WE’VE GOT EYES ON YOU!
Lessons learned using online proctoring to stop cheating

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AGENDA

- Problem / Issue
- Possible Solution: Online Proctoring
- Investigation
- Nursing Experience
- Omnium Experience
- Lessons Learned
- Moving forward
How can we **stop students from cheating** when taking online tests from **remote locations**?

**In other words...**

- How do we know that students are who they say they are?
- How do we know that students are not accessing unauthorized materials?
- How do we know that students are taking the test individually?
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OPTIONS

- Change the assessment
- Invigilate exams on campus
- Arrange for students to take exams at testing centers
- Online invigilation / proctoring
18 Month Graduate Degree program; 6 two-week face to face modules, delivered in various locations around the world. Each module is separated by 3 months.

Cohort of 25 - 35 students

International Student Group - live in Canada, Germany, Switzerland, China, Austria, USA, etc...

Students write final exams for 7 courses

Exam scheduling takes up precious time during a module – Sometimes 1.5 days out of 10

Previously, exams were written 3 months after conclusion of course

NOT IDEAL
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PROCTORU

- Live proctors watch approx 6 students at once
  - ✔️ Using student’s webcam
  - ✔️ Viewing / controlling the student’s screen
  - ✔️ Verifying the student’s identity
  - ✔️ Trained to watch for eye movement
  - ✔️ Log interactions with students

- Exam taking technology is independent of ProctorU (usually an LMS)

- React to issues in real time via faculty advocate

- $17.50/student/one hour exam
- $25.00/student/two hour exam
- $33.00/student/three hour exam
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**EXAM TAKING PROCESS**

- **Before the exam:**
  - Student *creates account* and *schedules exam*
  - Student *tests* equipment

- **On the day of the exam:**
  - Student *logs into ProctorU* and *connects with Proctor*
  - Student goes through ‘*readiness procedure*’ with Proctor
  - Login to LMS, navigate to course/exam
  - **Proctor enters password**
  - Student writes exam
  - Student submits exam when finished
  - Disconnects with ProctorU
A **first** for the University of Toronto

Address privacy:

- Worked with I+TS Security office to conduct a Privacy Impact Assessment (PIA) and a Threat/Risk Assessment (TRA)
- Worked with ProctorU to complete assessments and build in recommendations for privacy

- Students accept ProctorU’s Terms of Service
- **ProctorU must purge all data** at the end of the pilot
THE NURSING EXPERIENCE
THE PILOT

- Conduct **3 proctored online exams** using the **Blackboard Test tool and ProctorU**
- Faculty of Nursing to **incur the costs**
- Students can **opt out**
- **2 - 90 minute exams:**
  - Midterm and final, closed book, MC, 91 students each
- **1 – 2 hour and 15 minute exam:**
  - Final, open book, MC and open-ended, 30 students
- **Evaluate effectiveness and make a decision for future use**
EXAM RULES

▪ **NUR1100: 2 closed book exams (Nov and Apr)**
  ▪ No Calculator, no phones
  ▪ Blank scrap paper and pen/pencil allowed.

▪ **NUR1022 (Mar): Open book exam:**
  ▪ Hard copy only (notes, textbook, etc.)

▪ Student should not leave proctor's sight (no washroom breaks).

▪ No additional programs, browsers, or browser tabs open

▪ Student will need to present 2 pieces of photo ID

▪ Student will need a reflective surface

❖ **Accessibility concerns**
BEFORE THE EXAMS

Student communication is key:

▪ Included technical requirements in course syllabus
▪ Concept introduced at residency week
▪ Developed practice BB test (without ProctorU)
▪ Developed short demonstration video of how to take a BB test (without ProctorU)
▪ Created student guide with firm deadlines
DURING THE EXAMS

▪ Make sure “faculty advocate” and instructor are readily available

▪ Monitor the test
  ▪ ProctorU has great real-time reporting with transcripts
  ▪ Cross-reference with Blackboard

▪ Hope for the best, expect the worst
  ▪ Be ready for technical and academic issues
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RESULTS: NUR1100 MIDTERM EXAM (NOV)

- **89 / 91** students proctored by ProctorU
- Two student issues:
  - One student had low bandwidth – *extra time allotted*
  - One student could not load screen sharing software – *took test without ProctorU*
  - Detailed reports of incidents were received after the test
- ProctorU provided many reports including:
  - Test start and end times
  - Chat transcripts and proctor notes
  - Avg wait time for a proctor: **8 secs**
  - Avg startup time: **8.5 mins**
RESULTS: NUR1022
FINAL EXAM (MAR)

- **Improvement made**: all questions on one screen
- **29 / 30** students proctored by ProctorU
  - One student could not load screen sharing software and had bandwidth issues – **took test without ProctorU**
- Experience was **much worse** than the last exam!
  - Avg wait time for a proctor: **12 minutes!**
  - Avg startup time: **13 mins!**
  - **Not enough communication** with faculty advocate
  - Proctors **not as familiar** with exam rules
  - **Inappropriate authentication** mechanisms
  - **Cultural differences**
- **Why??**
RESULTS: NUR1100
FINAL EXAM (APR)

- **87 / 91** students proctored by ProctorU
- **BB was down the day before**, a little slow the day of
- All student issues were related to Internet speed.
- Experience was **much better** than the last exam!
  - Avg wait time for a proctor: **57 secs**
  - Avg startup time: **12.5 mins**
  - **Lots of communication** with faculty advocate
THE OMNIUM EXPERIENCE
THE PILOT / COMMITMENT

- **Committed** to moving all final exams online
- Program to **incure the costs**
- Students **cannot opt out**
- Require that faculty supply **multiple versions** of final exam
- Schedule an **alternate ‘in person’ exam date** in the event of technical difficulties
- To date have run **two final exams out of six planned**
EXAM RULES

▪ Open book exam:
  ▪ **Open notes** (including soft copies of notes), allowed iPad use for accessing e-text
  ▪ Scratch paper allowed
  ▪ Only rule – no communicating with another human being, except for proctor

▪ Student will need to present 2 pieces of photo ID

▪ Student will need a reflective surface
BEFORE THE EXAMS

Student communication is key:

- Reminders to schedule exam; **fee for scheduling late**
- Students confirm that they have the **correct technical requirements** for the exam – webcam, microphone, bandwidth, flash and operating system
- Insist that students **connect with a live proctor prior** to exam day to take care of technical issues in advance
- **Clearly communicate** the requirements of the exam and what is allowed
- “Borrowed” student guide
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RESULTS: RSM5201 ACCOUNTING FINAL EXAM

- 24/27 students proctored by ProctorU
  - One student had no Internet access!
  - 1.5 hours to clear issues; writing in China so would have started the exam at 1 am
  - Travel conflict

- Multiple student issues:
  - **Wait times to start exam** due to technical issues
  - **Inconsistent messaging across proctors** – what was allowed and what wasn’t
  - **No timing by proctor**
  - Timed link created anxiety; could not upload or download exam after 2 hrs 15 mins. **75% of the class emailed their exams 😞**
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RESULTS: RSM5302 FINANCE FINAL EXAM

- Experience was **much BETTER** than the last exam!
- **Improvements made:**
  - Link provided by Proctor
  - Students told to time themselves - no timed link
- 28/28 students proctored by ProctorU
  - 1 major technical issue due to work firewall. **Fixed after 45 minutes**
- Students knew what to expect so anxiety levels were much lower
- **ProctorU issues:**
  - Timing issue – **time zone confusion**
  - 2 instances with **providing the incorrect link to students** – some proctors gave our LMS link, not exam link.
EVALUATION OF NURSING PILOT

Data sources include:

▪ ProctorU post-test surveys – generally positive
▪ Nursing surveys on online test-taking experience

Response Rates:

▪ Exam 1 (midterm) – ProctorU 64/91 (70%), Nursing 73/91 (80%)
▪ Exam 2 (final) – ProctorU 22/30 (73%), Nursing 17/30 (57%)
▪ Exam 3 (final) – ProctorU 67/91 (74%), Nursing 16/91 (18%)
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INDEPENDENT SURVEY RESULTS

✓ **Almost all** students took the test from their homes
✓ Majority of students accessed the test **wirelessly** via a DSL or Cable Internet connection
✓ Most students agreed that the **demo videos and practice exam helped** them prepare for the exams
✓ Being able to **test equipment ahead of time really helped**
✓ Creating a ProctorU account and signing up for exams was easy
✓ **Felt well supported** before and during the exams
✓ Had a good understanding of what the test taking experience would be like prior to taking the exam
During the on-line exam I was able to focus on the questions **without worrying about the technology.**

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During the online exam I was able to focus on the questions without worrying about the technology.

- Going back and forth between questions is slow (native BB issue, fixed during exams 2,3)
- Too long to get setup to take the exam
- Too long to wait for an available proctor
- Proctor shift changes were distracting
- Nerve racking worrying if the technology would not work
- Prefer to take paper exams
- Audio was delayed so had to use chat window, which was distracting
- Webcam light was distracting
- Connection dropped a few times, which was stressful
INDEPENDENT SURVEY RESULTS

Additional comments:

• ProctorU was helpful in solving technical difficulties
• Appreciated the lengths that ProctorU went to ensure that academic integrity was upheld
• The room scan felt like an invasion of privacy
• Worried about losing test time while the proctor was getting them setup
• Unable to access professor if a question arose during the exam
• Do not like online test taking in general
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LESSONS LEARNED

▪ Backup plans are extremely important
▪ Communication is key
  ▪ Inform students of the wait times
▪ Cultural differences – language/accents of proctors, American Thanksgiving!
▪ Accessibility
▪ Consistency of proctors
MOVING FORWARD

- **Concern**: how much does it effect performance?
- Determine if we think that online proctoring is the right choice for our program
- Determine if we wish to continue using ProctorU’s services
  - If so, conduct a broader PIA and TRA for continuous use
  - If not, research alternatives and conduct a new pilot
- Build in lessons learned for future use
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