Reimagining Large-Class Instruction

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The primary goal of this working group was to ‘reimagine’ large-class instruction and learning. We use the term reimagine because, through the course of our work, it became abundantly clear that our findings and recommendations are not only applicable to online teaching during the current pandemic crisis. They are also applicable to large-class teaching in general. Accordingly, our current adaptation to online-only teaching need not merely be viewed as a reaction to the pandemic, but also as an opportunity to transform large-class teaching at UBC for the long-term.

The working group, which was composed of 22 members, divided our efforts amongst six key aspects of large-class teaching:

1. Reimagining large single-section courses.
2. Reimagining large multi-section courses.
3. Reimaging the first-year experience in large classes.
4. Reimagining assessments in large classes.
5. Principles for effective online communication.
6. Consideration related to academic assistants, teaching assistants, and markers.

Accordingly, we formed smaller groups to delve into each of the above. Although this section is framed with respect to large classes, many ideas may apply usefully to many teaching contexts.

Before delving into more details of our work, we would like to highlight four overarching themes that emerged (and that echo the guiding principles presented previously):
1. Being mindful of student, staff, and faculty wellbeing as we transition to online-only teaching.

2. Being mindful of the social and academic transitions that will be associated with our move online.

3. Striking the right balance between synchronous and asynchronous class activities.

4. Maintaining equity amongst students (e.g., as related to academic integrity and accessibility) and amongst teaching staff (e.g., workload).

Finally, it should be noted that our work was heavily influenced by the results of the student survey that was conducted by Dr. Siobhán McPhee and Dr. Katherine Lyon.

**Reimagining large single-section courses**

*Group members were: Marcia Graves, Barry Mason, John Ries, and Lindsay Rogers.*

This group laid out some ground principles and specific recommendations that can be generalized to many different large-class settings.

**Principles**

1. **Self-reflection:** Instructors to reflect on what they are bringing to the class that is ‘value-added’ over a textbook or internet video. Once identified, the course can be adjusted to emphasize that/those value-added components.

2. **Flexibility:** Online learning needs to be flexible to meet the needs of learners (e.g., balance of synchronous/asynchronous delivery to accommodate learner preferences and time zones)

3. **Engagement:** Strategies to optimize student engagement in online learning need to be implemented (e.g., breakout groups with defined deliverables, interactive ‘live’ tutorials, problem/case-based learning). Associated with this is the need to manage student cognitive load.

4. **Teacher support:** Learners need consistent access to their teachers to guide their learning.

**Specific recommendations**

**Course structure:**

- A combination of asynchronous and synchronous content is ideal. The ideal balance between the two should be a function of the course-level learning outcomes, student needs, and the workload of the teaching team.
• Asynchronous content is best delivered as ‘micro-lectures’ (i.e., 10–20 minutes). Following each micro-lecture, quizzes and other tools can serve as self-checks for student learning\(^1\).

• Asynchronous content provides students with more flexibility, but it is best paired with opportunities for synchronous discussion.

• When developing content for online learning, consider how this content will continue to support teaching when we return to in-person learning in the future (e.g., a blended model).

Class community and engagement:

• Student-student and instructor-student interactions should be incorporated into the course, such as synchronous class discussions and online video-based office hours.

• Breakout room activities (as are possible in Collaborate Ultra) can be used to facilitate interactions between students (e.g., Think-Pair-Share activities, case study work, problem sets, or data analysis).

• Discussion amongst groups of five students or fewer is more likely to be inclusive and engaging; larger discussion groups are best supported by a facilitator (i.e., the instructor or a TA).

• Consider using ‘learning communities’\(^2\) by creating groups in Canvas. In courses: divide the class into small cohorts according to student time zones. This will increase the likelihood that students will engage with each other.

Supports and resources:

• Single-section large classes will require additional supports for course development prior to the course start date.

• Teaching assistants can help facilitate breakout rooms and field questions during large lectures or discussions.

• A document camera, whiteboard or chalkboard can be simulated using a drawing tablet.

Student access:

• Online pedagogies are built to respect student’s workload and not exceed 7–10 hours/week for a 3-credit course.

• Instructors should consider the challenges faced by students in different time zones and accommodate those whenever possible. For example, consider reducing the amount of synchronous delivery or offer multiple synchronous sessions to accommodate students in different time zones.

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\(^1\) Tools like Camtasia and H5P interactive videos allow quizzes and other interactive activities to be embedded directly in pre-recorded lectures.

\(^2\) Canvas supports the formation of learning communities
Reimagining large multi-section courses

*Group members were: Meghan Allen, Greg Werker, and Neil Armitage.*

This group produced a graphical summary of their work, which can be found in the Large Classes Appendix. The figure includes a summary of base teaching principles. In general, their recommendations related to large multi-section courses were focused on coordinating and integrating the learning outcomes, course syllabi, course resources, and readings across sections of these courses.

This recommendation comes with the caveat that a full transition away from largely independently-taught multi-section courses is not something that can happen in a short time frame. This group proposed that the ideal scenario for a large multi-section course is one where there is standardization of all course materials across sections, and ongoing coordination amongst instructors (e.g., via a course coordinator). Moreover, they emphasized that the time needed for a transition to an ideal state would depend on the extent to which the large multi-section course is currently coordinated.

In light of the time needed to *reach the pinnacle*, one potential solution for fall instruction of large multi-section courses would be team-teaching a large multi-section course. For example, each of the course instructors would take turns producing weekly asynchronous content (e.g., several short pre-recorded high-quality lectures) that would be shared across sections, and all of the instructors would offer weekly synchronous activities in their sections (e.g., small group discussions, activities) for the duration of the course.

An additional recommendation has to do with section scheduling: Ideally, sections of the same course are offered at different times of day to accommodate students in different time zones.

Reimagining the first-year experience in large classes

*Group members were: Siobhán McPhee, Katherine Lyon and Steven Barnes.*

This group began its work by reviewing and formulating the student learning goals for the first-year experience (which are closely aligned with those of UBC’s Jumpstart program), which currently includes many large-class experiences. Students should be able to:

1. Confidently engage in student-student, student-instructor, and student-TA interactions.
2. Feel like they are part of a larger learning community:
   - membership in the academy;
   - networks and relationships;
   - UBC learning supports and resources.
3. Understand the importance of academic integrity.
4. Understand what online learning looks like.
5. Understand why particular technologies are used (for a particular course, or set of courses).


7. Be aware of additional implications for wellbeing in a predominantly digital learning environment.

8. Understand how to collaborate in an academic setting.

The group identified general challenges and presented some high-level suggested changes required to support a positive and rewarding first-year experience. A more detailed analysis can be found in the Large Classes Appendix.

Challenges:

- First-year students may not have much experience with self-directed learning.

- First-year students may not have used Canvas or other technologies used at UBC.

- Additional time will be required of faculty and teaching assistants to meet the course-level learning outcomes.

Suggested changes:

- Assessments should ideally be low-stakes, and also offer students different options to meet the course-level learning outcomes. The larger working group has termed this approach to assessments (which is also applicable in upper-year courses) ‘structured flexibility’.

- The teaching team should consider efficient methods to provide first-year students with comprehensive and — if possible — personalized feedback, recognizing the constraints of a large class size. Examples of technology assisting tools are outlined in ‘Effective Online Communication’ in the Large Classes Appendix.

- Ensure that synchronous class time is utilized differently from asynchronous class time, as each has its own affordances.

- Consider deploying a survey, ideally delivered to students before the course begins, to identify accessibility issues related to computer hardware, internet bandwidth, Canvas access (e.g., students in US-embargoed countries will not be able to access Canvas, Wikipedia, YouTube, Facebook, etc.), and time-zone differences, to name a few. When necessary, consider other tools for delivering course content to those students with identified accessibility issues.

Reimagining assessments in large classes

Group members were: Amber Shaw, Fred Cutler, Patrick Pennefather, Jonathan Graves, and Sunita Chowrira.

This group produced a comprehensive wiki page related to assessment strategies. This page provides an extensive analysis of various assessment strategies (not just limited to those used in a large class) and their relative ease of implementation.
Principles for effective online communication

Group members were: Silvia Bartolic, Maja Krzic, Jonathan Graves, and Janice Stewart.

The major goal of this group was to address how to enable effective communication in large classes. They provide recommendations for faculty-student modes of communication and methods to facilitate student-student communication in large classes. Their specific recommendations are presented in the Large Classes Appendix. Presented below are the major themes and challenges that arose from their work. This group also created a comprehensive wiki page Reimagining Online Communication.

General themes:

• It is important to help students feel that they do matter as individuals.

• Effective communication should aim to create a supportive and safe classroom climate.

• Students and faculty should be provided with the necessary supports and technologies so to enable communication that supports their learning and facilitates relationship building.

• Align the modes of communication with the learning goals for the course.

Challenges:

• There should be careful consideration of both the type and number of communication platforms used in classes.

• As is true for all technology recommendations from the larger working group, the number of online platforms used for communication with students should be limited and ideally coordinated across programs, faculties, or UBC as a whole.

• Large online classes may require additional TA support to facilitate and manage course communication channels.

• Certain platforms for communication might raise accessibility issues; for instance, technology, access from other countries, bandwidth, etc.

Considerations related to teaching assistants and markers

Group members were: Neil Leveridge, Qingshi Tu, and Judy Chan.

This group did a careful analysis of issues specific to teaching assistants and markers. Presented below are some identified themes and challenges. A more detailed analysis can be found in the Large Classes Appendix and within the Guidelines for the Role of Teaching Assistants (PDF) area of focus document.

General themes:

• Teaching assistants (TAs) and markers are invaluable contributors to education at UBC.
• Graduate and undergraduate TAs with first-hand experience of online learning may be particularly valuable contributors as we shift to online teaching.

• Every effort should be made to facilitate a smooth transition from course planning with academic assistants to teaching/implementation with TAs and markers.

• Instructors should ideally share their rationales for course instructional design decisions with their TAs and markers.

• More frequent meetings of the teaching team will probably be necessary in the context of an online-only environment.

• Clear expectations should be laid out by the instructor for both the TAs and markers.

• Students should be given clear instructions about when they should be contacting their TAs vs. their instructors.

• Students need to be provided with information related to expected response times to emails and other modes of communication with their TAs (e.g., within 24–48 hours, excepting weekends and holidays).

• Instructors, departments, and UBC as a whole need to be mindful of union regulations around work hours for TAs (e.g., according to current regulations, teaching assistants should not be working after 9 p.m.) in light of the fact that the university will want to be accommodating students in different time zones. See also the Guidelines for the Role of Teaching Assistants (PDF) area of focus document as well as the CUPE 2278 website for more detailed regulations.

Potential challenges for TAs and markers:

• Additional workload resulting from:
  • preparing novel course materials and activities;
  • new modes of assessment which could increase grading time;
  • synchronous class facilitation (e.g., managing breakout rooms, managing questions);
  • synchronous activities with students in different time zones;
  • a potentially greater volume of emails from students;
  • a need for more frequent solicitation of feedback from students;
  • check-ins with students who may be experiencing difficulties with online learning and/or wellbeing issues.

• Different expectations for online courses.

• Needs for a good working computer with a high-speed internet connection, webcam, microphone, and a suitable work space.

Charts and additional information can be found in the Large Classes Appendix.