Engaging Online Learners Through Synchronous Meetings

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Author Biography

Dr. David Glassmeyer is an associate professor of mathematics education at Kennesaw State University. He teaches graduate mathematics and mathematics education courses within the university's online M.Ed., Ed.S., and Ed.D. programs in Middle and Secondary Grades Education. He aims to help teachers increase STEM (science, technology, engineering, and mathematics) integration and ultimately student achievement in schools. As a mathematics education researcher, David focuses on examining and developing teachers' STEM content knowledge at the middle and secondary levels, specifically on teachers' reasoning of mathematics concepts.

During the spring 2020 semester, the COVID-19 pandemic forced USG instructors to quickly convert all courses to remotely delivered instruction. Many of us turned to synchronous meetings, where learners joined class at the same time and participated in a virtual class using audio and video. These meetings often had to occur with minimal planning time or considerations regarding best practices, as we operated under an emergency education mindset.

As we face additional semesters of online learning, an important question is how research-based principles on learning can be used to design and implement synchronous instruction. This essay overviews strategies I have used to facilitate synchronous meetings, with a goal of engaging students through active learning and a sense of community, which can be challenging in an online format (Muljana & Luo, 2019).

Strategies to Facilitate Synchronous Meetings

Select a technology platform to use

My university provides all instructors access to Blackboard Collaborate (Figure 1), which I have happily used for a decade to facilitate synchronous meetings. Your university may alternatively have subscriptions to Zoom or Canvas Conferences. Research and explore the technology platforms available to you.

Determine dates and times to meet

Prior to the start of the semester, determine course synchronous dates and times using student input and include the information on the syllabus, giving as much advanced notice as possible. For example, my students are practicing teachers only available in the evening, after finishing their K12 school day, extracurriculars like coaching, and family obligations. Depending on the course, I have established synchronous meetings ranging from 90 minutes twice a week to 105 minutes once a month.

Establish expectations and norms

During the first week of the semester, establish student expectations by detailing the hardware, software, and features needed for the synchronous meetings. For example:

1. Have the syllabus indicate students will need access to a webcam, headset, and a computer connected to high-speed internet for the course meetings. I have found internet that supports the playing of video (e.g. Youtube, Netflix) is sufficiently fast for Blackboard Collaborate. For students unable to acquire these materials, consider university library and public library resources.
2. Make the first homework assignment due prior to the first synchronous meeting, and ask students to log into the virtual room, test their equipment, and explore useful features.
    - For Blackboard Collaborate, these features include the chatbox, raising your virtual hand, and writing on the virtual whiteboard.

- Have homework assignments that ask students to read articles or complete problems before the synchronous meeting to allow conversations about them during class.

Create a plan for your synchronous meetings

Here are guidelines I use to support student engagement, collaboration, and formation of virtual community:

- Select active learning activities you have already facilitated in face-to-face settings and convert them to an online format.
- Create clear written instructions and goals maximizing the potential of the online environment. I create a PowerPoint presentation that includes space for students to write or type on the board during the synchronous meeting. I use online tools, such as graphing websites, rather than graphing by hand, within the activities.
- Consider possible student responses, solutions, representations, and connections, and how you might facilitate small- and whole-group discussions to ensure a variety of perspectives are considered.
- Practice using features of the synchronous meeting platform and transitioning between activities.
- Create a timeline of how class will go and note contingency plans if things get off schedule.

During the first synchronous session, follow your plan. I use the following structure to foster student engagement, collaboration, and formation of virtual community:

- Arrive 15 minutes before class begins to upload the slides, troubleshoot, and chat informally with students.
- Ask students to log on at least 5 minutes early and double check their equipment.
- Share slides once class begins, launch activities, and place learners into small groups to complete them.
- Have students share audio and video in large and small group settings. Blackboard Collaborate allows up to 6 users to simultaneously share audio and video.
- Pull everyone back together after completing the activity, select a group to present, show their work, and allow the group to explain their thinking and solution to the class.
- Allow peers to respond, extend, and question presentations through the chatbox feature, raising their hand, using polls, and by turning on their microphone and video. Even contributions as simple as chatbox message from a peer saying "great explanation - I hadn't thought of it that way" provides opportunities for student engagement, collaboration, and formation of virtual community.

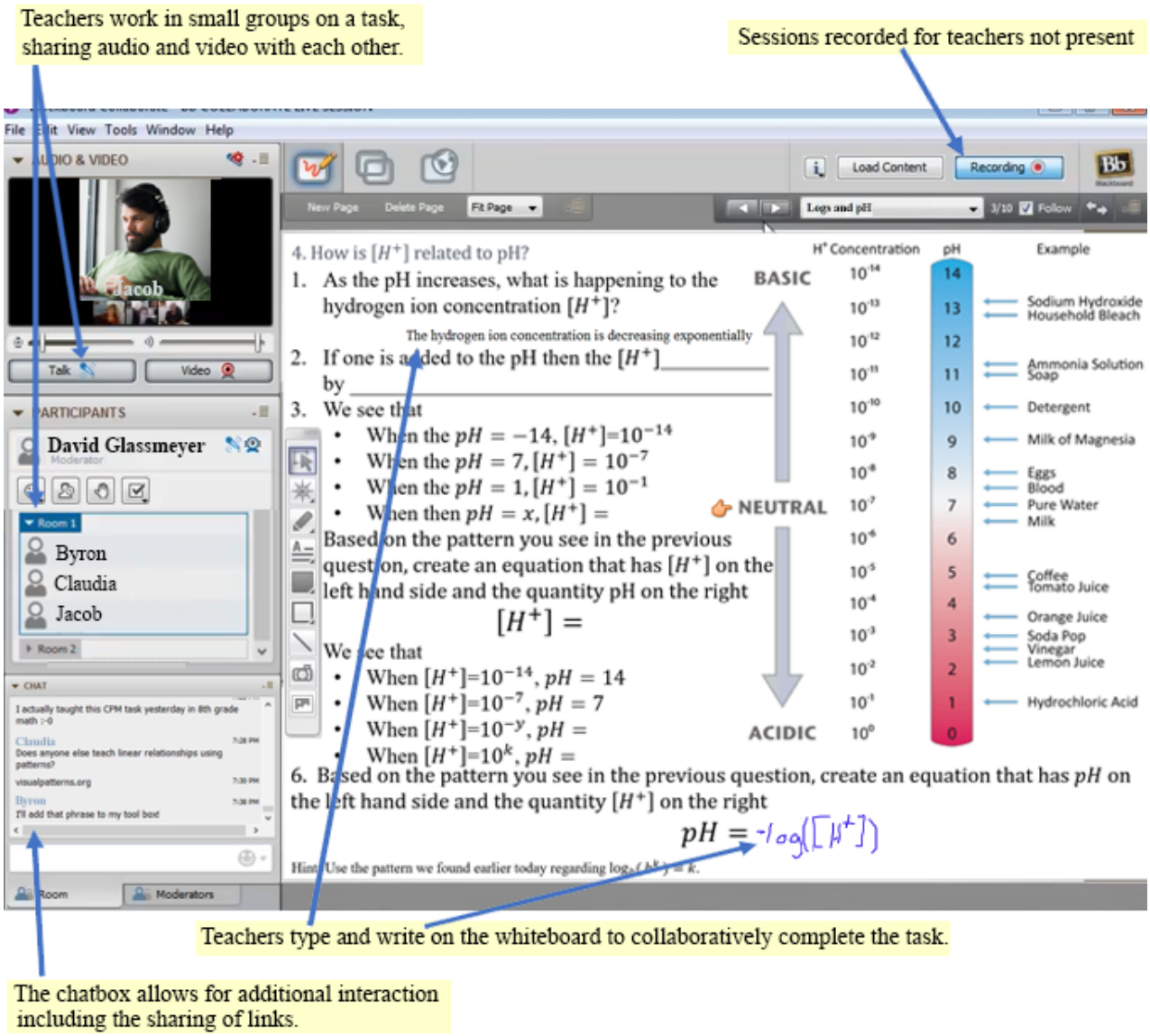

Figure 10: An anonymized example of a synchronous meeting where active learning took place through Blackboard Collaborate Classic, requiring learners to consider how logarithms are needed to describe the mathematical relationship between hydrogen ions and pH.

Feedback

Data from students and colleagues indicate the synchronous meetings were effective in my goal of promoting online learner engagement. Students course evaluation comments include: "*While the course is online, the engagement exceeds many of my previous face–to–face courses.*" A colleague observed that my synchronous meetings "*incorporated several online student engagement strategies including collaborative learning, breakout rooms, and student presentations, which resulted in collective enthusiasm and impromptu discussions about connections to their own K-12 classroom experiences*" (Dr. Anissa Vega). If you are interested in learning more about how to engage learners through synchronous meetings, more detailed and comprehensive information can be found in Fukawa-Connelly, Klein, Silverman, and Shumar (2018) and Glassmeyer (2020).

References

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