safe exam
browser

Securing online exams with
navigation control

welcome to brighter

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Introduction

As we gradually transit into the online examinations ecosystem, with proctoring, test-takers continue to demonstrate exceptional creativity in employing diverse means to ace their exams. From passing chits, whispering, and eyeballing for help, to leveraging technological advancements for cheating on-screen - there has been a visible transition in how examinees try to manipulate the system.

Some Common Ways Students Cheat in an online exam :

Impersonation

Using a proxy or an impersonator to take the online exams is a common form of cheating. Students leverage the remote invigilator's inability to identify genuine test-takers.

External Help

Seeking help from friends and family who are casually sitting beside the monitor, holding placards with answers, is another exercise by students to cheat in online exams.

Employing Digital Devices

Smartphones, calculators, Bluetooth earphones are some of the most misused items during online examinations. They are used to store answers for surfing on the web or receiving information.

These assertions don't necessarily insinuate students of dishonesty. The common perception has changed with the growing belief that cheating in an online exam is easier than in a traditional exam. Thus students employ tactics to help them succeed academically without having to work hard.

However, technology is a significant enabler in making online exams cheating-free.

'How honest is the person taking the proctored exam? ' is the more significant question that needs an answer.

Using advanced Proctoring Technologies can address this issue with its robust features that enable institutes to conduct an end-to-end secure online examination while maintaining its integrity.

However, a more significant problem to answer is:

How can one remotely monitor what's happening on the test-taker's screen?

Invigilators don't have the know-how of what to check and expect when unfair means are used. From using external devices like micro-USB, browsing through restricted web pages for answers, to sharing your screen with other test-takers - the list of hacks adopted by students is expansive. Somehow, this dilemma is not examined enough and cheating remains a common practice.

The higher education market is poised to touch **USD 37.82 billion during 2020-2024** globally, indicating a significant growth trajectory in the coming years. At a time when educationists and academicians are sharing knowledge and transcending geographical barriers, instances of cheating weaken the online ecosystem, eroding its credibility.
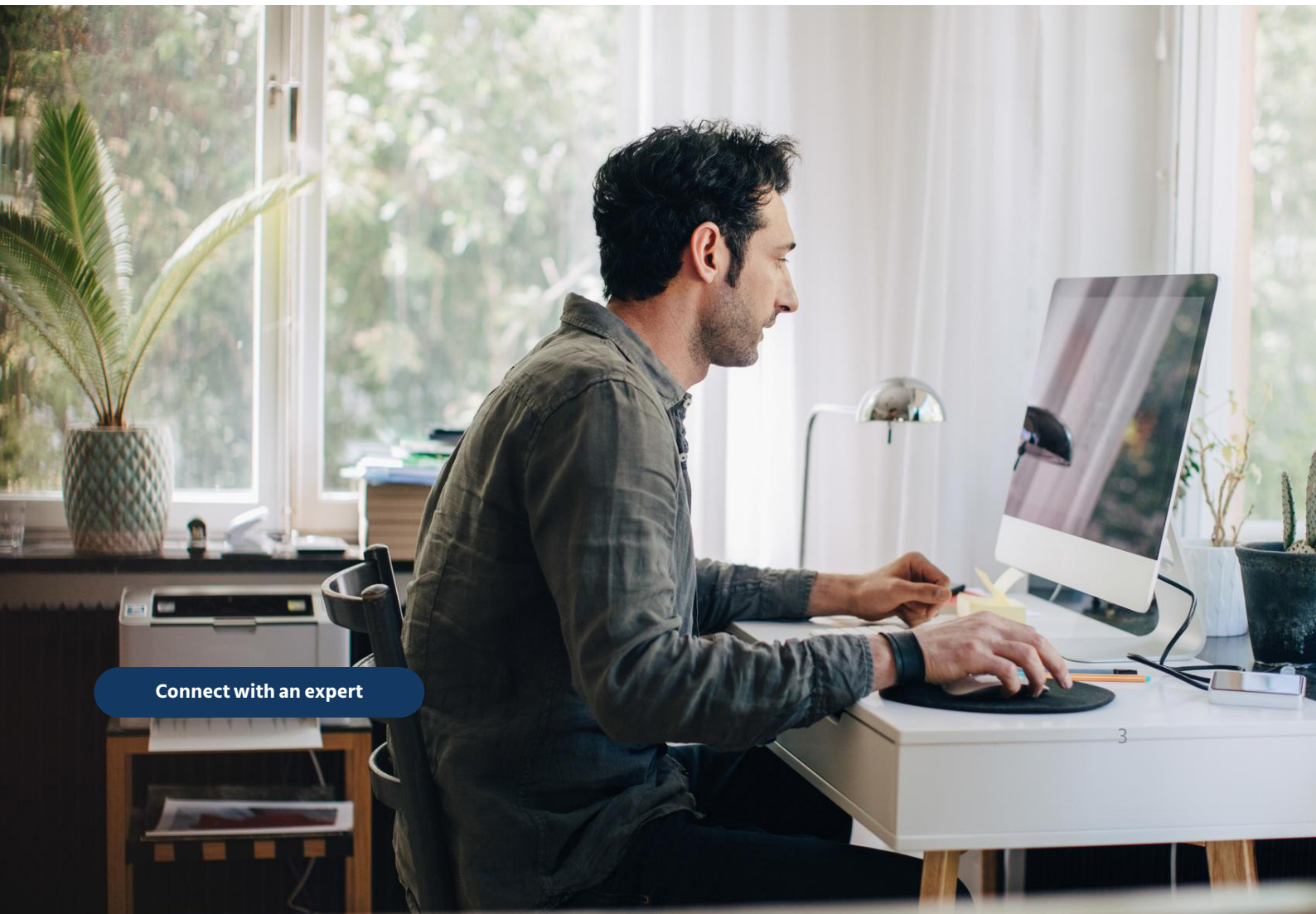
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Types of On-screen cheating

Copy-paste

One of the most conventional forms of cheating in an online exam is copy-pasting responses. Whether it is keeping the answers ready in a word doc, notepad, or using the study material from a separate document, these traditional forms of cheating have found takers among students. Eyes glued to the screen is an easy way of deceiving the remote invigilator who has no information on what's happening on the screen. He, therefore, doesn't flag it off as a concern.

Screen sharing/ Mirroring

While taking exams from remote locations, candidates often misuse multiple and ubiquitous software - screen-sharing or mirroring apps being one of them. The app allows another person to remotely view the exam screen and feed the test-taker with answers. Also, students have been known to use Google Docs to cheat in tests by reviewing and editing the other person's responses and sharing them with invigilators.

Online Browsing

The power of the internet has made online cheating a breeze. People using unfair means easily switch from their exam screens, navigate through various websites, search engines, social media pages, and other sources of their choice to find the correct answers. They paste the questions onto the URL and find the best solution from which to plagiarise.

Use of External devices

The likes of hard drives, USB, Micro SD, and other such easy to conceal and difficult to detect external smart devices are standard accessories to on-screen cheating. Whether before or during the test, the students plug them for easy use.

Use of Bluetooth and other virtual machines

Configuring machines with your computer before taking an exam, and directly copying from them, is easy for tech-savvy students. The same goes for Bluetooth-integrated devices like smartwatches that are used to relay the answers to the students.

Task Switching

Continually switching between one screen to another to cheat is a common phenomenon. The use of the keyboard and shortcut controls such as Win, Alt+tab, Alt+F4, F1, Ctrl+P, Print Screen, makes on-screen cheating readily accessible.

That students tend to exploit vulnerabilities despite using several measures to curb cheating practices during online examinations remains true. However, adopting technology can significantly improve the quality of online exams.

We don't mean you harness it by deploying your IT personnel to continually monitor network traffic or the student's browser history during exams to assess honesty and adherence to rules. You must develop an airtight solution that limits students' navigation control when they take exams online - a robust and credible anti-cheating mechanism to deter students' attempts at cheating, deploying the technology.

Safe Exam Browser (SEB) is one such cutting-edge solution that prevents violations in online exams.

It eliminates students' ability to cheat by creating a highly secure and controlled environment online. The SEB prevents users from opening any other window, restricts access to unauthorized resources, and controls system functions while the online examination process is underway. It runs on any computer or device integrated with any web-based LMS and connection to high-speed internet.

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Mettl Secure Browser

Introducing Mercer| Mettl's new solution that is specifically designed to provide secure navigation control during the candidate's test-taking experience. **Mettl Secure Browser (MSB)** is a next-generation anti-cheating lockdown browser that provides immense security and exceptional features when compared with regular safe browsers.

MSB is a web-based lockdown browser that converts any system into a safe workstation. It restricts the students' ability to communicate with outside sources during the test, thereby making high-stakes, large-scale exams exceptionally secure, reliable, and fair.

When your proctored exam is underway, a manual proctor is only assessing your behavior. The proctor cannot evaluate and monitor activities on your test screen. Institutes and universities can leverage MSB to address such gaps in the invigilation process.

MSB does not allow test-takers to move out of the application before the test is finished. It also restricts students from opening any unauthorized website or accessing any blacklisted software/third party applications. MSB also shuts down all active applications, such as other browsers and cheating tools. It controls access to other activities such as switching to other websites and screens during the exam.

A unique safety policy of the Mettl secure web exam browser is the absence of any navigation buttons. It is akin to a locked kiosk mode that can't be exited unless the student submits responses for grading.

MSB currently runs only on windows (7 and above). It supports a minimum of 4.5.1. .Net framework (it comes inbuilt in the MSB.exe file).

How MSB prevents navigation control and helps conduct remote online examinations successfully

Restricted Control keys/functions

To preserve the integrity of the process and content, MSB smartly restricts all right-click menu options, function keys, and keyboard shortcuts. Features such as copy, cut and paste, with the mouse and the use of keys such as Win, Alt+F4, F1, Ctrl+P, using the keyboard, are disabled. Copying and pasting anything to or from the keyboard is not possible. Print Screen or screenshot options are also barred to ensure no text content is copied and distributed to other test-takers. This function also blocks students from copying problem statements from the question paper and sharing it on the web.

Disabled External Ports

The use of any cable, hard drive, or external devices like USB, internet dongle are barred in the MSB. If the student has already synced any such device before the test has commenced, the exam will not commence until the student has removed the cable or device. If the student uses it during the test, the test will immediately terminate by logging the student out. The disabled external ports also prevent bypassing or illegal booting.

Secure workstation

Interestingly, there is no concept of URL with MSB integrated into your system. The browser window is a focussed, full-screen window that doesn't allow for minimization or any interaction with other screens. It has no navigation elements, no impromptu search choice options, and all toolbars and UI controls are removed to secure your exam-taking process further. 'Back,' 'next,' 'refresh,' and 'stop' are the only options given to the students.

Limited Navigation

A majority of institutes have advocated for students' ability to navigate through a few websites or access to specific software/ third party applications needed for assessment or test-taking. For instance, during open book exams. MSB allows customization options for students that enable using certain predefined whitelisted websites and software to function within the browser, blocking the rest.

No Browsing

If you thought surfing on the internet is a given option during online exams, think twice. Access to search engines like Google, bing, or social media accounts like Twitter, Facebook, WhatsApp is strictly barred. Further, other browsers such as Mozilla, Chrome, IE, are also terminated before launching the MSB on your system. The option of opening the test in a specific browser is enabled upon request.

No Access or Switching

MSB prevents access to other applications like messaging, virtual machines, and remote desktops to disable any communication that leads to the sharing of data and information among students taking the online exam. A student can't even switch between screens, nor enable options like screen-sharing. Task Manager, too, can't be accessed to avoid displaying the details of programs and processes running on your computer.

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How does MSB work?

The candidate needs to install the Safe Exam Browser.exe file in their system, which would also install all the required packages. Once done, the browser will work separately, shutting down other browser windows and applications running in the background.
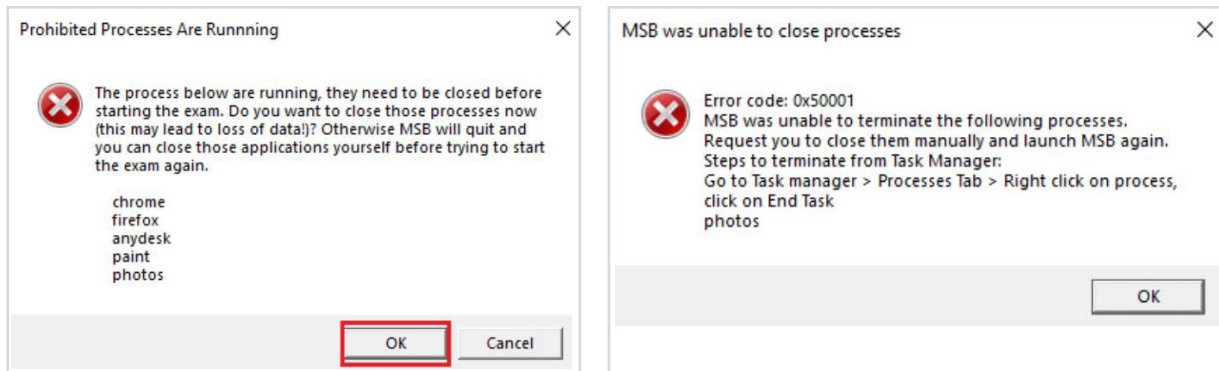
Before launching MSB, it shuts down all the other active applications running in the background on the system, after seeking your formal permission to do so. MSB also mentions the pending application's name in the alert message. You are required to click on the OK option shown on the warning message for MSB to launch itself.

In case MSB is not able to close all the mentioned applications, it'll ask you to close those applications manually from the Task Manager.

Significant criterion:

For MSB to function correctly on your computer, one has to ensure:

- MSB has administrative rights on the system
- Updated Windows with no pending installation
- MSB isn't logged in as a Guest User
- Anti-virus is disabled
- No implied restrictions on the network and application

Conclusion

Students typically prefer smart work over hard work with the proliferation of digital tools and technical accessibility.

A specific reason does not characterize the need to cheat; there are myriads of them. But they have to be prevented, given their unethical and unfair moorings. Educationists, conversely, must protect the integrity of their college, course, or certificate while remaining competitive in the business. With higher education witnessing significant improvement across the globe, people are seeking ways to prepare and take exams online, driven by its reach, ease of use and faster outputs. The sanctity of the online landscape is gaining primacy with a growing need for oversight on issues of cheating during exams. The demand is likely to further intensify with stricter focus on monitoring, analysis and scrutiny. By enabling technology, you can use the same tools, used by students to gain advantage unethically, to fool-proof processes. We can, therefore, prevent cheating, also ensuring that the value of the brand remains intact.

MSB addresses the most glaring vulnerabilities in taking an online examination by preventing access to internet browsers during exams and lays off switching between tabs to deliver you high levels of academic validity. A combination of our remote AI proctoring services and a secure browser system will positively impact the attitude towards online exams. The combination will keep track of all movement and ensure genuine exams. It's about time you employ and leverage MSB to measure the real performance of your test-takers.
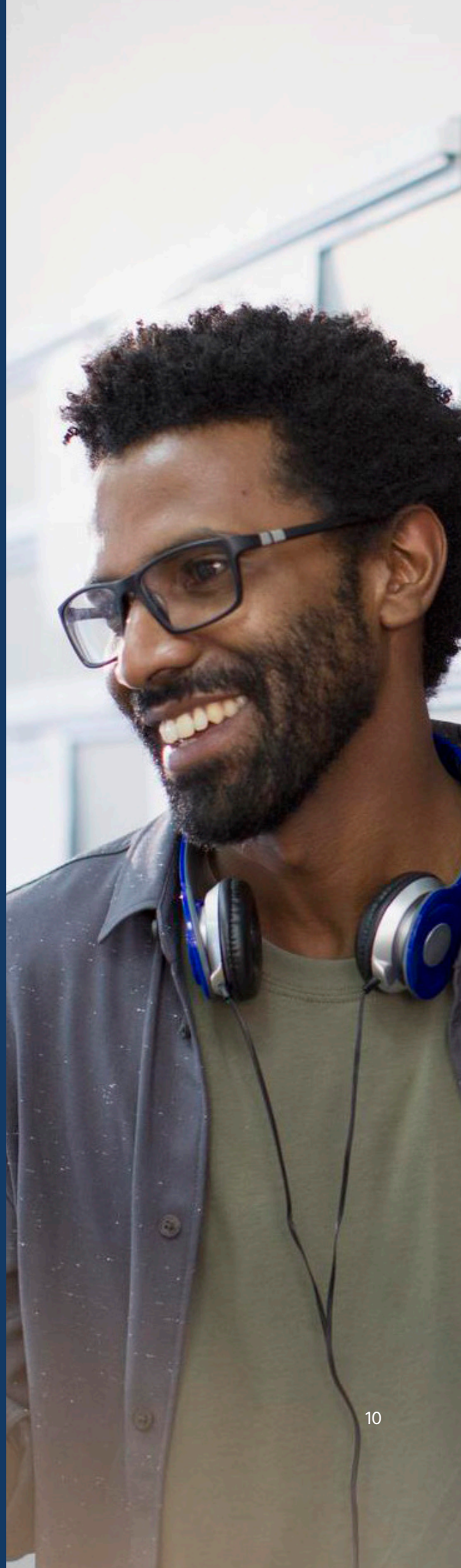
About Us

At Mercer I Mettl, our mission is to enable organizations to make better people decisions by making credible people decisions across two key areas: Acquisition and Development. Since our inception in 2010, we have partnered with 2900+ corporates, 31 sector skill councils/ government departments, and 15+ educational institutions across 90+ countries.

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