

TRANSITIONING TO

**ONLINE
TESTING**

A GUIDE FOR TESTING PROGRAMS

WHAT IS ONLINE TESTING?

Online testing is any form of test administration that uses the internet to deliver the exams. Ultimately, delivering exams online is as customizable as the tests themselves. Depending on your needs, you could deliver some or all of your exams virtually, with or without a proctor, in testing centers or directly to examinees homes and offices. **Start by determining your security and user experience priorities and then tailor your delivery practices to meet them.** Your exam delivery vendor should support and provide a variety of options options, including:

ON-DEMAND EXAMS

BUILT-IN SECURITY FEATURES

INTERNET BASED EXAMS

DATA ACCESS

REMOTE PROCTORING

ACCESSIBILITY CONTROLS

DEVICE SUPPORT

BROWSER SUPPORT

WHY GO ONLINE?

There are a myriad of circumstances that might inspire a testing program to transition to online exam delivery. Here are some examples:

FREEDOM OF CHOICE

Allow test takers to choose their own testing environment, one that they feel is most conducive to focused test taking.

DIGITAL LIFESTYLE

We live in an online world. More and more, users expect the convenience of online banking, shopping, and now taking an exam too. Embrace and prepare for the future by adopting digital practices now.

HEALTH AND SAFETY

During geo-political challenges and health crises, it's important to be able to provide alternative means of testing and reduce reliance on in-person testing centers.

CONVENIENCE

Reduce the logistical headaches of scheduling exams through testing centers. Allow users to take the test where they work, live, and learn.

ACCESSIBILITY

By testing in an examinee's home environment, you can easier accommodate any accessibility concerns like disabilities, availability of proctors, parking, and more.

SECURITY

If done properly, online tests can be as security as any other high-stakes test. In fact, online delivery enables us to capture more complex data to detect fraud and improve your exams.

HOW DOES IT WORK?

It's perfectly normal to have reservations about entering the world of online testing. Let's demystify the process of transitioning. Here's a step-by-step guide of how other programs, just like yours, added online testing to their repertoires.

1

Determine program scope (what certifications, exam design elements, proctoring method, etc.)

2

Vet and select vendors for exam development and delivery tools, proctoring solutions, and more.

3

Create a blueprint for your exam or exams. Pick a development tool that enables easy blueprinting.

4

Write content using a secure, role-based, SaaS platform to maximize security and accessibility.

5

Review and vet content with your SMEs. It helps if your exam development tools facilitate this process.

6

Develop a cut score for your exams. You may also opt to perform beta testing and analysis before launch.

7

When you're satisfied with your exam, it's time to **publish and deploy** it using your delivery vendor.

8

Review the results and data you collect, **evaluate** your success, and **republish** as necessary or appropriate.

9

That's it! Repeat steps 3-8 as necessary. With support from your team, you can now just relax.

CHOOSING YOUR TECHNOLOGY

What features should you be looking for in an **exam delivery solution**? It all depends on your specific needs. Here are some things to keep in mind.

SECURITY MEASURES

Look for security features like permission-based access, and encrypted connections to keep your content safe during development.

RAPID PUBLISHING

You'll want to be able to rapidly publish and republish your exams on your own terms. Don't wait to mobilize a vendor, D-I-Y.

REGISTRATION

If done right, online testing can improve the testing experience for both you and your test takers. Vet the user experience for your tech.

CAPABILITY

Find technology that boasts a wide range of capabilities, like innovative item types, dynamic security features, AI, you name it.

ITEM TYPES

What item types do you need your vendor to support— multiple-choice, short answer, hotspot, build list, DOMC? Choose wisely.

DATA COLLECTION

Test data should be easy to collect, access, and understand. Choose technology that includes robust data collection tools.

COSTS

Affordable solutions are out there for programs of all sizes. Carefully weigh your options against your security needs.

ANALYSIS TOOLS

Collecting data is one thing, but your technology should also support analysis for insight into the health of your program.

MITIGATING POTENTIAL RISKS

What are some of the **common challenges** and pitfalls of online testing, and how do you **combat them**?

SECURITY

Not all delivery software and proctoring solutions are created equal, particularly with regards to security. Make sure to thoroughly vet your testing partners, and don't rely on just one security measure. Make sure to utilize a variety of security solutions to prevent, deter, and detect threats.

INITIAL EFFORT

Anything worth doing is worth doing right, right? Take the time to source quality technology and quality partners. Ask the questions that matter to you. Select the features that you need most. Invest the effort up front, and online testing will save you and your users time and effort in the long run.

DATA PRIVACY

Obviously, moving online poses data privacy concerns. Be sure to have partner with vendors who are compliant with SOC2 security standards and protect your test taker's personal information.

INFRASTRUCTURE

Communicate clearly to ensure your test takers have the technical infrastructure in place to support online testing. This includes internet bandwidth, power requirements, devices, etc. Also, plan to have a good technical support solution in place to field user concerns during and around testing.

VALIDITY

You may have psychometric concerns about the scores you'll derive from online testing. Are they comparable? Theoretical quandaries like this can be very frustrating to psychometricians, but research has been done to address them and online testing is now widely used and trusted.

USER EXPERIENCE

While there is a learning curve to adopting any technology, online testing can improve the testing experience for both the testing company and for the test users. Have patience and trust the process.

SECURITY THREATS TO ONLINE TESTING

Imagine that you have a test taker who is hoping to cheat to get a better score on your exam, or a group of people hoping to profit by stealing and selling your exam content. Here are some methods they could use. The methods highlighted are of particular concern for online testing environments.

CHEATING

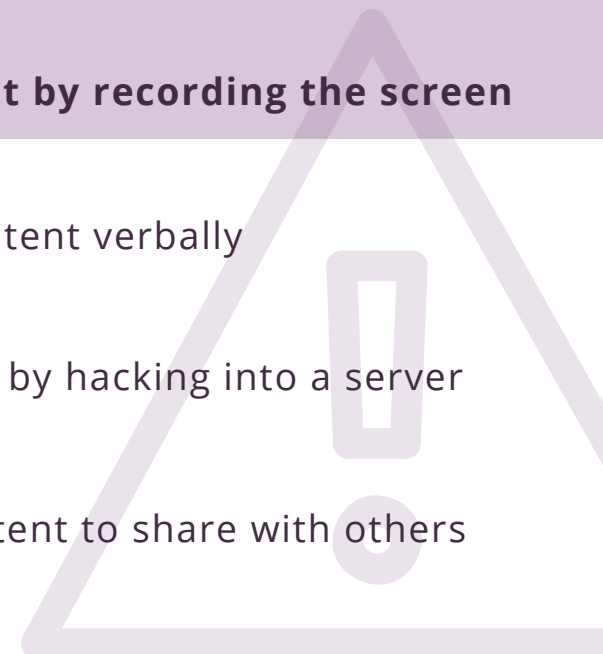
ADD DEFINITION OF CHEATING

- Using cheatsheets
- Using a proxy test taker
- Using pre-knowledge of exam content
- Getting help from an expert while testing
- Copying answers from a neighbor

PIRACY AND THEFT

ADD DEFINITION OF CHEATING

- Stealing content using digital photography
- Stealing content by recording the screen
- Transcribing content verbally
- Stealing content by hacking into a server
- Memorizing content to share with others



SECURITY SOLUTIONS

What can we do to protect our tests and the scores that come from them? This requires three types of solutions: **Prevent** the threat, **deter** the actors behind the threat, and **detect** new threats. Here are some innovative actions you can take:

PREVENT

Randomize item order and answer option order to prevent the creation of cheatsheets that rely on fixed order.

Utilize a test design that randomly presents relevant course content to completely neuter attempts at theft and most forms of cheating.

Employ adaptive testing to reduce the exposure rates of items, making it very difficult to capture enough of the test to help cheaters.

DETER

Let test takers know of the security rules and the sanctions for breaking them.

Inform test takers of systems you have put in place for preventing and detecting test fraud.

Require the signing of an honor code or oath and remind test takers of this oath often.

Describe previous breaches and how you discovered them to ward off copycats and fraudsters.

DETECT/REACT

Conduct a forensic analysis of test results to detect anomalies that may indicate cheating. With proof, you can:

- cancel test scores
- pursue legal remedies
- shore up general security vulnerabilities

Monitor the web for test content. If discovered, quickly send out cease-and-desist notices to remove your content quickly.

Use proctors to detect attempts at cheating and theft during test administration.

PICKING YOUR PROCTORING PARTNER

While proctoring isn't the only security tool available, it is a critical component of any online testing program. What variables are important to consider?

PROCTORING OPTIONS

Live Exam Proctoring

Data Transfer Encryption

Management Tools

Video Review

Proctor Controls

Live Chat

SECURITY DETAILS

Login Procedures

Photo Comparison

Security Questions

Facial Recognition

Fingerprint Reading

LOCKDOWN FEATURES

Owned vs 3rd Party Apps

Supported Operating Systems

Supported Browsers

Browser Controls

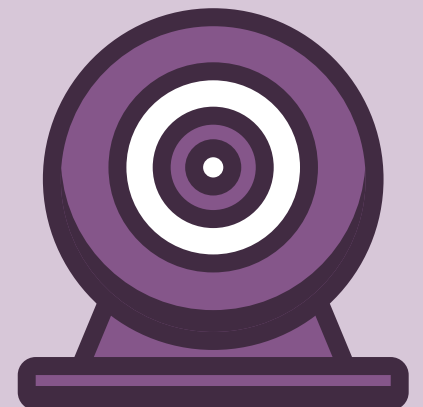
Keystroke Controls

WEBCAM CAPABILITIES

Room Panning

Internal vs External Cameras

Video Review



LEARN WITH US

This learning resource was created by Caveon.

At Caveon, we recognize that validity, reliability, and fairness can only be achieved when exams are secure. Quality exams that are secure benefit assessment programs, test takers, and society alike.

That's why, for more than 15 years, Caveon has driven the discussion and practice of exam security in the testing industry.

Today, as the recognized leader in the field, Caveon's offerings have expanded to encompass innovative solutions and technologies that provide comprehensive protection: Solutions designed to detect, deter, and even prevent test fraud. We are committed to integrity in testing. Period.



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