Anytime, Anywhere Testing
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What is Remote Proctoring?
• Candidates complete a test via online webcam monitoring.
• Intent is to create secure and verifiable testing conditions that mirror an in-person proctored environment (Karim, Kaminsky, & Behrend, 2014).
• Two Formats
  – Live
  – Record and Review
• In contrast, UNPROCTORED ONLINE TESTING allows the candidate to complete an exam online without being monitored in any way.

Recent Research: Are Remote Proctored Exams Different from Traditional Proctored Exams?
• Sample: Three professional licensing exams; total sample = 14,623
• Do scores obtained at kiosks with online remote proctoring exhibit sound psychometric properties, equivalent to scores obtained from the same test administered at traditional test centers with onsite proctoring?
  – No significant differences occurred between test delivery formats
• Do examinees’ perceptions of general features of the testing conditions differ across online remote vs. onsite proctoring conditions?
  – Similar levels of satisfaction with both test center and kiosk proctoring
• To what degree are examinee perceptions of the testing conditions related to variability in test scores?
  – Examinee perceptions of testing conditions were unrelated to their test scores.

A Comparative Study of Online Remote Proctored versus Onsite Proctored High-Stakes Exams (Weiner and Harris, 2017)
Recent Research: Do Candidates React Well to Remote Proctored Exams?

- **Study Design**
  - 2 X 2: proctored vs. unproctored; searchable vs. non-searchable test
  - 295 participants
  - Setting: Low-stakes; $1 compensation to complete, $25 reward to "highest test score" to increase motivation (random draw in reality)

- **Does remote proctoring affect test-taker reactions?**
  - Remote proctoring increased pressure felt by test-takers
  - Remote proctoring group had more concerns regarding privacy
  - Remote proctoring did not affect perceived chance to perform
  - More people in the remote proctored setting voluntarily withdrew from the study (30%) compared to unproctored condition (19%; statistically significant difference)

- **Concern:** "May increase attrition from an organization’s selection process by increasing pressure and privacy concerns." Keep in mind, though, that motivation in study was low compared to employment setting.

Recent Research: Does Remote Proctoring Deter Candidate Misconduct in Online Exams?

- **Study Design**
  - Undergraduate students completed exam in either unproctored (control; N = 184) or proctored (treatment; N = 186) setting.
  - Versions of exams varied based on pool of questions

- **Results**
  - Unproctored participants scored higher than those who were remote proctored.
  - Unproctored participants took longer to complete the test.
  - Unproctored participants felt as though they had a greater opportunity to collaborate with others compared to the remote proctored participants.
  - Remote proctored participants perceived they had significantly less opportunity to utilize unauthorized resources during the exam compared to those who were not.
  - Remote proctored participants felt a greater level of deterrence to engage in misconduct while testing compared to unproctored participants.

- **Conclusions**
  - Participants are more likely to engage in misconduct if they have the opportunity
  - Unproctored participants took longer—due to cheating? More research needed to be definitive, yet this group did score higher.

Outside Agency Survey Results

- **What test formats does your agency currently use to administer multiple choice tests, training and experience questionnaires, and/or essay response tests? (Sample: 50)**
Outside Agency Survey Results

• Of the seven agencies who reported administering remote proctored online exams:
  – 3 had 1,000-5,000 employees
  – 2 had 5,000-10,000 employees
  – 2 had 15,000+ employees
• One agency reported that they would be administering remote proctored online exams in less than one year.
• Six agencies reported that they do not administer any paper/pencil tests.

Why Does the City of Los Angeles Want to Shift Towards Online Testing?

• Alternative option to proctored testing
  – A limited number of seats can be reserved per weekend—has caused delays in open dates for some exams.
  – Dependent on vendor for testing
    • Seasonal availability
    • Short-term contract
• Test from ANYWHERE
  – Good customer service: Candidates do not have to spend their time and money to travel to the test site
  – Increased geographic dispersion of candidates—increased pool of qualified candidates

Pilot One: Unproctored Online Multiple-Choice Test

• Multiple hurdle exam: qualifying multiple-choice test; 100% training and experience questionnaire
• Principled approach to test security/cheating: Candidates were required to review Candidate Agreement and “agree” to abide by rules before beginning the test.
• Sample: 23 candidates completed test
Pilot Two:
Record and Review Remote Proctored Multiple-Choice Test

• 100% multiple-choice exam
• Candidates required to meet system requirements, download secure software
• Sample: 44 candidates
  – 41 completed remotely
  – 3 requested traditional proctored environment

Pilot Three:
Live Remote Proctored Multiple-Choice Test

• 100% multiple-choice exam
• Candidates required to meet system requirements, chat with proctor
• Sample: 40 candidates
  – 36 completed remotely
  – 4 requested traditional proctored environment

Remote Proctoring Considerations

• Rules
  – What is permitted during test?
    • Drinks? Gum? Hats? A smartwatch? Headphones?
  – What are the environment requirements?
    • Can candidates test from a bed or couch?
  – Are candidates allowed restroom breaks?
  – How can we allow scratch paper?
• Access to videos — short term and long term
• How will results be reported?
  – Will this integrate with our existing system?
    • Candidates uncomfortable entering SSN, sent NeoGov Person IDs
Pilot Results

- **Completion Rates**
  - Unproctored: 100%
  - R&R Remote Proctored: 71%
  - Live Remote Proctored: 69%
- **Geographic Dispersion**
  - Unproctored: 2 out of state (Texas and Illinois), 1 northern CA (San Jose)
  - R&R Remote Proctored: All southern CA residents
  - Live Remote Proctored: All southern CA residents
- No malicious misconduct found

Comparing Online Testing Approaches

- **Cost**
  - Unproctored: Cheapest (flat-rate)
  - Live Remote Proctored: Most expensive (per candidate, plus flat rate fees)
  - R&R Remote Proctored: Same pricing model as live, but cheaper per candidate fee
- **Technology Requirements**
  - Unproctored: Minimal—good internet connection
  - Remote Proctoring
    - Webcam
    - R&R Remote Proctored: Most extensive
      - Required secure browser downloaded
      - Some limitations on compatible web browsers

Candidate Experience Survey Results: Reaction to Online Testing

- 59 respondents across the three tests completed the survey
- **Item:** I would have preferred to complete the online multiple-choice test in an in-person proctored environment.
  - Overall, 41% of respondents disagreed or strongly disagreed to this statement (good); 27% were undecided
  - Those with the least amount of system requirements tended to disagree with this statement.
- **Item:** I hope that the City of Los Angeles Personnel Department offers more of its tests in the same online setting.
  - Overall, 64% of respondents agreed or strongly agreed to this statement; 25% were undecided
Candidate Experience Survey Results:
Reaction to Online Testing

- **Item:** Overall, my experience with the administration of the online multiple-choice test was positive.
  - Overall, 86% of respondents agreed or strongly agreed to this statement; 8% were undecided.

- **Item:** What features about the online multiple-choice test administration did you enjoy the most?
  - Being able to take the test for a date/time that fit my personal schedule.
    - Selected by 86% of respondents.
  - Being able to take the test in a private area of my choosing (e.g., home, office).
    - Selected by 54% of respondents.
  - Being able to complete the test from a computer rather than in a paper/pencil format.
    - Selected by 42% of respondents.
  - None of the above; I did not enjoy this remote proctored multiple-choice test experience.
    - Not selected by any respondents.

Candidate Experience Survey Results:
Reaction to Online Testing

- The easier it was to complete the test, the more satisfied the candidates were overall.
- Candidates did not seem to like the format for the technology, but for the flexibility.
- For both remote proctored formats, candidates did express some anxiety/pressure:
  - Unease if room scan was sufficient.
  - Unease if ID picture was clear enough.
  - Technology issues that (almost) led to late check-in.
  - Unease if test was submitted successfully.
- Also received positive comments:
  - It was great I didn’t have to drive to L.A.
  - I would not change a thing.
  - I liked it!
  - I had a pleasant experience with the remote proctored multiple-choice test.
  - I got to take the test in my comfort area and quick/easy to access the website.

Future Goals & Plans for Anytime, Anywhere Testing

- Track lapse rates:
  - Survey those who do not test for reason why—other opportunity or concerns with format?
- Communicate process to candidates through videos to decrease anxiety.
- Improve scratch paper process.
- Improve time to complete exam process.
- Find cost effective approach:
  - Meet or beat cost of traditional paper/pencil testing.
  - Currently collecting RFPs to consider vendors that can integrate with new test management system.
- Future Testing Plans:
  - Unproctored Training and Experience Questionnaire using new test management system.
  - Two to three additional record and review remote proctored pilots.
Questions?

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