

Building Online Assessments to Minimize Academic Misconduct

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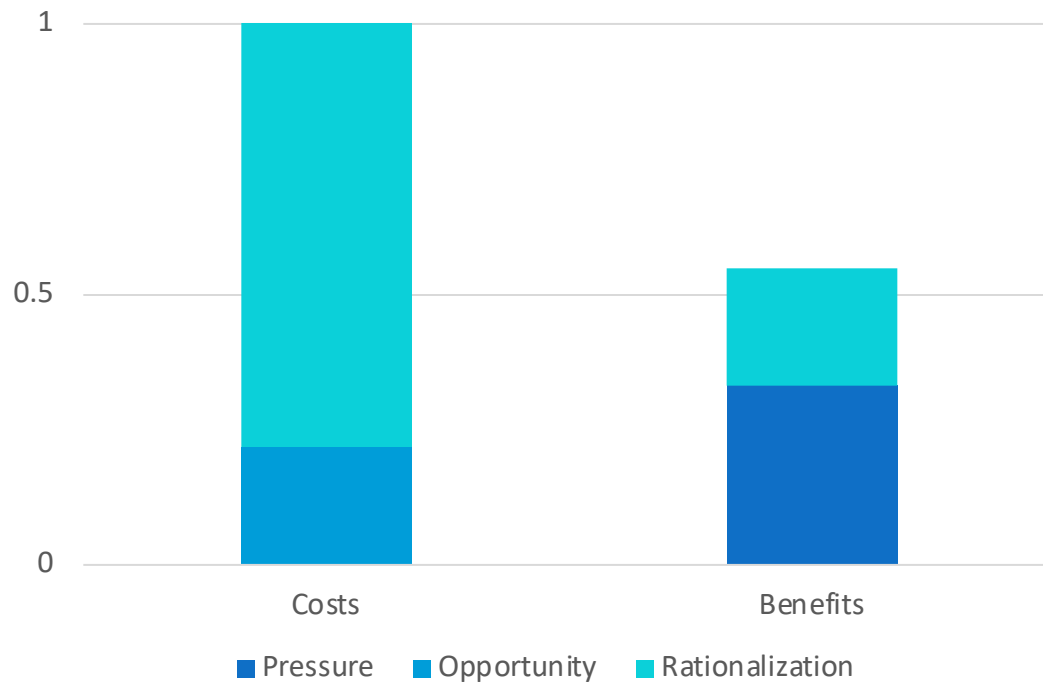
How do we build online assessments to minimize academic misconduct?

Overview

- Discuss model of misconduct and online courses
- Recommendations
 - Course design
 - Assessment
 - Administration (proctoring)
- Questions and Discussion

Misconduct: A Hybrid Model

Hybrid Model



- Economic model
 - Benefits > Costs
- Auditing / fraud approach
 1. Pressure/necessity
 - “Do I need to cheat?”
 2. Opportunity
 - “Is it easy to cheat?”
 3. Rationalization
 - “Is it okay to cheat?”

Course & Syllabus Design

Syllabus Policies & Honour Codes

- First category deals with the “big picture” – not assessment specific, but which assessments: rationalization
- C1: Explicitly define misconduct and use exercises to reinforce
 - Give clear definitions for your course and include activities
 - Anecdote: in second year classes, less than 30% of students will be able to answer simple questions about an honour code correctly in their first attempt
- C2: Use an honour code and enforce it publicly
 - Break down the “expectation” of misconduct online and avoid rumours

Examples – Exam “Pre-Quiz”

Question 2 1 pts

You are writing the exam and notice a clear error in a question. What should you do?

- Message your friends about the error so they don't miss it.
- Email the instructor to ask about the error.
- Check Google to make sure it's an error.
- Post on Piazza about the error.

Question 5 1 pts

You and a friend share a Google Drive folder where you share notes for this course. You notice your friend has uploaded a copy of their exam to the folder. What should you do?

- Do not open or look at the exam, and report it to the instructor.
- Delete the exam, and report it to the instructor.
- Message your friend to tell them to delete it.
- Ignore it, and continue with your exam.

- Provide concrete real-life situations
- Include “edge-cases” that aren’t obvious

- If feasible, include a class discussion about the answers

How do I Structure Assessments?

- C3: Use small frequent assessments instead of large ones
 - Reduce benefits by making assessments smaller
- C4: Explicitly avoid scaling or relative grading
 - Scaling creates in-class competition and encourages cheating
- C5: Provide room to improve and timely feedback
 - Give students a path forward and opportunity to take responsibility

Ideas and Examples

- Give several smaller exams over the term instead of a large final
- Provide opportunities to drop assessments or improve:
 - Token Economy – in this course, you will be given three tokens. One token can be used to (a) submit an assignment late, or (b) skip a discussion. Two tokens can be used to (b) skip an assignment entirely, (c) re-write up to 10 points on a midterm. Three tokens can be used to drop a midterm entirely.
 - “We will automatically drop the lowest X of Y” (but watch out!)

C6: Consider different kinds of online assessments

- The most important “big picture” recommendation is to think about how assessments tie to learning objectives and choose high-level assessments
- What do you want students to learn? How can you evaluate learning? What options are available (feasible)?
 - Is a traditional exam necessary? What about a presentation? A project or paper? Something else?
- We already do assessment “out of the classroom” in lots of ways!

Assessment Design

How should I conduct my exam?

- I want to have an exam – how should I conduct it?
- A1: Set a tight time limit for your exam
 - Cheating takes time; demonstrating mastery = speed (?)
 - Tip: prepare students and give them practice & experience
- A2: Use synchronous exams or shorter windows
 - Increase costs to coordination & misconduct
 - Tip: communicate to students early & prepare for problems

How should I ask exam questions?

- A3: Only display one question at a time & randomize order
 - Reduce benefits of coordination
 - Let students practice, and structure exams appropriately
- A5: Introduce questions with random elements or use “pools”
 - Don’t give every student the same question
 - Create different versions of a question and randomly select
 - Use randomization like Canvas Quiz “formula questions”
 - Challenges: more work, harder to evaluate consistency

General tips about exams?

- A6: Change exam questions frequently
 - Assume past exams (and test banks) have been compromised
- A7: Allow and define use of materials
 - Think carefully if some material is OK (esp. if “low cost” to access)
 - Define HOW permitted material can be used (not just what material)
- A8: Be careful about releasing students’ answers or correct results
 - It’s surprisingly easy to “leak” information about an exam
 - Do this at the end, after all the grading is completed

A9: Use “Higher Order” Questions

- Just like assessments in general, think about the questions
- Try to avoid using very precise, one-dimensional answers (even if they summarize complex thinking)
 - These are easy to relay to others and to share
- Try to include questions which (i) have many right answers and (ii) require explanation and discussion
- Good example: “stimulus response” questions
 - Present a “stimulus” (text, picture, link, etc.) then ask for a “response” which needs to demonstrate specific learnings

Example: Stimulus-Response

- *“Starting in 2016, OPEC has formed a new organization called OPEC+, which includes the members of OPEC plus 10 other members including Russia and Mexico.”*
- *What impact would the expansion of OPEC into OPEC+ have on oil prices and oil policy?*
- *Explain with specific reference to the models and concepts we've developed in class.*
- Stimulus: a brief passage about a real-world situation related to one discussed in class/readings
- Response: a question about the passage, related to the models and concepts in class
 - Very difficult for a generic non-student or tutors to answer
 - Hard to find good answers online

Administering Assessments

Administering Exams Online

- Understand that **all** online proctoring systems can be defeated
- Proctoring works best as a final “cost” barrier to cheating – eliminating low-cost cheating
- Comes with serious challenges (webcams, hardware, internet connections) which can disadvantage students
- Need to clearly communicate requirements upfront and give opportunities to practice
- Still need to be present online to address problems

Options at UBC

- Lockdown browsers / open book: no (or effectively no) proctoring
 - Treated like a traditional take home exam; will not prevent misconduct alone
- *Video proctoring (Collaborate)
 - Best used to verify identity and ensure students are writing the exam
- *Automated proctoring (Proctorio)
 - As above, but also tracks internet use + behaviour
 - Cheaper alternative
- Supervised remote proctoring (Examity)
 - As above, but has online supervision via proctoring service
 - Costly alternative

Recommended Options Comparison

Proctorio

- Integrated into Canvas
- Requires webcam, good internet connection
- Tracks video, screen, internet traffic & records results
- Uses ML to provide “assessment” and investigation (review output)
- Private (?) for student

Collaborate Ultra

- Integrated into Canvas
- Require webcam, internet connection
- Only video and limited recording options
- Up to instructor to use tools and track issues
- Not private unless using groups

Questions & Discussion

- What's your biggest “wish you knew” moment teaching and making assessments online?
- What challenge do you find the most difficult?
- How do we accommodate students in online assessments?
- What are your “tricks of the trade”?
- What do you do that you think is neat and we haven't covered on this presentation?
- What are your general views (or criticisms) about the methods we have covered here?

Appendix

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