

FYMSiC Online Conference: Teaching Math and Stats Courses in Interesting Times (to say the least)

Saturday, May 23rd, 2020

Session 1: Course Delivery

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Breakout Rooms 1, 5, and 9: Expectation for Instructors

- What is reasonable to expect of instructors during these times? (Capacity for regular teaching load? Ability to record lectures? Availability for virtual office hours? Access to a computer and high-speed internet? ...)
- What kind of support do we need (e.g. from our departmental colleagues / from administration)?
- Should there be a difference in expectations for us when it comes to large versus small classes?

Deliverable: Either

A) A list of three items that you feel are important and reasonable to expect of every instructor during these times.

or

B) A list of three items that are relatively widely expected of instructors that you feel are unreasonable.

Notes: Rem Kooistra (King's University) for group 1:

- Reasonable to balance resources of time - some tasks will take more time than usual, eg. communication with students. This should balance by pooling resources of content creation, eg. having some instructors make videos to use in all sections. But note that students and instructors may want an individual face and name on their section.

- We expect small, iterative improvements in quality as we learn, but not immediately. The start of the fall term will be better than the spring, and the end of the fall term will be better than the start. But it is unreasonable to expect everything will be perfect immediately.

- It is unreasonable to expect synchronous instruction if campuses are closed. If the physical infrastructure is not available, then for example graduate students may not have resources at home to do this.

- It is unreasonable to solve student's internet or tech problems. We should know how to direct students to find help that the university provides.

Shannon Ezzat (University of Winnipeg) for group 5:

- It is reasonable to expect flexibility, stability and autonomy. Flexibility and autonomy in terms of what is possible to offer, and stability for students and instructors in terms of knowing what is expected of everyone.
- Emphasizing Rem's last point: In person, the university provides an environment and infrastructure to learn. They should continue in this role by providing space and tech for instructors.
- The divide between teaching stream and research faculty (where most large courses are first year, and most first year classes are taught by non-research faculty) may create large discrepancies between workloads.
- It is unreasonable to ask instructors to use online proctoring without training.

TJ Yusun (University of Toronto, Mississauga) for group 9:

- Reasonable to think about course design in a way that makes it accessible and equitable to students.
- It is important to keep focus on the students.

Breakout Rooms 2, 6, and 10: Setting Curriculum

- What do we teach? Do we change the content we teach compared to how we'd have taught a course in person? If so in what ways?
- What are the unique opportunities and limitations presented by remote teaching in this regard?
- Does class size impact this decision? If so, in what ways?

Deliverable:

A list of three important considerations in adapting the course curriculum for remote teaching. (Your list can be generic, or focus on either large or small classes.)

Alfonso Gracia-Saz (University of Toronto) for group 6:

- We should not change course objectives or standards. We need to figure out how to do it with new assessments.
- Computations and reliance on final answers is over. We need to focus on the process and explanation. This is a case to apply the overused message: "This is an opportunity instead of a challenge."
- Students learn by what they do, so we need to take care to explain to them what they should be doing. Our focus and communication should be on what the students are doing, not on what we are doing.

Yvan Saint-Aubin (Université de Montréal) for group 2:

- Our curriculum content has not changed, and cannot because of multiple sections and downstream course requirements.
- We have the opportunity to show cool math videos, e.g. mathologer, 3blue1brown. Our delivery may be more efficient with pre-recorded videos. It is easier to refer to recorded lectures, it makes them available in other timezones, and having all resources online means no shuffling papers.
- Class size has a large effect on assessment, that is, which assessment methods are possible, but less on content.

Jerrod Smith (University of Calgary) for group 10:

- Content has not changed but delivery has.
- Class sizes may expand without physical restrictions.
- We should seize this opportunity to use open source resources in redesign.

Breakout Rooms 3, 7, and 11: Course Delivery

- How do we deliver course content to students?
- What are the unique opportunities and limitations presented by remote teaching in this regard?
- What are the benefits/drawbacks of synchronous (e.g. live sessions) versus asynchronous delivery (e.g. pre-recorded lectures)?
- How do we promote student engagement and foster a sense of community when teaching remotely? Should we manufacture activities that make our students interact with each other?

Deliverable:

A list of three ideas and/or practices for delivering course content remotely. (Your list can be generic, or focus on either large or small classes.)

Mihai Nica (University of Guelph) for group 11:

- Include face and hands in videos! Students like it and are used to it from online streamers. OBSstudio is a good tool to mix camera streams, ex. <https://youtu.be/PwzG0sU-0rQ?t=700> (Rem Kooistra and Sean Fitzpatrick in the chat support the use of OBS)
- Mix synchronous and asynchronous instruction.
- Having a small percentage of students ask questions is valuable to everyone, it is not a failure.

Sarah-Mayes Tang (University of Toronto) for group 3:

- We should recognize that we will face various issues on different campuses, and that we have unique situations in each university and department.
- We need to consider students who don't have reliable/strong internet connections, e.g. we can use asynchronous videos for content delivery and use scheduled lecture times for office hours.

Tara Stuckless (Memorial University of Newfoundland) for group 7:

- We suggest introducing two types of office hours: one for general course questions, open to groups of students, and one for personal matters, open to one student at a time, possibly using a waiting room in Zoom.
- Students find rewatching recorded lectures useful, so these should be recorded and available in reasonable file sizes whenever possible. Camtasia is a useful tool.
- The lack of a physical classroom experience disengages some students. Larger class implementation and instruction has to be simple, step-by-step and easy to follow.

Breakout Rooms 4, 8, and 12: Finding and Sharing Resources

- Do you have interesting resources and practices about remote teaching that you'd like to share?
- More broadly, how can the math teaching community share our ideas and resources more effectively and efficiently?
- Are there areas that you feel like you really need help on but can't seem to find any relevant resources?

Deliverable: Either

A) A list of three interesting resources or practices to share
or

B) A list of three resources you wish existed (and maybe how we can start curating them).

Xinli Wang (University of Toronto, Mississauga) for group 8:

- Lower weight of tests and exams, consider changing to project based assessments.
- Use frequent (weekly or biweekly) low stakes assessments.
- Consider more short answer questions, randomized questions, and use the FYMSiC repo to share resources.

Valerie () for group 12:

- Here is a list of open resources:
 - H5P site is <https://h5pstudio.ecampusontario.ca/> and any Ontario educator can sign up for free
 - Health Numeracy Project bit.ly/henupr
 - Mobius (see later 5 minute talk)
 - Teaching communities: FYMSiC, MS Teams, Zoom, Skype, LMS's, Google Meets
- Three resources we wish existed or had simple ways to organize:

Resources to support and help students with how to work and learn online. Lorena is creating her own.

Online proctoring for large groups (Respondus LockDown Browser works in D2L Brightspace for small groups)

Multiple versions of online tests for large groups

Deferred exams. Taras ran 2 sessions for exams so those with kids could do it after they went asleep. Done on onenote - questions, datasets, with different solutions for open book work. and timed say 8-10 pm

Focus on open-book, project based questions.

Michelle Davidson (University of Manitoba) for group 4:

- Resources: Openboard as an alternative to OneNote to share lecture notes

Mathfix, Mathkey and Webdemo to convert handwriting into LaTeX

- Dream resources: online proctoring, less set up, more plug-and-play resources