Engineering Collaboration for Online and Remote Education

An E-CORE Quick Guide to

Remote Proctoring for Instructors

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This guide provides support for instructors considering implementing proctored online exams. It provides a starting point to help determine if proctored exams are appropriate and outlines important considerations for their use. To continue the conversation on this topic, visit the Remote Proctoring for Instructors Discussion Forum thread.

Reasons for using remote proctoring

- Supports students in making the right choices about academic integrity by reducing the influence of misconduct rationalization and opportunity
- Ensures fairness for all students during individual assessments by doing two things:
  - Discouraging the use of unauthorized aids
  - Discouraging unauthorized collaboration
- Protects the confidentiality of exam questions by reducing the sharing of questions within a cohort writing at staggered times or across cohorts

Does your institution support remote proctoring?

- Remote proctoring is generally achieved either through the use of specialized software or services[1], or by real-time observation via a video-based collaboration tool (e.g. Zoom)
- Not all institutions allow remote proctoring
- Due to privacy laws, only use applications or methods provided and permitted by your school

[1] e.g. Examity; Proctorio; Proctortrack; ProctorU;

Choose your proctoring approach

Method and Examples	Pros	Cons
Commercial proctoring software or service: various services including fully automatic AI driven, live authentication and proctoring, or a hybrid	• Record of activity available for post-processing • Lockdown browser option • Students don't see each other • Scalable	• Requires camera, microphone, reliable internet connection • May not available in some countries or compatible with some accessibility accommodations or software • Student privacy concerns
Real-time observation: In-house solution using video collaboration tools such as Zoom	• No recording of biometric data • Immediate intervention upon detection of suspicious activity	• Requires camera, microphone, reliable internet connection • Students can see each other • ID checking creates privacy risks, set up and exam start complicated • Need at least 1 observer for each 16-32 students
No proctoring: use of integrity pledge alone	• No student concerns about privacy • Easy to implement, scalable • No special equipment required	• Unknown compliance rate • Student concern about potential misconduct is unresolved

Suggestions for Addressing Common Student Concerns*

Data Privacy including the collection and storage of personal data, video images, screen capture, and computer content:

- Let students know where data will be stored, how it will be used, and who will view it.
- Assure students that only instructors make decisions about academic integrity.
- Follow institutional guidelines.

Personal Privacy if viewing or recording causes discomfort:

- Allow students to sit with back to wall, avoid room scan.
- Assure students that most automatic proctoring recordings are never viewed.
- Do not record live invigilation.
- Protect student identity during student id checks.

**See: Assessment Guidebook for more helpful tips*

Feelings of anxiousness for students who find being watched online more dis-concerting than in-person invigilation:

- Use practice assessments to help students adapt.
- Students with accessibility accommodations may need special consideration or alternative solutions.

Technology issues negatively impacting assessment:

- Inform students in advance of technology requirements.
- Connect students to campus tech bursary programs.
- Have a backup plan for students who cannot access tests successfully.
- Provide extra time on tests for connection issues.
- Use staggered starts and allow reconnection during tests.

Use cases

Question style	Question security	Unauthorized materials	Unauthorized collaboration	Notes
Multiple choice, text entry	●	●	●	Any high level question style, no calculations or rough work required
Critique/Analysis	●	●	●	e.g. spot the error
Closed book long answer (written work expected but only final answer entered and auto graded)	◉ ○	◉	●	Question security drops if a cohort is writing at staggered times
Closed book long answer (graded work)	◉ ○	◉	◉	Question security drops if a cohort is writing at staggered times
Open book (selected materials)	○	○	●	Unauthorized print materials harder to detect
Open book (unlimited resources)	•	---	○	Useful for reducing real-time collusion by preventing discussion
Legend: ● Excellent ◉ Good ○ Fair • Poor				

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