

Engaging Learners Through Synchronous Meetings

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A major challenge of any online format is fostering virtual community and promoting learner engagement (Muljana & Luo, 2019). A method I have used to minimize this challenge is synchronous course meetings, where all learners join class at the same time and participate in a virtual class using audio and video. This essay overviews strategies I use to facilitate synchronous meetings with a goal of engaging students through active learning and a sense of community.

Strategies to Facilitate Synchronous Meetings

1. 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.
2. 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.
3. During the first week of the semester, establish student expectations by detailing the hardware, software, and features needed for the synchronous meetings. For example:
 - 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.
 - 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.
 - i. For Blackboard Collaborate, these features include the chatbox, raising your virtual hand, and writing on the virtual whiteboard.
 - ii. Consider having the homework ask students to read articles or complete problems before the synchronous meeting to allow conversations about them during class.
4. Set up 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.
5. 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 1: 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.

Teachers work in small groups on a task, sharing audio and video with each other.

Sessions recorded for teachers not present

The screenshot shows a Blackboard LMS interface during a synchronous meeting. On the left, there is a video feed of a teacher named Jacob, a list of participants (David Glassmeyer, Byron, Claudia, Jacob), and a chat window. The main content area displays a whiteboard with a chemistry task about pH and H^+ concentration. The whiteboard includes a table of H^+ concentration and pH values, a pH scale diagram, and handwritten notes and equations. A 'Recording' button is visible in the top right corner.

H^+ Concentration	pH	Example
10^{14}	14	Sodium Hydroxide
10^{13}	13	Household Bleach
10^{12}	12	
10^{11}	11	Ammonia Solution
10^{10}	10	Soap
10^9	9	Detergent
10^8	8	Milk of Magnesia
10^7	7	Eggs
10^6	6	Blood
10^5	5	Pure Water
10^4	4	Milk
10^3	3	Coffee
10^2	2	Tomato Juice
10^1	1	Orange Juice
10^0	0	Soda Pop
		Vinegar
		Lemon Juice
		Hydrochloric Acid

Handwritten notes on the whiteboard include:

- 1. As the pH increases, what is happening to the hydrogen ion concentration $[H^+]$?
The hydrogen ion concentration is decreasing exponentially
- 2. If one is added to the pH then the $[H^+]$ _____ by _____
- 3. We see that
 - When the $pH = -14$, $[H^+] = 10^{-14}$
 - When the $pH = 7$, $[H^+] = 10^{-7}$
 - When the $pH = 1$, $[H^+] = 10^{-1}$
 - When then $pH = x$, $[H^+] =$ _____
- Based on the pattern you see in the previous question, create an equation that has $[H^+]$ on the left hand side and the quantity pH on the right

$$[H^+] =$$
- We see that
 - When $[H^+] = 10^{-14}$, $pH = 14$
 - When $[H^+] = 10^{-7}$, $pH = 7$
 - When $[H^+] = 10^{-x}$, $pH =$ _____
 - When $[H^+] = 10^k$, $pH =$ _____
- 6. Based on the pattern you see in the previous question, create an equation that has pH on the left hand side and the quantity $[H^+]$ on the right

$$pH = -\log([H^+])$$

Hint: Use the pattern we found earlier today regarding $\log_e(A^k) = k$.

Teachers type and write on the whiteboard to collaboratively complete the task.

The chatbox allows for additional interaction including the sharing of links.

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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