

PTE Industry- Leading Security

Built on three pillars
you can trust



We've designed every aspect of the PTE test experience to make sure that genuine test takers get a fair opportunity to shine. Through our use of technology combined with human expertise, we are committed to supporting test takers through the full testing journey, from the moment of booking the test to the delivery of those all-important results.

– Katherine Hargreaves, Operations Team, Pearson

PTE Industry–Leading Security: Built on three pillars you can trust

In the world of English language testing, where a single score can change the course of a person's life, the stakes are incredibly high. Most test takers approach this challenge with honesty and determination, driven by the hope of securing a brighter future for themselves and their families. For many, a good score is not just a personal achievement but a key that can unlock opportunities that will transform the lives of their loved ones.

However, the immense pressure to succeed can drive a small number of individuals to make unfortunate decisions. In our experience delivering high-stakes tests worldwide, we have encountered test takers attempting to impersonate others by using fraudulent IDs and swapping clothes in restrooms. We've even had instances where test takers left envelopes of cash on invigilators' desks or tried to bypass PTE's advanced palm vein technology for identity verification.

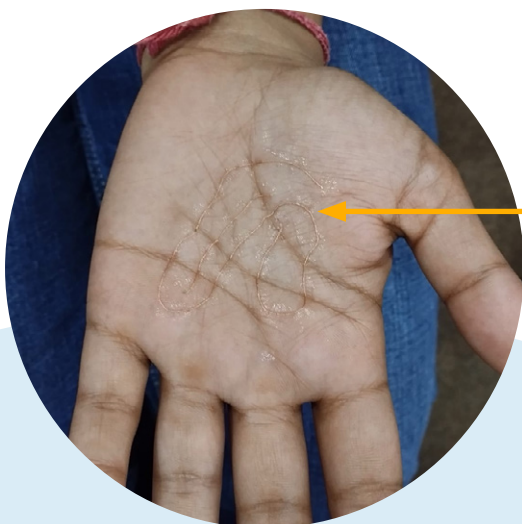


Image shows attempt to bypass our biometric system by attaching copper wires to the palm.

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Compounding these challenges, organized crime syndicates have become increasingly involved in deceptive practices, exploiting the immense pressure some candidates experience. We have experienced these groups engage in ‘item harvesting,’ where individuals repeatedly take the test to memorize and share questions for cash, alongside many other, elaborate cheating schemes.

Although these incidents are infrequent, they occur periodically and underscore the critical need to uphold the highest standards of integrity in our testing process. This is why, when Pearson developed PTE, its high-stakes English language assessment, it drew upon over 100 years of global assessment expertise to completely reimagine every aspect of the testing process. Our goal, to deliver a more secure and accurate experience than ever before, raising the bar for what a testing experience can be.

This article provides an in-depth look at the three pillars of security we’ve implemented to ensure we are industry-leading: secure by design, secure by delivery, and secure for the future. It’s the integration of all three measures that sets us apart and defines our commitment to excellence in security.

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PART 1: SECURE BY DESIGN

Test security has always been a priority for assessment organizations. When it comes to the more traditional paper-based and hybrid testing, there are multiple opportunities for test papers to be leaked, copied, or stolen as papers pass between the exam boards, printers, distributors and test centers. Many of these risks can now be mitigated by developments in computer-based testing.

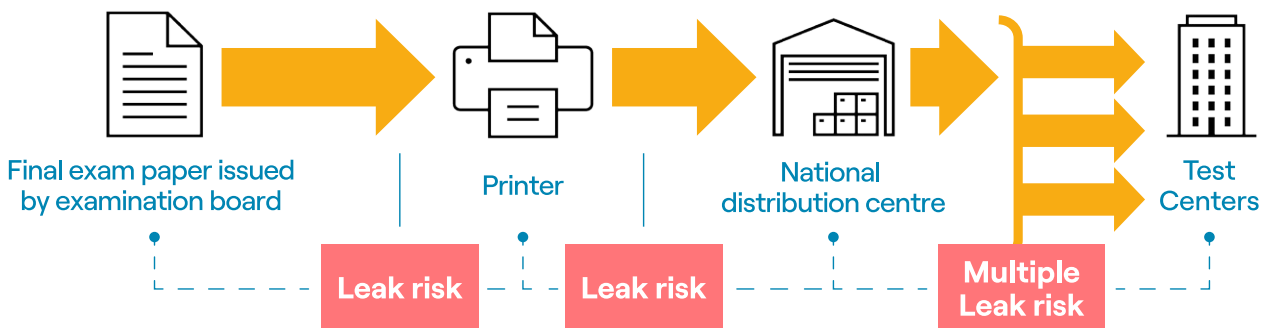
“By combining the precision of AI with the judgement of human experts, we ensure that our assessments are both fair and secure, providing a robust framework that upholds the trust and credibility of our testing process.”

100% computerized

PTE is a 100% computer-based test. No papers are printed, distributed, or stored locally and not even invigilators have access to the test papers themselves. All tests are encrypted, meaning that they are converted to a code that can only be accessed by the test taker whose identity has been verified successfully.

Once a test has been taken that same technology is used to re-encrypt and upload responses directly to the secure Pearson Hub.

Paper based testing



Randomized questions

When test takers have identical examination papers, as is the case for most paper-based exams, it creates the opportunity for them to copy from one another during the exam. It also increases the chances of test questions being “harvested” or memorized and then passed on to future test takers.

With PTE, no two test takers at a test center will have the same test. Each PTE test has been carefully designed to ensure that they all have the same level of challenge, but each one is made up of different questions selected at random by an algorithm from a vast pool of content and question types. This means that, even if a test taker tries to look at someone else’s screen during the test, they will not find the same question or answer to copy.

Human + AI - Identifying anomalies at scale

PTE has developed a system that seamlessly blends the power of our AI-driven automated scoring with the expertise of human evaluators. The strength of our AI system lies in its ability to aggregate and synthesize vast amounts of data, comparing responses against historical patterns to detect suspicious behaviour and flag anomalies that might go unnoticed in traditional human-scored assessments.

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To enhance the reliability of our scoring process, we integrate human expertise in three key ways:

Firstly, AI helps to identify suspicious patterns of behaviour in tests, which naturally evolve and change over time in line with shifting trends, making them harder for humans to detect. When flagged by the AI system, a suspicious test score is put on hold and not released until reviewed by a specialist security team. These experts have access to test-center surveillance footage and audio recordings, which they use to support their investigations and ensure the accuracy of the final decision.

Secondly, using AI-powered data analytics, we are able to identify high-risk questions where test takers are more likely to attempt cheating. For these questions, we implement a double-scoring process, where the AI-generated score is verified by a human expert, adding an extra layer of security to ensure the integrity of the results.

“Palm-vein scanning is more accurate than other biometrics such as face recognition or fingerprints because the palm-vein data is inside the body and not affected by the hand’s surface, as is the case with fingerprints or faces which can change over time.”

Thirdly, beyond monitoring flagged test results, our security team conducts detailed spot checks on a percentage of tests each day. These checks involve not only reviewing test data but also examining other sources such as CCTV footage and audio recordings to ensure the integrity of the testing process.

By combining the precision of AI with the judgement of human experts, we ensure that our assessments are both fair and secure, providing a robust framework that upholds the trust and credibility of our testing process.



PART 2: SECURE BY DELIVERY

PTE is taken in test centers run by Pearson VUE. This Pearson division administers nearly 21 million exams annually in 5,500 test centers in over 180 countries. These are not all English language tests, but they do share a common trait: they are all high stakes. Pearson VUE has over 30 years' experience in delivering such tests and are experts in the security field. They take a proactive, preventative approach to verifying test takers' identities and documents and administering tests in a way that leaves little scope for unfair advantage.

Secure staffing

Test center employees undergo background checks before joining our team. After recruitment, they receive comprehensive training and regular re-certification to ensure they are fully equipped to conduct thorough ID checks and identify signs of malpractice. Additionally, we have multiple proactive monitoring systems in place to oversee staff activities and safeguard against any potential security threats.

Minimizing conflicts of interest

In a traditional paper-based test center, humans are involved in every step of the test-taking journey: registering candidates, taking payments, invigilating, and scoring the oral exam. This can lead to malpractice and some instances of bribery of paper-based test center staff have made the headlines. In Pearson VUE test centers, the team is solely responsible for providing a highly secure environment in which the test is delivered. Registering and paying for tests takes place online before the exam day and no test center staff are involved in delivering oral exams or marking papers.

Without the need to handle payment or score tests, conflicts of interest for test center staff are greatly reduced.

Advanced identity verification

When the stakes are high, it is inevitable that a small percentage of test takers will try to cheat the system. There are candidates who try to enter test centers with forged IDs, another person's documents, or IDs with doctored images. Institutions and governments need to be confident that a score belongs to the candidate who has registered for the test, so identity verification is key to a secure, reliable testing process.

Registering for PTE requires the highest level of verification. On arrival, test takers must present a valid physical ID, typically a passport. The ID must be current, issued within the last ten years, and match the details provided when booking the test. If a test taker cannot produce the required ID or their details don't match exactly, they will not be allowed to take the test. Digital IDs, photocopies, or outdated documents are not accepted. Documents are then checked using airport-level passport scanning machines as well as human verification by specially trained center staff. As a final step, candidates are required to provide additional biometric data: digital photographs, palm-vein scanning and electronic signatures.

“ The Score Report Website (SRW) gives institutions and governments complete peace of mind that results are genuine. This paperless and secure process means institutions or employers can log in to the SRW online portal using their own unique credentials to see a candidate’s verified test results. ”

Biometric security

On entering the test center, each test taker completes a palm-vein scan of both hands. Palm-vein scanning is more accurate than other biometrics such as face recognition or fingerprints because the palm-vein data is inside the body and not affected by the hand’s surface, as is the case with fingerprints or faces which can change over time. This biometric data alerts us to proxy testers and previously banned test takers.

Test takers use a palm-vein scanner at registration, on entering the exam room, when taking a break, and on exiting the exam room. Having multiple biometric checkpoints on test day minimizes the opportunities for fraud.

Comprehensive monitoring

In addition to identity verification and monitoring of test responses, PTE also combines digital and human surveillance methods to ensure the highest levels of security during the actual test-taking.

These include:

- Continuous video surveillance with audio, providing a digital record of test taker actions that can be reviewed both in real time or retrospectively if concerns are raised after the test.
- An industry-leading invigilator-to-test taker ratio of 1:15, compared to the 1:25 standard ratio used by other test providers.
- Use of ‘mystery shoppers’ who discreetly take tests while experiencing every step of the process firsthand. They then report their findings back to us, with a special focus on security measures. This thorough, undercover evaluation helps us maintain the highest standards and safeguard the integrity of our testing environments.

We also encourage test takers to play an active role in surveillance and protecting the integrity of PTE; we have a dedicated tip line and online form for reporting any suspicious activity they may have noticed during their testing experience.

Secure results

Pearson redesigned the process of receiving and verifying test taker results, so institutions and governments no longer have to rely on the candidate to pass on paper or digital copies of their test results.

The Score Report Website (SRW) gives institutions and governments complete peace of mind that results are genuine. This paperless and secure process means institutions or employers can log in to the SRW online portal using their own unique credentials to see a candidate's verified test results.

Removing candidates from the score communication process removes the risk of falsified test certificates and provides receiving institutions with the confidence that the results they see are genuine and unaltered.

“ Staying secure goes beyond academic research; it also requires us to stay ahead of emerging technologies and anticipate how they might be misused to gain an unfair advantage. ”



PART 3: SECURE FOR THE FUTURE

Security measures are not static. Underpinning all of PTE's security measures is ongoing research to understand the latest digital security and gaming trends, anticipate how new technologies might be used, and adapt our protocols in response.

Research

We are proud of our ongoing research partnership with the University College of London Institute of Education and are also currently funding projects at University of Bedfordshire (UK), University of Nottingham (Malaysia), and University of Southampton (UK) to carry out new academic research on emerging gaming behaviors, which are increasingly prevalent in high-stakes language testing. These behaviors, which range from strategic guessing to the overuse of memorized responses, are not just isolated incidents but are becoming sophisticated tactics employed by test takers. By closely analyzing these behaviors, we aim to understand how candidates exploit test formats and structures to artificially inflate their scores. This research provides critical insights that inform continual enhancements to our automated scoring system, ensuring we accurately reflect true language proficiency rather than test-taking strategies.

Staying secure goes beyond academic research; it also requires us to stay ahead of emerging technologies and anticipate how they might be misused to gain an unfair advantage. By proactively identifying and understanding these technologies, we've been able to detect and prevent candidates from using devices like small cameras and smart glasses to compromise the security of our testing environment.



RESPONDING TO SUSPICIOUS ACTIVITY

The measures outlined in this article ensure that any fraudulent attempts are caught early in the testing process. Should an incident occur, we respond swiftly and fairly. We start by reviewing the evidence:

- **Forensics:** Flagged tests are reviewed by both human experts and our AI tools to compare candidate performance on exams with expected norms and decide if a full investigation is required.
- **Surveillance:** CCTV and audio files from the test are reviewed by security experts trained to detect and assess suspicious behavior.
- **Tip Offs:** We value the information shared with us and ensure that every tip-off is carefully reviewed and acted upon where necessary,
- **Undercover operations:** In exceptional cases where we believe it is necessary, we take an extra step in our investigation by engaging undercover operators to ensure we gather the facts needed for a fair and informed decision.

After completing the investigation, we make a fair, evidence-based decision. Test takers have the right to appeal, during which they may provide additional information to support their case.

We maintain a zero-tolerance policy for fraudulent activity. Anyone found engaging in fraud receives a lifetime ban from taking the PTE.

The triple-lock approach

We know that most of our test takers are genuine candidates who want to certify their proficiency level and are focused on unlocking the opportunities that speaking English brings.

We've designed every aspect of the PTE test experience to make sure that genuine test takers get a fair opportunity to shine. Through our use of technology combined with human expertise, we are committed to supporting test takers through the full testing journey, from the moment of booking the test to the delivery of those all-important results.

By creating a test with a unique design and delivering it in a highly-secure environment, we ensure a fairer testing experience for everyone with results that institutions and governments can rely on, and test takers can be proud of.



About the author

Katherine is a member of the Pearson operations team where she is responsible for the effective implementation and continuous improvement of test operations policies and procedures.

Key aspects of Katherine's work involves collaborating with Pearson teams to review test outcomes and ensure that established processes have been followed. She monitors trends to identify opportunities to improve test delivery processes, procedures and policies, strengthening test integrity whilst minimising customer disruption. Katherine has more than 20 years' experience working in education and science sectors.



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