

eBook

Why Locked Down Browsers Fail the Security Test

& Why You Need Complete
Device Control

Key Takeaways:

1

Browser-based exam security comes with limited security features and internet requirements

2

Using exam browsers for testing can conflict with exam-takers' device software that may impact performance

3

Digital assessment platforms that offer complete device control can work offline for better exam security

4

Added resources and other security features can do more to minimize academic dishonesty



Introduction

Despite the range of viable education technology and computer-based testing solutions available, academic dishonesty can still be a problem for many programs.

When test providers learn more about exam security technology such as browser-based exam security, often referred to as a locked down browser or exam browser, it can seem like a simple solution that can effectively minimize the chances exam-takers have to cheat. However, using these forms of online security for your programs can come with drawbacks.

Three Common Problems

of Browser-Based Exam Security

1

Limited Security Features

Browser-based exam security (i.e. locked down browser) is online software that is limited in protecting the integrity of exams. While exam-takers are prevented from performing certain actions like copying or printing webpages or visiting other websites, there is nothing that prevents them from employing tactics that effectively bypass the exam browser's security measures altogether.

Using virtual machine software, or "VMware", is just one of the many tactics in which the security of locked down exam browsers can be compromised. Virtual machine software allows computers to run multiple operating systems over a single physical host computer [1], which is what most exam browser software is intended to prevent. This method can be made all the easier for exam-takers with websites like YouTube and Reddit that can offer step-by-step instructions on how to bypass an exam locked down browser's security with VMware.

There are also documented instances of exam-takers typing a URL into a text-only answer box within the exam locked down browser itself, that is then automatically hyperlinked. Exam-Takers are able to click on the hyperlink to open a separate browser tab, opening another door for cheating [2].



2 Internet Dependence

Exam browsers require a constant internet connection and are bandwidth intensive, especially on exam day. When there are too many exam-takers online at the same time, internet connections can be drastically slowed or dropped/interrupted completely.

If you lose your internet connection when taking an exam with browser-based exam security, even if just for a moment due to satellite interference, bit-flip, solar flare, or simply a child gaming in the other room, everything stops until the connection is re-established. Answers may not be saved and exam-takers' progress can be lost—which is a situation that can be especially dire for essay-intensive exams. What's more, losing an internet connection can mean the exam cannot be completed within the scheduled time frame, creating a whole new problem that is left for the instructor to sort out.

3 Conflicting Programs

Oftentimes exam browsers are designed to detect other programs installed on the computer that could cause potential problems for the software. That's one reason it's recommended that certain programs, especially programs that use Java or maintain a constant internet connection like instant messengers, be closed before starting up the exam browser. However, if a program is not properly closed, there is no feature in the browser that can force it to close prior to the exam and thus it can cause the browser to stop responding. Similar to losing the internet connection completely, this can cause a host of problems for both exam-takers and test providers.

Additionally, an exam-taker's computer may also create pop-up security windows that can appear onscreen even if the exam browser is currently active. If this happens, the only solution may be to restart the entire computer and address the pop-up security windows before beginning the exam all over.

Benefits of Using a Platform

That Maintains Complete Device Control

Exam-takers looking to “beat the system” may still find inventive ways to cheat with basic computer-based testing solutions. That’s the reason it’s important to understand the key features of a digital assessment platform and how automatically regulating exam-takers’ devices offers better exam security than locking down a browser.

How Does Complete Device Control Provide Superior Exam Security?

A digital assessment platform that completely controls an exam-taker’s device can operate completely offline, without requiring a continuous internet connection. This means throughout an exam, the assessment platform is able to block access to all internet, web browsers and search engines, disable even basic computer functions and key commands, and prevent any programs from running in the background while an exam is being taken. Additionally, with complete device control, a digital assessment platform can also record all activity on the computer and activate the camera and microphone to record all user behavior, enabling A.I. and human reviews to look for signs of academic dishonesty.



ExamSoft is a digital assessment platform that offers test providers the highest level of exam security with complete device control within one, simple digital assessment platform:

- 1 All programs are completely disabled on a student's device during an exam, including internet browsers, screensavers, and software applications
- 2 After starting an exam, every action is logged and timestamped including text entries, time spent on questions, content deletions, and back-and-forth navigation
- 3 No programs running in the background, no taking screenshots of questions and answers, no screensavers with hidden notes



Additional Exam Security Features for a More Controlled Testing Environment



Auto-Randomizing Questions and Answers.

Educators and administrators should enjoy peace of mind knowing questions cannot be compromised after exam-takers complete an assessment. The ability to auto-randomize both questions and answers, for one or multiple exam variations, can make it significantly more difficult for exam-takers to copy specific exam items for other exam-takers to use in the future.



Encrypted Exam Files.

A digital assessment platform that controls devices should have the ability to automatically encrypt exam files before and after an exam for added security. A platform that provides the most reliable offline exam security feature will also automatically delete exam files from any device when exam-takers finish an assessment.



Expanded Solutions.

For the educators who know it's always better to be safe than sorry, a digital assessment platform that can integrate expanded product solutions, like student ID verification and remote proctoring/invigilation capabilities, can add truly unmatched exam security and effectively prevent virtually all forms of academic dishonesty.