**December 9, 2020 - Teaching in Fall 2020 - Lessons Learned**

**CMUE Virtual Workshop**

**Hosted by: Joe Rubin, Maria Davis, Nicole Sukdeo**

**Summary of Content from the “Lecture” Breakout Discussion**

* There are a lot of people looking for guidance and expertise with lecturing!
* Discussion about whether synchronous or asynchronous is better; it was identified that different institutions are pushing us in different directions.
* Students have reported through surveys to have a mix of learning styles with some preferring asynchronous and some preferring synchronous - there doesn’t seem to be a one-size-fits-all option.
* Lots of discussion about how to engage students - it is perhaps easier with upper-level students in smaller class sizes than in large first year classes.
* Scheduled office hours are a challenge; one participant recalled a situation where many students attend office hours to listen to the questions of other students without asking any themselves… this can leave instructors in a silent virtual room without anyone asking anything. Some teaching and learning centres have been suggesting that instructors hold these virtual office hours - their utility may be overstated.
  + May be better to schedule one-on-one time with students that have questions.
* Make sure to keep lectures on time - don’t go over the 50-minute time allotted to the lecture - remember the students are busy!
* No silver bullets for student engagement.

**Summary of Content from the “Lab” Breakout Discussion**

* Participants reported a variety of experiences including face to face and asynchronous.
* Concern about plagiarism was a common theme - especially among younger students who may not yet understand university expectations.
* One participant pre-recorded lab activities and then provided data for the students to analyze.
  + This instructor noted that preparing video labs is quite time consuming - requiring about 10 hours/lab which was a huge time commitment.
* Others taught face-to-face labs in small groups, while this did allow for some technical skill development - the students weren’t able to work as collaboratively as in the past and there were onerous requirements for sanitization of the labs between groups which was a challenge for personnel.
* One instructor noted that students had virtual but synchronous labs which were able to provide somewhat more than observational experience.
* One instructor reported had students create experimental flow charts to demonstrate their understanding of what they *would have* done in a normal year.
  + This allowed students to demonstrate planning and executive functions.
  + A great way of assessing higher order learning objectives.
* Another instructor used teaching assistants to record videos of lab procedures; oftentimes there are small mistakes in these videos.
  + This instructor then asked the students to identify the mistakes in the video as part of their assessment - this encouraged them watch the video several times and really understand the procedures demonstrated.

**Summary of Content from the “Assignment” Breakout Discussion**

* Many of us wanted to do assignment-based classes to limit exam stress, it turned out that many students didn’t like this - they wanted the regular structure of midterm + final.
* Team projects were done collaboratively in a virtual setting.
  + Making posters, interviewing a microbiologist, making videos.
* Several instructors gave students swabs and tasked them with hunting for wild yeasts or superbugs - the swabs were turned into the class and the students then received the data virtually - analysis done on own.
* One instructor did a Wikipedia writing assignment.
* Winogradsky columns used in a take home setting.
* A number of assignments associated with exams were also discussed:
  + Create a cheat sheet for your exam - this cheat sheet will then be graded.
  + Make an illustrated study guide.
  + Students writing their own MCQ.

**Summary of General Discussion**

* Discussion surrounding the use of peer reviews/grades.
  + Two types of review discussed.
    - Performing a peer review - providing feedback to classmate and giving the reviewer a participation grade.
    - Having students give their peers a “grade” that will be incorporated into the overall grading rubric.
  + Advantages: may comprise a portion of the students mark that an instructor doesn’t have to grade, and might help with accountability in group work.
  + Students also learn a lot by performing these exercises - may help students identify things that they were missing from their own reports.
  + Sometimes students when do peer reviews, they give useful feedback but then not give “grades” that necessarily reflect the work (don’t want to give low grade to their friends).
  + Ethical concerns - if someone gets a low grade from a peer there isn’t the same accountability as with instructor assigned grades. These assessments work well when they work, but if they fall apart it can be a disaster.
  + There may be differences in how you would include peer review in students in their first year vs. 4th year students who have more experience and critical thinking skills.
  + Having students provide feedback also gets the students to learn from each-others work - e.g. they read about topics that they didn’t study for their assignment.
* One participant noted that while the solutions being discussed sound excellent, it would be too much work for a large class - might work better in a graduate class setting.
* Keeping it simple is really important - fun, innovative things sometimes require a lot of grading or are complex for the students resulting in a constant stream of student email questions - can be a victim of own success!
* There are clearly different challenges faced by instructors with different positions (graduate students, lecturers vs. faculty) with respect to autonomy in choosing teaching method.
  + One participant who put a lot of time into developing some online content is working in a setting where program administrators are dictating more synchronous vs. asynchronous activities.
  + There is clearly a need to provide some support to graduate students in the development of their own pedagogical methods in a way that isn’t in conflict with their academic ecosystem or the requirements of their ‘bosses’.

**Resources and Links Provided**

Scott Roscoe (roscoe@uwindsor.ca) from the University of Windsor shared a YouTube video of a laboratory demonstration that he put together:

[https://youtu.be/ujIgVk5HoQY](about:blank)

Scott also shared an article about teaching vs. grading:

Teaching more by grading less (or differently). J. Schinski and K. Tanner. [CBE Life Sci Educ](about:blank). 2014 Summer; 13(2): 159–166. doi: [10.1187/cbe.CBE-14-03-0054](about:blank)

Maria Davis ([Maria.Davis@uregina.ca](about:blank)) from the University of Regina shared her peer reviewer rubric. This assessment was done with 90 students in a 200-level course. The reviews did not assign marks to the submission (Introduction section of a lab report). Students were asked to give feedback, each reviewer was assigned 2 reviews, in this way, students received feedback from two individuals. Students were allowed to incorporate the peer feedback into their paper prior to submission for grading.

Joe Rubin ([joe.rubin@usask.ca](about:blank)) from the University of Saskatchewan shared some resources as well, including a video that he prepared for CSM CMUE demonstrating how lecture videos can be edited in iMovie for asynchronous delivery:

[https://youtu.be/6tMpz7Yzi4U](about:blank)

His students wrote Wikipedia articles as an assignment. One example article can be found here:

https://en.wikipedia.org/wiki/Staphylococcus\_schleiferi

And finally his assignment where students wrote multiple choice questions:

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