REMOTE PROCTORING: IMPACT ON ACADEMIC INTEGRITY, PERFORMANCE, AND TESTING ANXIETY

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Objectives

Upon completion of this session, participants will be able to:

- Explain how technology can aid conducting proctored assessments in distance learning environments

- Describe the impact of remote proctoring and test taking on academic performance and testing anxiety

Remote Proctoring

Aims to assure academic integrity for exams taken remotely

OPTIONS:

Real-time online proctoring companies
- Live proctor guides exam start, checks ID, and checks environment for unpermitted materials
- Can intervene in real-time if needed
- Limitations: Fee per service, high demand during pandemic

Artificial intelligence-driven remote proctoring solutions
- ID verification beforehand, captures audio and video footage during exam
- Artificial intelligence analysis of student activity, gaze, background noise, etc.
- Limitations: definition of "normal" behaviors not inclusive of all types of learners

Internal remote proctoring procedures
- Real-time proctoring combined with post-exam academic dishonesty data analysis
- Limitations: solely reliant on internal resources

Technology for Remote Proctoring

Secure Computer-based Exams

- Testing device using ExamSoft in secure mode
  - Also utilized on exams in non-distance education
  - Restricted access to other applications
  - All device functions disabled

Surveillance

- Second internet-capable device
- Via Zoom
- Focused on workspace and student, not exam device
- Each proctor observes up to 24 students

Exam Proctors

- Consist of UTHSC College of Pharmacy faculty and staff
- All reviewed policies and procedures document and completed one-hour training session for standardization

Exam Procedures: Check-in

- 15-30 minutes prior to exam
- 360° view of each student's workspace
  - No virtual backgrounds
  - No unauthorized materials
  - Quiet and well-lit environment
  - No AirPods or other wireless communication devices
  - Computer screen ("ready to test")
  - Mirror for Zoom device check
- ID verification to ensure the correct identity of the exam taker

Exam Procedures: During Exam

- Students maintained audio and visual connection
  - Students unmuted briefly (< 5 seconds) at random intervals
- Proctor monitored students on Zoom using "Gallery View" and noted and recorded any potentially suspicious activities
- UTHSC College of Pharmacy coordinator of testing was available to join the Zoom session
  - Any student with suspicious activities could be brought into breakout room to address any issues and avoid interrupting other students
- Permission for leaving seat must be requested via Chat function
- Need to leave seat minimized
  - Both devices connected to power source for duration of exam
  - Students encouraged to bring any water, snacks, tissues, etc. that may be needed
- Students dismissed via chat and show verification of exam upload

Dealing with Technical Difficulties

◦ IT staff support is key

◦ Offered pre-exam walkthroughs of Zoom functionalities for proctors and students

◦ Students instructed if kicked out of Zoom = rejoin ASAP
  ◦ Proctors documented start and end time if student's Zoom device failed to provide video

◦ Need clear and detailed procedures for:
  ◦ Proctors to scheduling Zoom sessions
  ◦ Signing in to Zoom for proctors and students

◦ "Zoom Tech Tips" provided to students
  ◦ Use of "do not disturb" mode to minimize disruptions on Zoom device
  ◦ Gallery view vs. speaker view and pinning videos (to minimize "jumping" of Zoom screen during exam)

Post-exam Academic Dishonesty Data Analysis
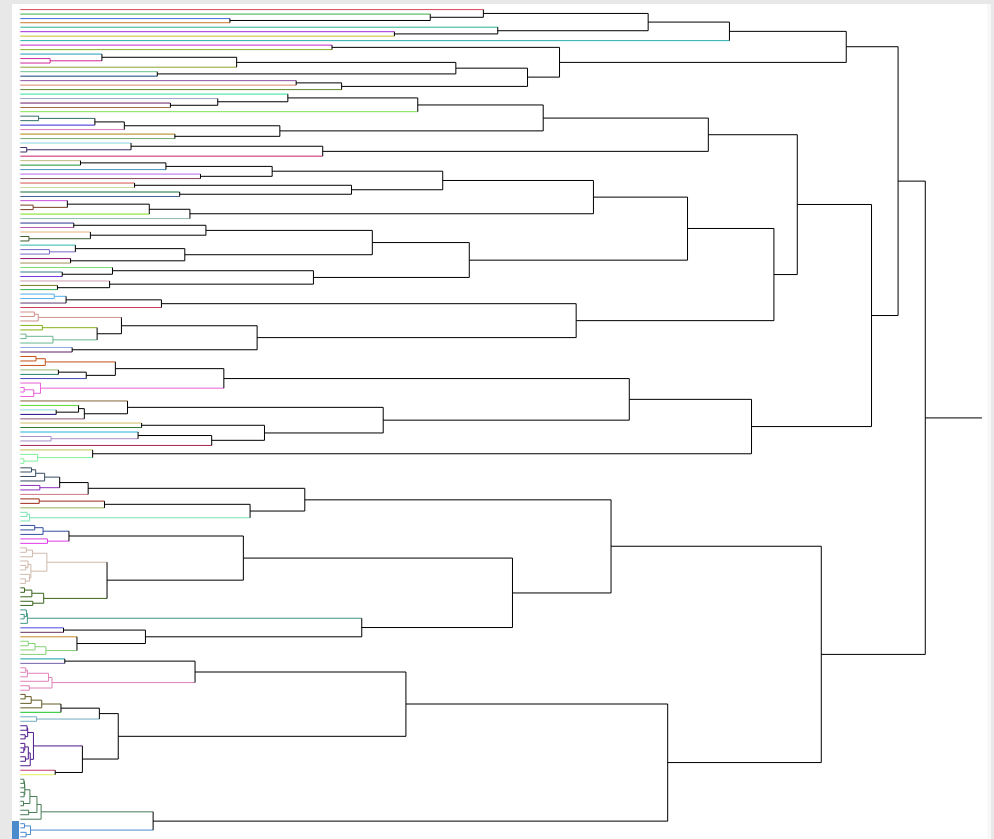
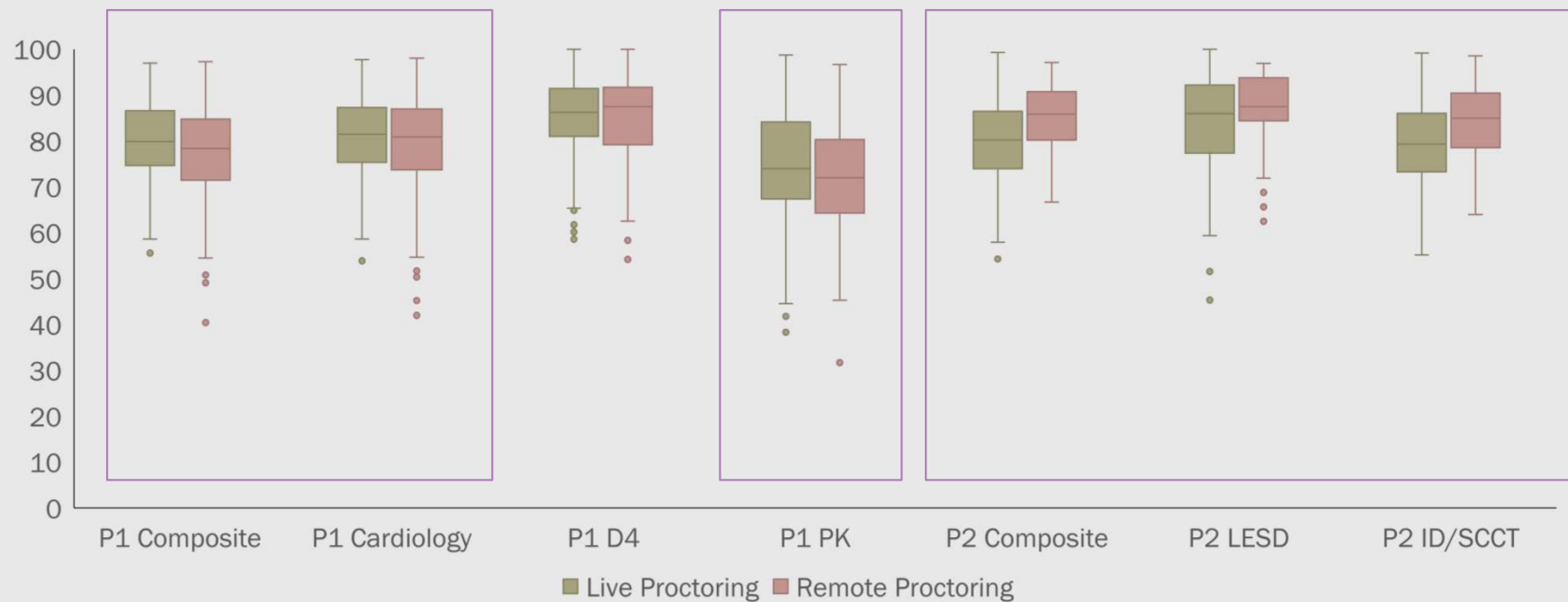**1- Hierarchical clustering**

- Similarity in student exam responses

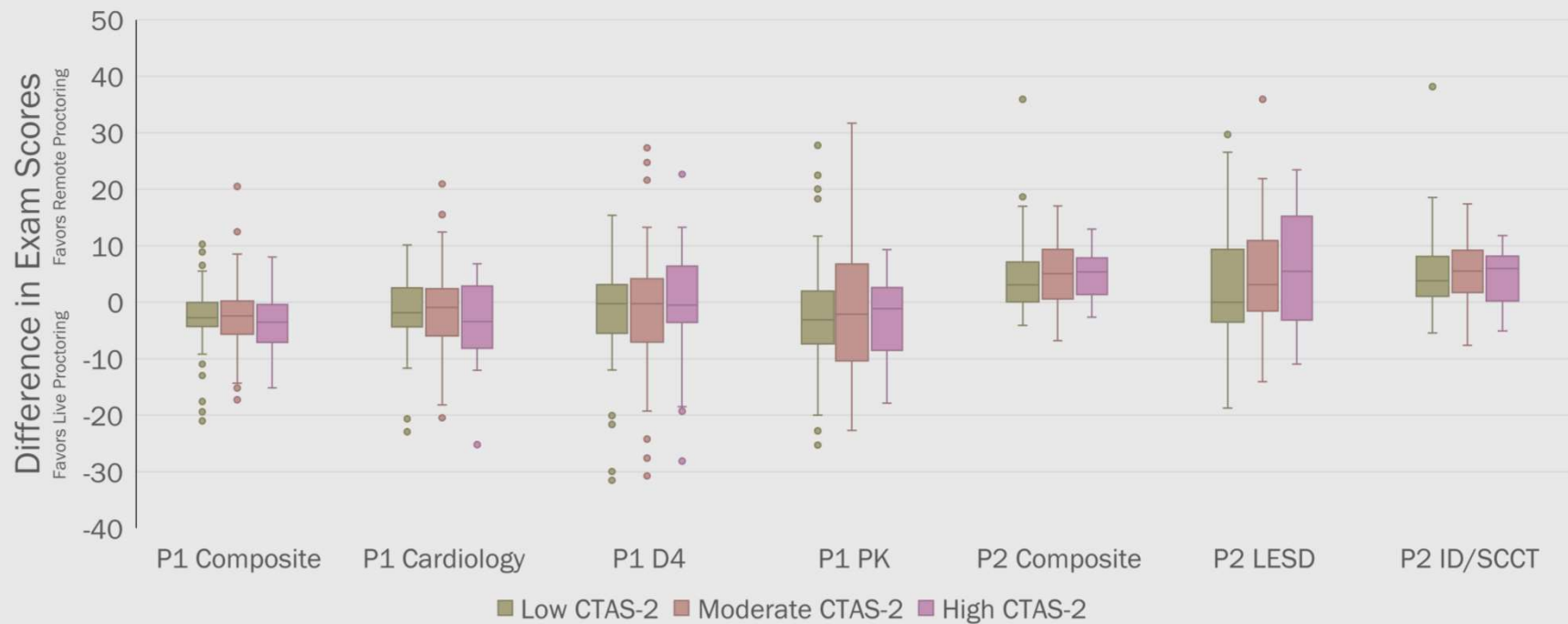**2- Exam taker timestamps for question navigation, exam submission**

3- Analysis of IP addresses for submissions/uploads

Chen M. Detect multiple choice exam cheating pattern by applying multivariate statistics. Presented at: International Conference on Industrial Engineering and Operations Management 2017
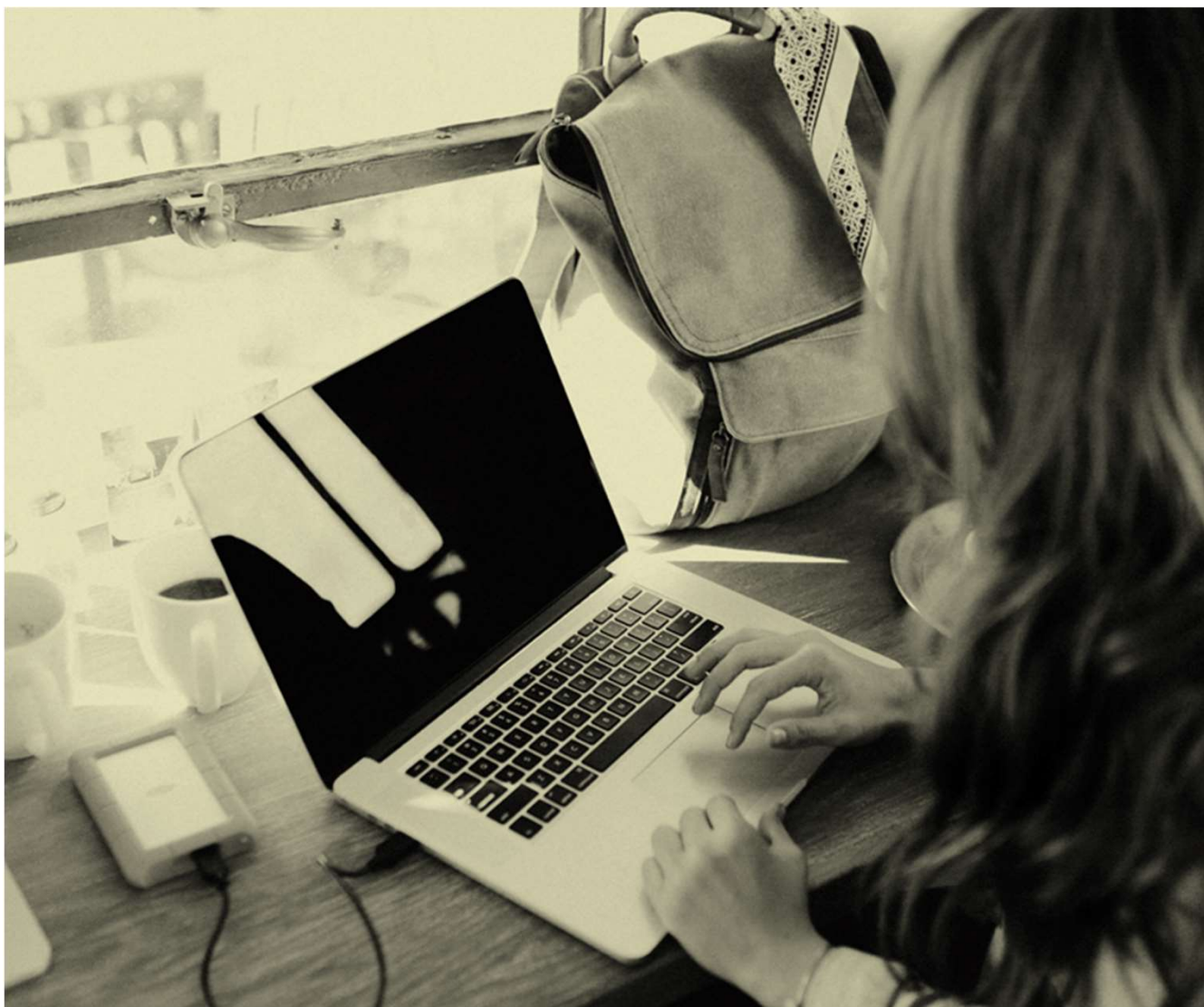
Before/After Comparison of Academic Performance

Academic Performance Stratified by CTAS-2 Score

Summary

- Technology allows for many options to administer and proctor exams remotely to assure academic integrity

- Remote proctoring procedures do not seem to impact academic performance, even in students with higher levels of testing anxiety

QUESTIONS?

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