

Teaching During COVID-19

Guiding Principles for Effective Synchronous Teaching

Synchronous and asynchronous methods of teaching serve significantly different purposes.

Asynchronous learning means that the instructor and the students in the course all engage with the course content at different times and from different locations. The instructor provides students with a variety of course materials that the students move through on a flexible timeline, as guided by the instructor. Learning units might make use of a variety of media (video, audio, text, images, etc.), assigned readings, online quizzes, discussion boards, and more. The instructor sets guidelines, provides students with feedback, and assesses them as needed.

Synchronous learning means that the instructor and the students come together at the same time - either face-to-face or digitally. If participants are remote, synchronous events are typically mediated by digital tools such as Zoom and Microsoft Teams - tools that allow for livestreaming of audio, video, and presentations, such as live classes or meetings, live conversations, simultaneous document editing, and more.

In remote and online environments, students will be accessing the course from different locations, time zones, and with different life situations beyond the course itself (e.g., work and family obligations). A synchronous approach to remote instruction presents many obstacles and challenges. Therefore, asynchronous approaches are recommended wherever possible. More on synchronous and asynchronous approaches is provided in the CTL Transforming Teaching Toolkit.

The following considerations are designed to help the instructor determine if synchronous instruction is merited and to provide exemplary practices in its implementation:

Restrict Synchronous Events to the Essential

Synchronous events should be limited to the occasions where it is necessitated over asynchronous alternatives. Synchronous classes will be best suited for certain forms of engagement such as discussion and debate, hosting office hours, facilitating active learning with immediate feedback, bringing in consultants and guest speakers, building a community, or enhancing interaction between students (Martin & Parker, 2014).

Synchronous events are not ideal for content delivery, deep critical thinking, and group work.

Build in Contingencies to Overcome Barriers to Learning

The most significant limitation of a synchronous approach is the heightened number of barriers faced to accessible and equitable access. Many barriers are likely including:

- time zone differences (instructors should ensure that students in different time zones are not required to be present for synchronous events at unreasonable times);
- competing demands [i.e. childcare, arranging a quiet remote space (see Wyman, 2020)];
- failure of technology;
- required accommodation for sensory and learning disabilities;
- language barriers (i.e. ESL students facing greater comprehension challenges); and
- differences in the way students process information and feel comfortable participating online.

Instructors opting for a synchronous approach will need to address these barriers by planning for appropriate contingencies. One common approach is to record the live session so it can be posted and accessed again/later with added accessibility measures in place (such as closed captioning), although this takes time and effort for instructors to coordinate.

Alternatively, asynchronous approaches offer greater flexibility, differentiated forms of media, and easier accommodation for differences in learning that address the barriers often caused by synchronous approaches.

Consider Length of Events and Student Engagement

Careful consideration needs to be given to the overall length of a synchronous event and just how engaging that event is for participants. There are no clear guidelines for how long a synchronous event ought to be or how long is too long. However, an hour of listening to a speaker is never going to be ideal. In addition, frequent virtual meetings are resulting in significant fatigue - as many of us have now experienced (see Zoom Fatigue - e.g. Schroeder, 2020; Skylar, 2020).

Synchronous events, of any length, are particularly prone to loss of attention – extra attention to active learning strategies will be required. There is evidence that students' attention span in any lecture context is only 10-15 minutes long (Bradbury, 2016) and that mind wandering increases when watching pre-recorded lectures (see Wammes et al., 2019). Active learning strategies can reinvigorate attention by changing the form of engagement every 10 minutes or so as attention is waning (Jing et al, 2016). Examples of this include intermittent testing of understanding, or pausing and ask all students to take 2 minutes to write down their ideas. Instructors will need to plan for and facilitate these regular active learning components in essential synchronous lessons.

Asynchronous approaches offer diversified options for engaging students in a variety of activities. Videos of 5-7 minutes in length can intersperse other forms of engagement such readings, discussions, quizzes, opportunities for feedback, and other online activities (Darby, 2019).

Select Consistent Technologies that are Secure, Reliable, and User-Friendly for the Class Size

Instructors will need to select a limited number of appropriate technologies and stick with them to facilitate synchronous learning. Using multiple types of technology introduces confusion and prevents users from gaining a degree of familiarity and comfort with the tool. Technologies must be secure (as highlighted with recent Zoombombing concerns), reliable, and user-friendly for both instructors and students alike. Technologies that are institutionally supported (e.g. Microsoft Teams) should be prioritized over other third-party tools as institutional tools have been properly vetted (e.g. for privacy and security concerns) and are available to the Queen's community free of charge.

Synchronous technologies pose limitations to class size and capacity. Many class sizes exceed the maximum capacity of synchronous technologies. For example, Zoom supports a capacity of 100-500 participants depending on the license, while Teams supports 250 participants at a time. Instructors should choose the technology that best accommodates the size of the class for essential synchronous sessions.

Follow Best Practices of the Technology Itself

Instructors will need to plan for and develop skills related to effective management of the remote synchronous classroom. In light of all these best practices, there remain

additional considerations for hosting a synchronous event. Important considerations include:

- orienting students to the tool with clear instructions;
- requesting that participants mute their microphones;
- effectively managing an online discussion; and
- enabling fair and balanced participation (see Zoom, n.d.).

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