# 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.

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## 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 Hurtz, 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
  - **<u>Remote proctoring did not affect perceived chance to perform</u>**
  - 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 an privacy concerns." Keep in mind, though, that motivation in study was low compared to employment setting.

*Cheating, Reactions and Performance in Remotely Proctored Testing: An Exploratory Experimental Study (Karim, Kaminsky, & Behrend, 2014)*

## 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 unproctored.
  - 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, but this group did score higher.

*Utilizing Webcam-Based Proctoring to Deter Misconduct in Online Exams (Hylton, Levy, & Dringus, 2016)*
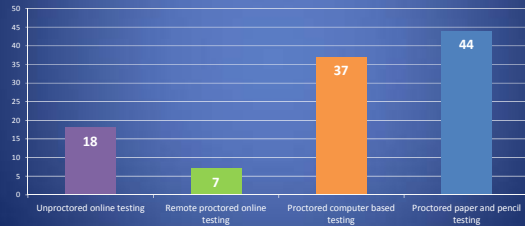
## Outside Agency Survey Results

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

| Category | Value |
|---|---|
| Unproctored online testing | 18 |
| Remote proctored online testing | 7 |
| Proctored computer based testing | 37 |
| Proctored paper and pencil testing | 44 |

## 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

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**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

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## 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 download
      - 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:**
  - Unsure if room scan was sufficient
  - Unsure if ID picture was clear enough
  - Technology issues that (almost) led to late check-in
  - Unsure 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 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 RFQs 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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