THE UNIVERSITY OF MELBOURNE

Re-imagining, re-inventing and challenging traditional assessment approaches

An academic's perspective

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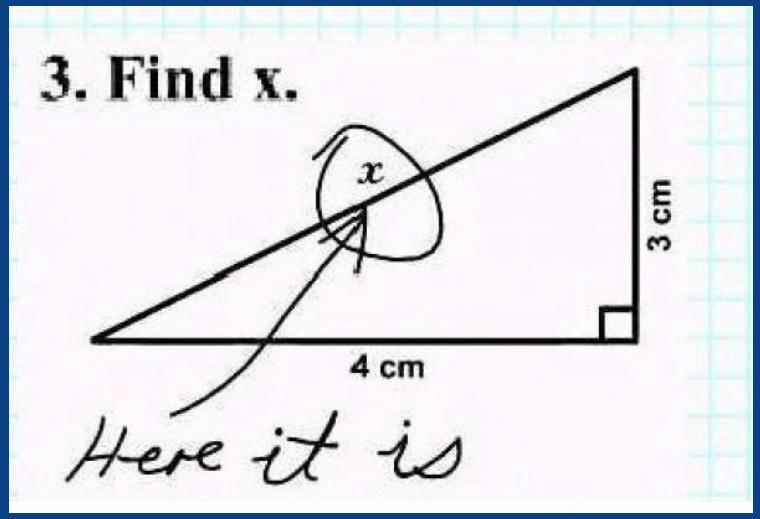
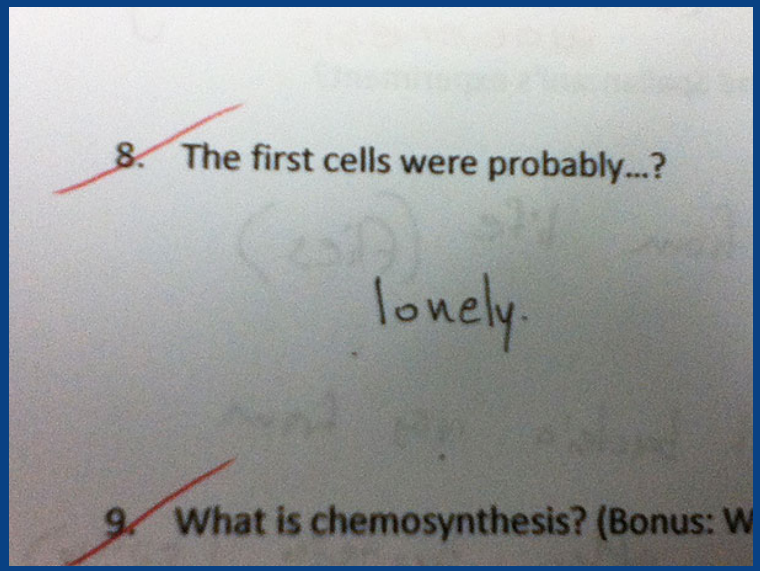




Human Physiology (PHYS20008)

Runs both semesters

~350-550 enrolments per semester

Weekly:

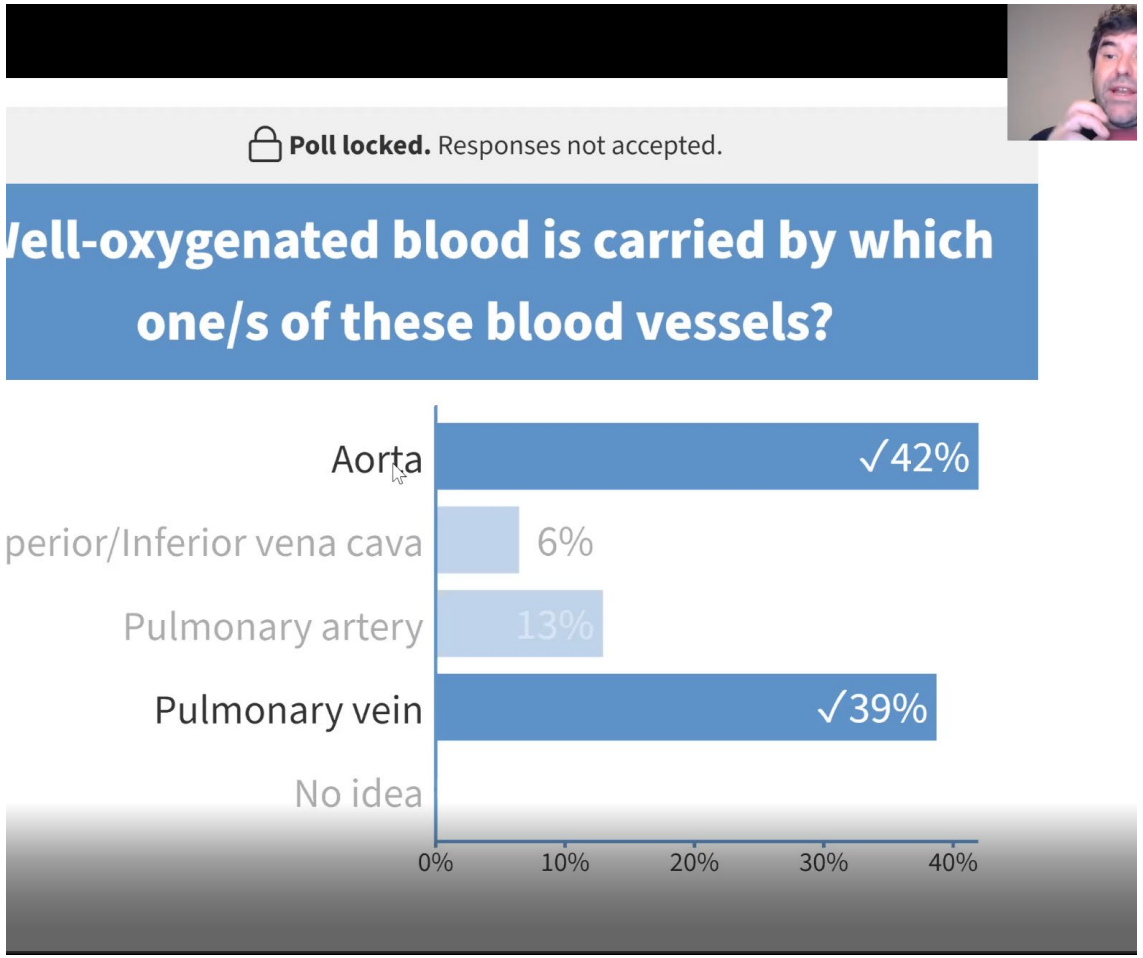
- 3 lectures with live polling (nuts and bolts information)
- 1 inquiry-based workshop (integration and application)
- 1 MCQ quiz with feedback (Consolidation)

45/48 sessions delivered by same lecturer

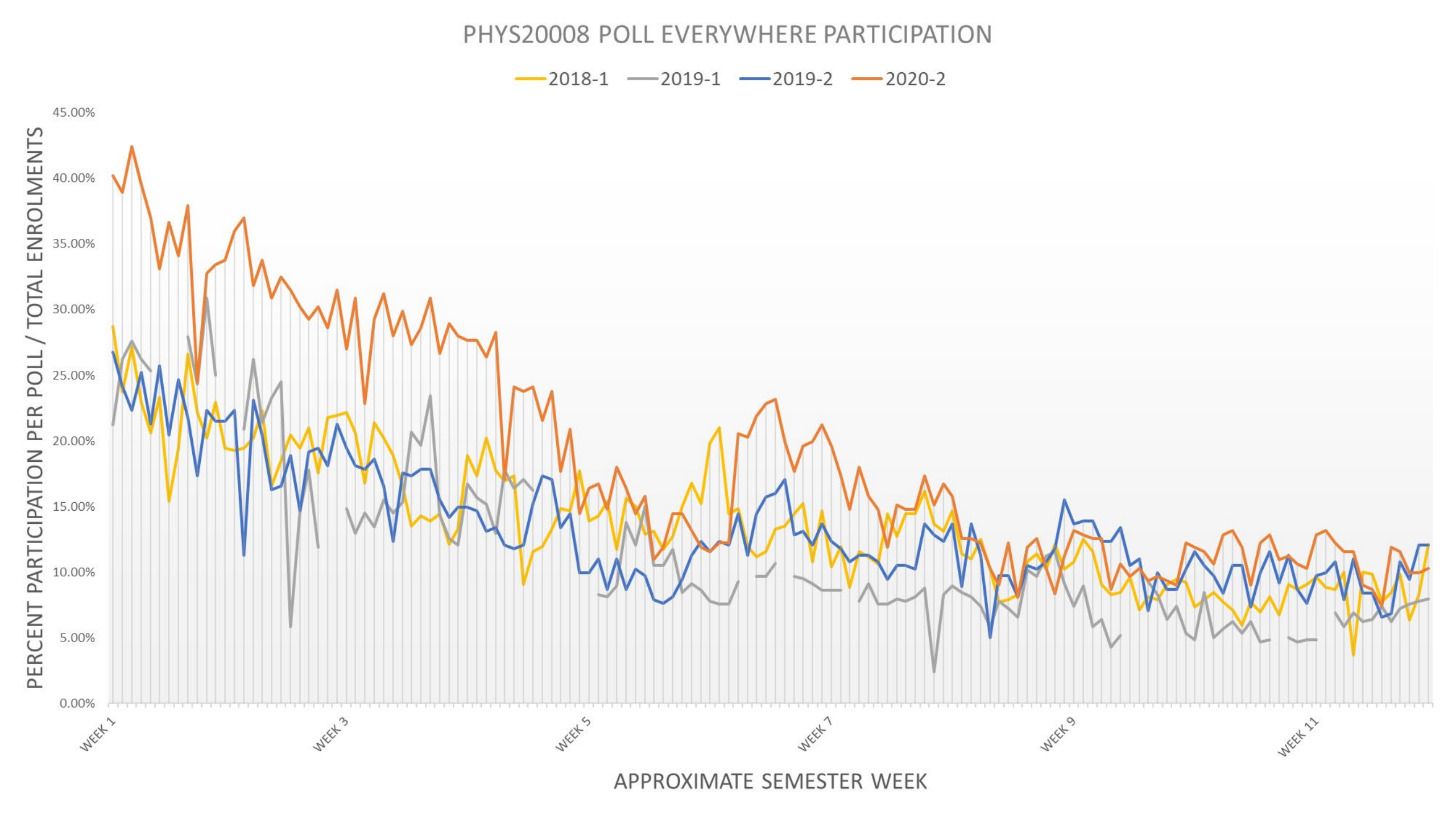
Making the transition

Lectures	Live online (Zoom) with Poll Everywhere
Workshops	Weekly group study sessions (Zoom breakout rooms)
Interactive modules & Discussion board	Inquiry-based workshops (Zoom)
Weekly Online Quizzes	No change
MSTs/EOS Exam (MCQs on campus)	No change
	Open resource, open collaboration, SAQ/LAQs

Lectures

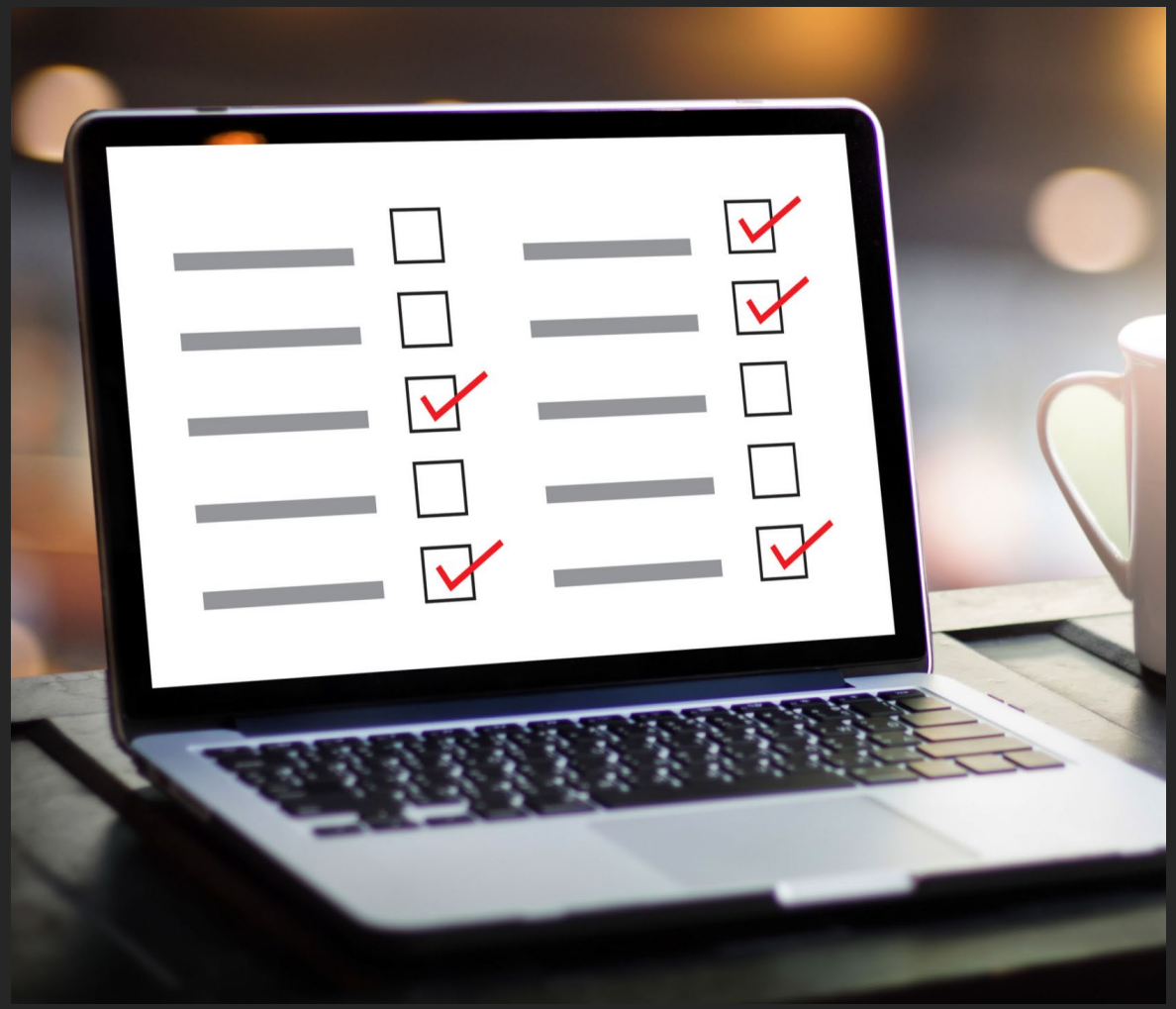


- Run live on Zoom webinar
- Poll Everywhere (engagement, formative feedback)
- Active chat box
- Drawing/annotating on Surface Pro


PHYS20008 POLL EVERYWHERE PARTICIPATION
2018-1
2019-1
2019-2
2020-2
PERCENT PARTICIPATION PER POLL / TOTAL ENROLMENTS
45.00%
40.00%
35.00%
30.00%
25.00%
20.00%
15.00%
10.00%
5.00%
0.00%
WEEK 1
WEEK 3
WEEK 5
WEEK 7
WEEK 9
WEEK 11
APPROXIMATE SEMESTER WEEK

CAL Format

- MCQs done through Canvas LMS
- One det for fundamentals and another for applications
- Encouraged to work in groups
- Feedback for each question provided after task closes

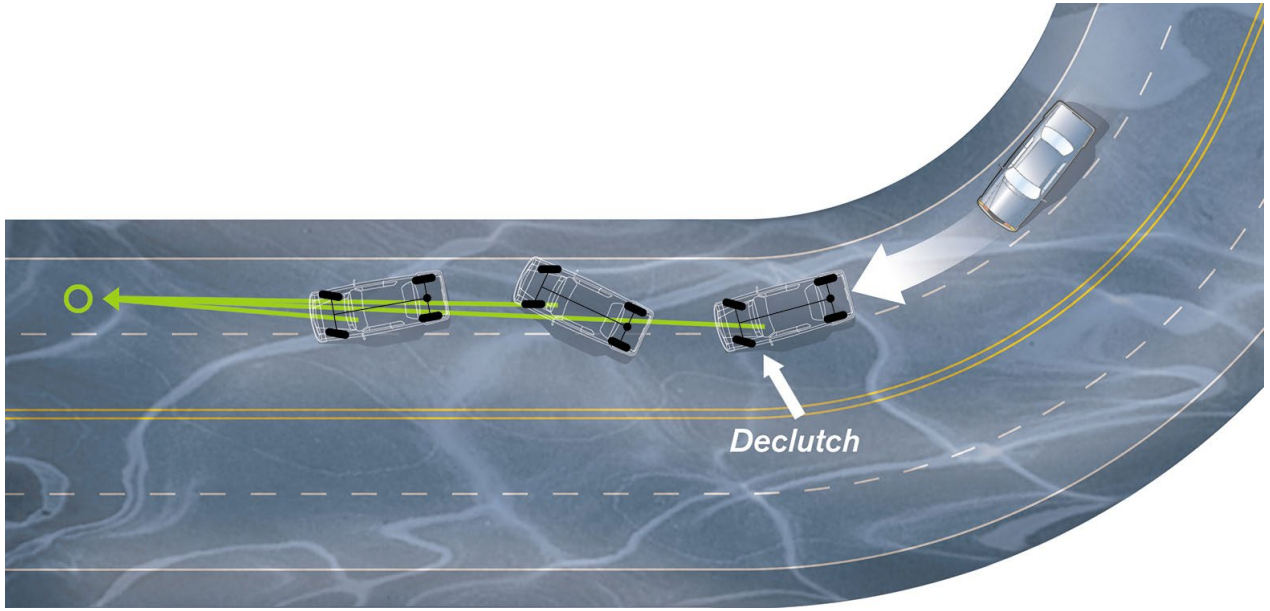


Online Assessment: Inconvenient Truths

- Regardless of ‘the rules’, all online assessment is open resource, open collaboration.
- Barring collaboration and resources punishes the honest students.
- In a large cohort, at least some students will experience every issue possible (technical, connectivity, etc.).
- Assessment open for short timeframes amplifies connectivity issues and requires accounting for OS students in different time zones.
- ‘Online invigilation’ is highly invasive.

Human Physiology MST and Final Exam Format
Steering into the skid

- Short answer questions
- Open collaboration
- Open resource
- Open for 12 hours (MST) to 14 hours (EOS Exam)
- MS Word doc to fill in and upload through Turnitin



<u>The Rules</u>

- No plagiarism
- No open forums (discussion board, Facebook pages etc)
- No asking questions in Yahoo answers, etc.
- Encouraged to keep groups small

Question style

- Attempting to avoid ‘Google-able’ or factual recall questions.
- Aim for questions which encourage discussion and debate.

Consider four preparations, each with a chamber containing a mystery muscle fibre connected to a force transducer and a stimulating electrode. You are able to:

- Stimulate the muscle fibre and cause an action potential
- Vary stimulation frequency and amplitude
- Measure the contractile force of the muscle fibre but **NOT the duration** (don’t ask me why. You bought the cheapest force transducer they had at K-Mart).
- Change the composition of the artificial extracellular fluid in the muscle chamber i.e. add or remove ions. You may ‘reset’ this between experiments.

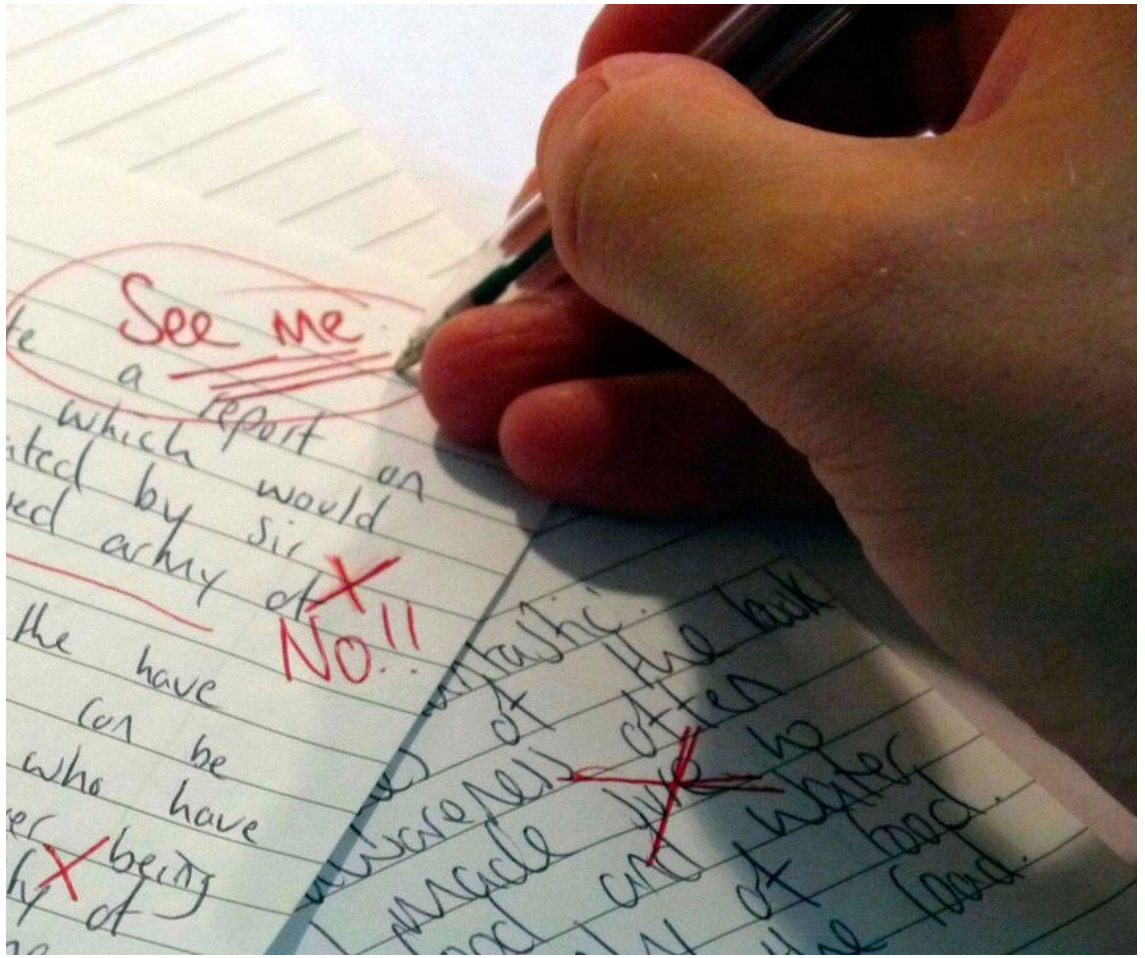
Each of the four preparations contain a different type of muscle fiber:

- A slow-twitch skeletal muscle fibre
- A fast-twitch skeletal muscle fibre
- A cardiac contractile cell
- A cardiac autorhythmic cell

Describe how you would go about determining which type of muscle fibre is in the chamber. There is no one correct answer to this, but you must describe your reasoning in the context of Physiology. **(**I did this in **350 words** ensuring I described the Physiology, but yours may vary depending on your method; **15 marks)**

Marking and Feedback

- Each question was marked by one assessor across all students- eliminated variability between papers
- No feedback was left on student papers
- Assessors had one week to mark and provided feedback on common errors
- Students were provided with model answers and general demonstrator feedback for each question



So did everyone get an H1?

	MST1	MST2	MST Avg	EOS Exam	Total
2020 S1 (SAQ)	77.15%	72.36%	74.22%	70.73%	73.90%
2019 S2 (MCQ)	67.53%	71.39%	69.26%	64.24%	67.95%

The Pros

- Easy to deploy
  - Didn't need to make adjustments for AEAs or time zones
  - Very little 'policing' required
  - No stress about tight time windows
- Students were actually discussing and researching the material
- Written responses highlight students who understand the material
- Anecdotally, students responded well to the format, appreciating the flexibility and feedback

The Cons

- Students with 'good study groups' were advantaged
- Marking time and $
- Difficult to write questions- not appropriate for all disciplines
- Potential for 'passengers' in study groups
- Can't re-use tests

The Dons

Breakout rooms

- How can students get the most out of their assessment?
- Viewing assessment as a learning experience, not just a number
- Recognising the efficacy of “learn it, do it, teach it”