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

- 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”

- 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
Selected References


Selected References


