Breakout Rooms: Recommendations for UBC Science Instructors

UBC Science instructors have been using Zoom and Collaborate Ultra breakout rooms with some success, despite significant technical challenges. These instructors, and their students, have shared their experiences with us, which we used to develop the recommendations in this document.

It is important to note that these recommendations are context specific (e.g., size of the class, activities planned, availability of TAs to facilitate the breakout rooms, etc.), and that they may not be suitable for your context. We encourage you to adapt based on your context and feedback from your students.

Breakout Rooms

Breakout rooms are small rooms or spaces created within a virtual synchronous class session. They provide opportunities for students to interact with one another and discuss course content in small group settings. They allow students to contribute to discussions that are too difficult to moderate in main rooms, giving students more opportunities to engage with the course content and with each other. When used for in-class work, they enable students to work on questions that are too challenging for them to work on individually while still getting feedback from peers.

By creating smaller spaces for students to interact, breakout rooms offer places for students to connect socially and build community. Students frequently indicate that they are making friends in their classes and that they appreciate the opportunity to speak with and learn from each other in these small group settings.

Breakout rooms can offer important advantages to instructors; you can "read the room" more organically by dropping in on groups, helping you to keep track of whether students are working and if they need prompting.

In order to promote student learning and experience, breakout rooms need to be designed carefully with inclusive teaching practices in mind. They may be time-consuming to implement and may lead to frustration both for instructors and students if they don't work as intended. Using online breakout rooms for activities previously done in person is not always feasible, as entering and exiting the rooms can take more time. Further, depending on the use of technology (e.g., Collaborate Ultra, Zoom), there are certain limitations on how many breakout rooms can be accommodated and how students join the breakout rooms (e.g., freely or pre-assigned).

Recommendations

The following recommendations for online breakout rooms emerged from our conversations with UBC Science instructors and students during the 2020 summer and fall terms. We encourage instructors to familiarize themselves with Collaborate Ultra and Zoom before deciding which technology is appropriate for their use.

Room Assignments in Zoom

For instructors using Zoom breakout rooms, there are three approaches (described below) to sort students into rooms. **We highly recommend the simpler approaches** where possible.

- *Simpler approaches:* there are two good options that do not involve a csv file with accurate student emails. In this approach, students just need a Zoom account (any Zoom account) and an up-to-date version of Zoom.
    - Students prepend group numbers to their display names, allowing TAs and instructors to quickly sort students into rooms or
    - Instructors set up a list of permanent breakout rooms and share it with students, allowing students to join the breakout rooms on their own.
- *More complicated approach:* this approach requires a csv file to put students in pre-defined breakout rooms based on their email addresses. Please let Sara Harris know if you plan to use this approach next term. In this approach,
    - Instructors will need to collect the email addresses students have associated with their Zoom accounts.
    - For students who don't yet have a UBC Zoom account but would like one, they will need to get an @student.ubc.ca email address, then share it with their instructor. The instructor then needs to send a list of these emails to av.helpdesk@ubc.ca, which will provision the Zoom accounts and let the students know to activate them.

Culture and Norms

- Group norms should be established early on to build classroom culture. These norms might be revisited now and again to reinforce the agreed-upon guidelines. For sample guidelines, see Sample Guidelines for Classroom Discussion Agreements (Brown University) and Setting Class Norms About Behavior During Group Activities (Carl Wieman).
- Clearly communicate specific instructions on what students and TAs (if applicable) are expected to do in breakout rooms. We recommend communicating the instructions both verbally and in writing (on a slide, in a Google Doc, or in the chat) before sending the students to the breakout rooms. We also recommend making the instructions available to students while they're in the breakout rooms or encouraging them to take photos of your instructions to refer to. This will help to keep students on task.
- Ask students to use a shared document for their breakout room activities to alleviate the fear of missing out on what might be happening in other breakout rooms, as students will be able to see what other groups have done. Consider holding a breakout room reporting/debrief session once students return to the main room.
- If you use breakout rooms frequently, try to use them on a regular schedule. This will help students know when they need to prepare for them.
- If you don't use breakout rooms very often, let students know about breakout room activities a couple of days in advance. This will give them time to prepare, as they may need to find a space in which they're comfortable turning on their cameras.
- At the start of the term, use breakout rooms to build community by engaging students in social activities outside of course content. Teaching Spotlight – Creative Ways to Engage Students Before Class Begins (Christine Goedhart) provides an example.

- Consider asking students to put a picture or meme in place of their name. This icebreaker can help students feel comfortable in expressing themselves.
- Be mindful of breakout room activities resulting in fatigue when considering the frequency of using breakout rooms. We recommend experimenting to find what works best for you and your students within your specific course context.
- Also be mindful that students sometimes face technical issues, like not being able to share screens, being dropped from sessions, not getting into the appropriate breakout rooms, etc. This is part of the process.
- Be kind to yourself and do not expect to replicate what you do in a large class in an online environment.

Activities

- Allocate 10+ minutes for breakout room activities; it typically isn't worth doing a breakout room session for less than 10 minutes, considering the high level of involvement. A possible exception to this may be when the instructor sends the students to the breakout rooms for a few minutes to discuss a multiple choice question that is re-polled after individual answers.
- Structure breakout room activities to result in a deliverable, with a specific pedagogical goal in mind.
- The design of complex tasks, problems, and questions that students can't individually solve results in more meaningful interaction among students and keeps them focused on the activity's goal/deliverable.
- Design activities that help reduce silences and encourage every student to participate (not just the same student every class).
  - Scaffold the activities so that they have low barriers to entry.
  - Have a catalyst in breakout rooms to spark and moderate conversation. It could be a prompt, specific task, or assigning specific roles to students.
- Always have a clear prompt or informal starter topic for a breakout room.
  - Example: An instructor uses breakout rooms with clickers. They ask students an involved clicker question and move students to breakout rooms for 2 minutes. Students return to the main room after working on the question and respond to the clicker question. If some students didn't answer the question correctly, the instructor does a mini lecture on the question.

Groups

- Consider diversity in group composition.
  - Example: in introductory physics labs, a female student in a group of male students may adopt two common modes of work that can disadvantage her: the secretary archetype that records and analyzes data, and/or the Hermione archetype that does the managerial work. See Hermione and the Secretary: how gendered task division in introductory physics labs can disrupt equitable learning (Danny Doucette, Russell Clark, and Chandralekha Singh).
- Consider asking students to perform specific roles (e.g., reporter, note taker, facilitator, moderator) to help them take ownership and be accountable for what they are doing. Some instructors using this technique have emphasized the importance of assigning and rotating the roles, whereas others found it helpful to provide a lot of flexibility in how they allow groups to interact with each other, as each group will find their own way.

- Groups of 7-10 people work better in breakout rooms than in face-to-face settings, for several reasons:
  - Small groups boost participation because of the social pressure that is lacking in the main room. However, if the group is too small the discussion may not be triggered and/or sustained.
  - Groups of this size provide richer discussion, which may help students feel that the discussions are a good use of their time.
  - If some students in the group do not want to participate (or have the camera off), there will still be a reasonable number of them engaged in the activity.
- Some instructors have found it helpful to have fixed group membership rather than random group composition, but if no one else shows up in the breakout room, students need to be moved to a different room.
- One TA can be assigned to multiple breakout rooms with the task of checking each group's progress. When not checking the rooms, TAs can wait in the main room in the event a student needs to return there for help.
- Some instructors have reported that students stop interacting and are silent when the TAs/instructor visit their breakout room. At [the student panel Skylight organized in November 2020](#), one student suggested that instructional teams give warnings before jumping into breakout rooms. We recommend that TAs and instructors broadcast a message to let students know they'll be entering breakout rooms, then check whiteboard and other collaborative platforms to assess student engagement.
- Use shared documents to make it easy to efficiently move between groups (e.g., Google docs), but be mindful of the [privacy issues](#)! For Google Docs specifically, students should be able to participate anonymously if they choose to do so, and this should be accommodated by the activity setup. Instructors could write headings for Group 1, Group 2, etc. or use separate documents with the group number in the titles. If tracking names is important for cases where grading is needed, one could screenshot the group allocations to capture who is where. Otherwise one could capture participation or grades via a clicker question where the identity is recorded.
  - Example: an instructor pastes a link to a Google Doc in the chat before students move to their breakout rooms. The students use this link to record their work for grading.

Student Feedback

- Periodic check-ins with students (e.g., mid-course evaluation) about the breakout rooms might uncover potential problems and/or frustrations.
  - Chat is great for quick check-ins.
- Some students indicated they prefer to use their microphone and video feed in breakout rooms but not in the main classroom (where they prefer to use the chat).
- Have a Google Doc backchannel for students to ask questions, to ask you to come visit them, to let you know when they are done with the activity, etc. This can help address their need for immediate feedback from their TA and instructor.