

## Tips to Reduce Cheating In Online Exams

- It may be impossible to stop all cheating, but it is possible to reduce it.
- There is no one-size-fits-all solution.
  - Depends on course content/learning objectives
  - Depends on teaching style
- Use these tips to create a bundle for each course.

### **Monitoring:**

- Set up remote proctoring
  - Some schools retain services such as ProctorU
  - Some schools have monitoring software such as Respondus Monitor so the faculty member can monitor students
  - Students can be required to be on Zoom with camera on during the exam
  - Limitation: Purchased services are too expensive for many schools
  - Limitation: Students must have a working camera
  - Limitation: It can be easier to fool a camera than a set of eyes in a physical classroom
  - Limitation: Faculty based monitoring systems often record each student, flag suspicious movements, and then require the faculty member to watch all the recordings of those students individually (huge time investment)
  - Limitation: Studies have shown that online proctoring may negatively impact student performance more than in-person proctoring
- Use open-book, open note exams
  - Although not eliminating the need for monitoring, it does reduce this need
  - This is more representative of the work place where a professional would go find the answer they need
  - Limitation: It requires asking an entirely different sort of question

### **Restricted Access:**

- Use a lockdown browser
  - Disables printing
  - Turns off copy/paste
  - Disables screen capture
  - Disables right mouse functions
  - Does not allow access to any other application or web page until the exam is submitted
  - Cannot exit the quiz until it is submitted for grading
  - Limitation: They can use their phone to take pictures, but that takes time
- Set a timer
  - It takes time to cheat!
  - Prepared students should need no more time
  - Stress to students that the time frame is intended for students *who know the content*

- Just like an in-class exam, there won't be time to look up what isn't known – still need to study just like for an in-class exam
- Most in-class exams had a time limit so this is no change from traditional testing
- Have all students start the exam at the same time and end at the same time
  - There is less passing of information from one student to another
  - This is allowable with the hyflex designation (if this is noted in the syllabus so students have time to arrange for those set times – it is also recommended that you email students before the class starts so they are aware of this requirement)
  - Limitation: You may have students in different time zones
- Might consider 3 different versions of an exam and offer at 3 times the same day
  - Accommodates students in different time zones or those that must work
  - Reduces opportunities for students to pass information to friends
  - This can be done fairly easily in most LMS (learning management systems)
  - Limitation: It takes more time to write 3 exams instead of 1 (natch!)
- Automatically set the exam to end at the designated time
  - Most LMS (learning management systems like D2L Brightspace, Moodle, Blackboard, Canvas, etc.) will allow a setting that stops at the end time and prevents students from continuing to work
  - Some systems make it possible to allow students to continue the exam but can note what questions were already answered before the extra time is given
- Prohibit back-tracking
  - This prevents using Chegg since they cannot wait the 10 minutes to get an answer before moving to the next question
  - Some complain that this is a disadvantage since students in the class room can go back to previous questions, but students in the classroom are monitored so they have a different disadvantage
  - Limitation: Often a student needs time to let a question percolate in the back of their mind before being able to successfully answer the question
  - Limitation: A student cannot invest extra time at the end to continue working on a problem they find challenging
- Do not make the score available immediately after submitting it
  - Exams can still be used to foster learning, but set the system to show incorrect answers a few hours or even a day or two after all have taken the exam
  - May need to hide the final score in the grades area until this time as well
- Consider only allowing students to see which questions they answered incorrectly
  - Prevents exam questions to be available for next semester students

#### **Exam Structure:**

- Randomize the order of the questions
  - Makes it a little harder to compare answers with a friend via the phone since they have to describe the question, not ask “What about #4?”
  - This tends to work well if the exam is all multiple choice
  - Limitation: It is more time-consuming to grade questions that must be manually graded if they are scattered throughout the exam

- For multiple choice questions, randomize the order of the alternatives
- Use varied questions (multiple choice, short answer, true/false, fill-in-the-blank)
- Ask open-ended questions
  - It is much easier to identify cheating when responses will naturally vary from student to student
  - Limitation: Open-ended questions can take eons more time to grade in large classes
  - Limitation: Open-ended questions can be a nightmare to grade accurately and consistently, especially in larger classes
- Use questions that require higher level thinking (Bloom’s taxonomy – evaluate, synthesize, analyze)
  - Ask conceptual questions such as
    - “What is the next step in this problem?”
    - “Explain why this assumption in the theorem is necessary.”
    - “How is that result interpreted in this context?”
  - Ask students to identify an *error* in a proof or computation (this generally can’t be googled)
  - Use generalities like letters and variables in place of specific numbers
  - Limitation: These can sometimes be hard to grade accurately and consistently
- Have exam show one question at a time
  - Reduces the ability of the student to farm out questions to friends to find answers
- Create multiple versions of the same exam
  - Students are less likely to have all the same questions so this limits cheating
  - Just modifying the same question on different versions can be effective  
For example, one version might say “assume maximum airflow” and another version might say “assume minimum airflow”
  - Limitation: This can mean more work for some disciplines to create reasonable scenarios (e.g. in math you can change the numbers and you are good to go, but any application question must be realistic since a student can approach it from multiple angles)
  - Limitation: Harder grading
- Refrain from using publisher test banks
  - Solutions manuals for popular textbooks are pretty much ALL completely available online, and a savvy student can find those answers easily
  - If using problems from a textbook, sometimes it is possible to simply change the names and scenario (e.g. change Hector to Lin, change pulling a boat to letting a kite string out) which can prevent the problem from being easily identified in online solution sites

**Technical Issues:**

- Expect technical issues! ... they will happen
- Plan for technical issues
  - Prepare a ready response for common situations
    - “My internet crashed!”
    - “The lockdown browser won’t load properly.”
    - “It’s not fair that students in the classroom can return to previous questions.”

“The diagram wasn’t clear.”

- Preview the exam so you know those diagrams are legible, etc.
- Provide a “practice” test so students are familiar with the online exam technology that will be used
- Limitation: It is unlikely faculty can ever think of and prepare for all the myriad of creative issues students will encounter (or invent)
- Be available for questions during the exam
  - Be online yourself for ready access if a student has an issue
  - Teams in Office 365 works well once a team is set up for the class – can chat individually with a student, but can also quickly send out a message to all students if it is information (like a typo) that all students need to know
  - Limitation: This will not work when a lockdown browser is used

### Course Structure:

- Don’t grade on a curve
  - If a student’s grade depends on their fellow students performance, they will be more likely to cheat to beat the classmate
- Define cheating for the students
  - Be very clear about what is considered cheating since it has become apparent many students do not understand this (“No, Chegg may not be used.”)
  - Make academic integrity policies and consequences clear in the syllabus
  - Readdress this before the first exam
  - Limitation: Students who were not considering cheating now have the idea in their mind ... and can start thinking about how to circumvent all the other ideas in this handout
- Have students sign a contract
  - The contract should list what the university considers cheating
  - It can include a link to the pertinent university document
  - Can use the LMS (learning management system) polling or survey feature to execute the contract
  - Or can have students sign, scan, and upload the contract
- Use more frequent, lower-stakes assessment
  - Consider a series of quizzes rather than a couple of midterm exams
  - Students are not as likely to succumb to pressure if the pressure is reduced
  - Limitation: Reduces the ability to determine if the student can identify the type of problem because there is less content on each assessment

From actual online videos showing students how to cheat in online exams

