through the 5Es across the week, and the student view was written to provide directions to their student peers on how to move through the learning activities for the week. Teachers outlined what students would be doing and what digital tools they would be using to help students move through those learning activities, while on the student view, learning objectives, prompts, resources, and learning task directions were provided. The student view page was designed to be an interactive document in which teachers could hyperlink to digital tools and resources, making the page a HyperDoc (Highfill, Hilton, & Landis, 2016).

Teachers posted their asynchronous learning activities either to the course Learning Management System, or shared them vie email. Course instructors needed to be able to view these learning activities and the communication between the teacher and students to be able to accurately assess how the teachers interacted with their students. Microteaching rubrics were adjusted to reflect the new format and aligned with the 5E instructional model. Teachers also completed a reflection form at the end of their instructional experience that was updated to reflect the unique environment in which they taught asynchronously.

## Results to Date/Implications

Most students identified communication with students as the most challenging part of teaching in this format, as it was difficult to know where they were in their progress through the lesson. Some students used technologies that showed reports of student progress through the learning activities, but others sent out links to recorded lectures and worksheets, not knowing if students had completed them. Unlike live or real-time teaching, asynchronous teaching does not always allow for the instructor to quickly receive in the moment formative assessment feedback from students. Future iterations of this activity may be adjusted from asynchronous to synchronous online instruction, or limit lesson length to one or two days instead of a whole week.

## Future Plans/Advice to Others

Creating the materials and supporting resources for this learning experience took quite a bit of time, and logistical management of the activity was initially challenging to conceptualize. Students reported feeling frustrated that elements of the lesson plan template had changed from what they had previously experienced in the semester, so in the future, the course instructor may integrate the use of the 5Es instructional model as part of instructional plans earlier in the course or overall curriculum. The course instructor is currently planning for the Fall 2021 delivery of the course, and is considering how virtual instruction can be integrated into the course. Currently, Purdue University intends to be operating face-to-face, but considering that many schools across Indiana were using eLearning days prior to the COVID-19 pandemic, it is likely that many of our graduates will continue to teach in an asynchronous virtual format at some point.

## Costs/Resources Needed

This teaching approach required considerable investment of instructor time to develop the supporting materials in advance. It would be helpful for each undergraduate student to have their own Google Classroom to manage from an instructor perspective instead of uploading documents to our university’s LMS. Our institution is not a Google school, so the course instructor is looking into how this can be integrated into future coursework.

## References

Highfill, L., Hilton, K., & Landis, S. (2016). *The HyperDoc handbook: Digital lesson design using Google Apps*. Elevate Books Edu.

Tucker, C. R. (2020, March 8). Tips for designing an online learning experience using the 5Es instructional model. *Dr. Catlin R. Tucker.* https://catlintucker.com/2020/03/designing-an-online-lesson/