

Academic Integrity and Online Proctoring

The risk of academic dishonesty in the classroom is not unique to online learning; however, online instructors have a different tools and tactics to promote academic integrity in a virtual learning environment. Below, we provide some general recommendations and strategies for mitigating academic dishonesty in the online classroom and an overview of three different levels of test security, featuring popular proctoring services such as Respondus LockDown Browser® and ProctorU.

General Security Recommendations

Level I: Program and Course Environment Best Practices

General Practices

Prior to investing in a proctoring service or application, there are several program and course design strategies that lay a foundation for academic integrity in the online classroom.

- A Culture of Integrity
 - Clearly articulate standards and university policies in a way that explicitly details implications and consequences of academic dishonesty. Post these standards upfront at the beginning of the program in the Student Orientation and in the syllabus at each course.
 - Academic Policies: Make sure the university is able to enforce its academic policies for online cases, tell students about policies / honor code in multiple places, train faculty to reinforce academic integrity with students, etc.
 - Attestation Statement: Consider including an Attestation Statement in the Student Orientation or at the beginning of each course attesting to academic honesty.
 - Detail different types of academic dishonesty and how to avoid inadvertent violation of the standards.
 - Consider including a short, non-graded quiz for students to self-assess understanding of academic dishonesty.
 - In individual courses, reinforce mindfulness around academic honesty within instructions for course assessments
- Consistent Policies
 - Construct and follow policies for online students that mirror your on-campus policies.
 - State or link to these policies in all course materials and orientations.
- Overall Assessment Structure and Strategy
 - In addition to being a best practice for promoting student learning, continuous assessment and using open-ended assignments (such as

project-based assignments) can impede cheating and make it easier to detect changes in voice or style of work that could suggest some level of cheating.

- Create written assignments assuming that students will be open book.
- If a course includes group or team-based assignments, remember they can mitigate academic dishonesty, as students need to work together (which also implicitly verifies identity) and typically won't condone free riders.
- Use assessments that are smaller and more cumulative, i.e. to provide multiple evaluation points for students.
 - These low-stakes or non-graded forms of evaluation can help students better assess their learning and comprehension of the course content.
- If you have any doubts about a student's academic honesty, follow up with the student. Faculty can always conduct 1-1 conversations with suspect students.

Level II: Assessment Best Practices: No Invigilation or Identity Verification

Best Practices: Objective Assessments

Objective assessments contain questions for which there are single correct answers and/or responses (e.g. multiple-choice questions, fill-in-the-blank). These types of assessments are often used to assess foundational levels of knowledge or, with additional time investment in designing sophisticated course questions/items, can assess higher-level thinking through scenarios or conceptually-based questions.

Several practices and applications can help you analyze whether students have completed the objective assessment in alignment with your standards for academic integrity.

- Leverage LMS Data – You can use LMS data to evaluate student time-on-task in exams. Routinely review your students' start and end times for exams to identify anyone who takes an unusually short time to complete an exam.
- Use best practices for objective (auto-graded) assessments to make it more difficult for students to share item and answer data:
 - Pool assessment items into a larger item bank.
 - Use different assessment pools each time the course runs.
 - Randomize question and answer choices for each question so that answers appear in different orders for different students.
 - Give students a time limit for assessments.
 - Set the assessment to automatically save student work and submit answers at the end of the time limit. Allow only "enough" time for students to complete all questions without looking up answers or conferring with others.
 - Have the assessment accessible only for a specific amount of time (for example, opens on a Thursday, closes on a Sunday).
 - Do not release student scores until every student within the course has completed the assessment.

- Do not release correct answers to the questions to students when the scores and feedback are released.
 - *Note: Although this practice keeps secret the right answer to a particular question, it eliminates the possibility of providing corrective feedback to students based on their performance. In order to provide some measure of personalized feedback to students on their performance, some faculty will provide students their final score and then provide feedback to the entire class regarding most frequent errors.*
- Consider using automated assessments only for progress monitors/content checks that would become a small percentage of student grades; in this way, the majority of the course assessment would comprise constructed responses or assignments that more clearly map to higher levels of Bloom's Taxonomy, such as analyzing, evaluating and synthesizing.
- Application Recommendation: Respondus Lockdown Browser
 - Respondus is a lockdown browser used by many AP partner universities who use the Blackboard LMS. Respondus locks down students' browsers (such as IE, Firefox, or Chrome) so that students can view only the browser window containing their exam during the time that Respondus is active. See below for more detail.
<https://www.respondus.com/products/lockdown-browser/>

Best Practices: Constructed Assessments

As an alternative to objective assessments, performance-based assessments or exams (whether closed- or open-book) require thoughtful construction and are typically scored with a rubric that differentiates levels of performance.

As an instructional best practice, using constructed, authentic assessments in your online course can increase student engagement and strengthen connections between course material and application (or industry) practice and transfer.

In addition, authentic assessments automatically impede cheating as students are required to construct their own responses and craft their own work instead of selecting from pre-populated answers. These assessments can also include opportunities for student-student feedback, discussion, and collaboration, all of which help validate identity and mitigate academic dishonesty.

Several plagiarism detection applications also evaluate whether a student's written work is original and used appropriate citations, typically by comparing a student's work against a database of existing journal articles, papers, and resources. Some plagiarism tools build a repository of student submissions that are available to scan against future student submissions.

Some best practices for using plagiarism tools include the following:

- Ensure that any plagiarism detection tools are easy to use and do not go against any departmental or university policies place regarding student or course fees.
- There are a number of plagiarism detection tools in the marketplace (both free and paid for) that can be used to quickly analyze student submissions for breaches in academic honesty.
 - [TurnItIn](#) is the market leader with respect to plagiarism checking and can be integrated in Learning Management Systems such as Moodle, Blackboard, Canvas, Sakai, and Brightspace as an LTI. TurnItIn reveals content matches in student writing, allows for peer review, and enables quick and customized feedback.
 - Additional tools can be found here
 - Top 10 Free Plagiarism Detection Tools:
<https://elearningindustry.com/top-10-free-plagiarism-detection-tools-for-teachers>

Level III: Authentication and Proctoring Services

In addition to utilizing strategies to promote academic honesty throughout course design, additional cloud-based applications are available to provide either 1) identity authentication – confirming the identify of the student completing the assessment or 2) providing “eyes-on” invigilation to ensure that the student completing the assessment is not receiving additional assistance.

Identify Verification

Identity authentication and verification services help a university ensure that the student completing a particular assessment is the same individual who was accepted into the program and is receiving credit in the form of a credential. Typically, in an identity verification session, the student, via webcam, will show an official ID to demonstrate the match between the official ID and the student. Depending on the platform, students may also be asked to provide additional unique identifiers that can be used to later verify identity.

For example:

- Students may be asked for answers to several personal questions; these questions would then be delivered back to students randomly during an exam to ensure the original, authenticated student was still taking the exam.
- The platform may record a sample of the student’s typing, as keystroke biometrics provide a pattern as distinctive as a fingerprint.
- The platform may detect and record key facial characteristics, in order to check against these characteristics in a later exam session.

Identity authentication and verification can be done by a live person or done in a self-service approach, where the information is recorded in order to be available if a particular case merits investigation.

Some universities may choose to deploy identify authentication on its own or in conjunction with another monitoring technique, such as browser lockdown or invigilation (proctoring).

Examples of Identity Authentication Providers:

- Examity
- ProctorFree

Live Proctoring

Proctored assessments are the most advanced way to secure academic honesty in an online course. Quite simply, proctoring means that a student is observed or recorded – typically via webcam - during an assessment. This proctoring can reduce the risk that student is receiving outside or unauthorized assistance. Proctoring is often used in conjunction with identify authentication, a service that checks the identity of the student taking the assessment.

Proctoring can be a costly solution, however proctoring companies typically provide tiers of proctoring services that may include the following:

- Sessions are recorded to be viewed later by a proctor or spot-checked for instances of academic dishonesty. Some platforms are able to automatically unusual or suspicious activity or movements that is associated with cheating.
- Spot-checking within a proctored session, rather than continuous invigilation.
- Live proctors may continuously monitor students while they are participating in the assessment. This invigilation is typically the most expensive option.

As a best practice, universities should seek to adopt a solution that is easy for faculty and students to use and does not go against any departmental or university policies place regarding student or course fees. Programs may also want to work together as a department or institution to create a set of rules and expectations for students using proctoring services. For example, students can have a drink on the desk, visit the restroom, use notes, etc.

Live Proctoring Providers:

- Examity
- ProctorU
- Proctor Free

Additional Information and Strategies:

The Developing Market for Online Proctoring

A recent overview of products and providers

www.eduventures.com/2015/08/the-developing-market-for-online-proctoring/

Promoting Academic Integrity in Online Education

<http://www.facultyfocus.com/free-reports/promoting-academic-integrity-in-online-education/>

Does Your Online Course Promote Academic Honesty?

<http://facultycommons.com/does-your-online-course-promote-academic-honesty/>