

# Shifting a **high-stakes** test online

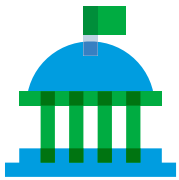
Mercer | Mettl enabled CEM to administer the prestigious National Medical Admission Test (NMAT) online.

welcome to brighter





Center for  
Educational  
Measurement, Inc.



**We conducted over 20,000**  
assessments across 7641 islands  
in the Philippines.

The Center for Educational Measurement, Inc. or CEM, Philippines, provides nation-wide testing services for the evaluation and assessment needs of private and public education sectors. With different education levels across elementary to professional schools, CEM offers more than 60 tests that assess students' achievement, aptitude, and career choices.

The Center for Educational Measurement, Inc., was launched in 1978. And over the last 42 years, it has pioneered bringing large-scale tests and assessments such as the National Medical Admission Test (NMAT) to the classrooms. Currently, CEM is partnering with more than 700 prestigious graduate schools, colleges and high schools.



# CEM's challenges and requirements in conducting the NMAT examination

CEM is a leading provider of standardized testing in the Philippines. Its current network of two branches and numerous test centers across the islands have enabled countless students to take their tests in the traditional pen-and-paper format. However, as COVID-19 raged globally, also impacting the Philippines, CEM began evaluating the feasibility of continuing with the offline testing for its prestigious NMAT to safeguard students, faculty and staff.

CEM manages the affairs and activities concerning the operation of the NMAT since the test was first administered in December 1985. The NMAT is a reputed exam that facilitates entry to top medical colleges in the Philippines after a detailed evaluation of students' potential and aptitude for the medical profession. Therefore, after acknowledging the stakes involved, the administration decided to expedite its efforts to shift its exam to the online platform. The leadership concluded that its vision of providing its clientele with a large-scale and nation-wide examination could be achieved digitally. But it was easier said than done. CEM was exceptionally particular about the test's reliability and validity. Its administration also raised concerns about the scalability, ensuring the confidentiality of the test results and the broader integrity of the undertaking.

CEM was keen on an air-tight and comprehensive solution that addressed its requirements and conformed to the testing profession's ethics and standards.



## Its unique set of considerations included:



1. A dynamic and scalable platform



2. High testing security



3. Minimal internet bandwidth



4. Flexibility in proctoring

## A dynamic and scalable platform

To conduct its high-stakes medical entrance exams, CEM needed a robust end-to-end online examination platform that could be scaled based on its requirements. Besides accessibility, credibility, scalability and ease-of-use assuming center stage, CEM also desired the freedom to control its assessments – from test creation to delivery to reporting. Hence, it also required a platform to personalize the exam console by creating and uploading its exam papers.

## High testing security

CEM was exceptionally particular about security and test integrity. Protecting the assessment's integrity, safeguarding its reputation and validating that students taking the exams deserved the degree were its utmost priorities. Its requirement also included a robust anti-cheating proctoring mechanism to ensure students attempting the test did not resort to any illicit means. Additionally, it sought a specific browser feature that allowed examiners to host the exam in a safe environment without concerns about on-screen cheating.

## Minimal internet bandwidth

CEM understood that unstable, erratic and patchy internet infrastructure in the Philippines could hamper the students' ability to take exams remotely. Hence, it sought a stable, consistent and seamless platform for applicants spread across 7641 islands. It sought a partner and a platform that required minimal bandwidth but offered maximum technical prowess.

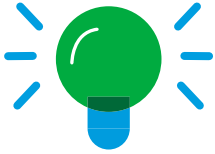
## Flexibility in proctoring

CEM desired flexibility in accommodating special requests, such as the possibility of uploading its test papers onto the platform and enabling its human proctors, along with AI proctoring, to deter students' attempts at cheating. Though CEM had experienced proctors trained in administering its tests, following internal policies and protocols, it still required a solution that offered a more secure and seamless online test-taking experience for the high-stakes test. Hence, it sought to proctor via a combination of advanced AI-technology and human proctors to ensure a quality and comprehensive testing experience.





# Discovering Mercer | Mettl's offerings



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CEM was scouting for a company that provided online proctoring services with the finest security infrastructure for its online exam. During its research, it came across Mercer| Mettl, also one of the first companies it contacted for its requirements.

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CEM was interested in Mercer| Mettl's sophisticated solutions, but it was still unsure whether its long list of expectations could be met. Therefore, Mercer | Mettl administered a trial for the organization to help it make a more informed decision. The trial comprised CEM's staff and faculty members who took the test on Mercer| Mettl's platform to comprehensively gauge its robustness, features and usability. Through the trial journey, CEM acknowledged that Mercer | Mettl's offerings were aligned with its education, assessment and integrity goals, besides offering the desired flexibility to personalize its solutions to meet its long-term requirements.



**Mercer | Mettl's technical team's responsiveness and promptness helped us immensely. They helped us adjust to the platform and understand it much better, which made us more open to the idea of digitization.**



**Jasmine Calpo**

Assistant, Aptitude & Special Tests Unit  
Test Development Section

# Solution



## Mercer | Mettl Examine

The online proctoring and examination software

The Mercer | Mettl team understood CEM's requirements and was capable of addressing them. The team understood that the client's concerns could be addressed through its futuristic online solution, 'the online examination platform' - an ideal value proposition to mitigate the Center's multiple challenges in giving online exams.

### Here's how Mercer | Mettl solved CEM's significant challenges:

The team employed Mercer | Mettl's Examine, a proficient and end-to-end online examination software system, to meet CEM's requirements. The comprehensive end-to-end exam management platform was easy-to-use and enabled the CEM to create and host its exams in a secure, seamless, user-friendly and credible manner. The robust platform also supported minimal internet bandwidth and provided CEM with a combination of auto and live proctoring to mitigate online cheating. It even offered a dedicated admin dashboard for detailed analytics and logs.

Connect with an expert

## Here's how the platform benefitted CEM:

### Hosting the exam

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The Mercer | Mettl team offered CEM a rich repository of **26 different formats** of exam papers. The team also provided the client the flexibility to upload the exam papers in the MCQ format as per the faculties' choice, besides offering the convenience of enabling an online rough sheet for complex formulae writing and calculations.

### Easy-to-use

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The platform's *easy-to-navigate* interface ensured hands-on expertise for examiners, students and proctors. The exam stakeholders found the platform user-friendly, even without any prior technical knowledge. There was also no change in the test-taking experience for the students.

### Internet bandwidth

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The Mercer | Mettl platform's robustness supported multiple exam-takers at various locations, across islands, with bandwidth as low as 512kbps. A user-friendly process did not demand students' time for downloading software and tutorials. It ran seamlessly on applications' systems, irrespective of their location.

### Unmatched scalability

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Mercer | Mettl's software proficiently managed CEM's large-scale, high-stakes NMAT requirements. With a proven track record of conducting 100,000 successful proctored assessments in a day, the dynamic technology ensured CEM received sizable enrollments and registrations digitally, without a glitch.



## Proctoring suite- AI+human proctor

Mercer | Mettl aligned an AI-assisted human proctor for a more secure landscape within the examination platform to address CEM's concerns about online cheating. The proctoring solution ensured a safe environment with similar accountability levels as in-person invigilation and negated the possibility of malpractices. The only prerequisite for the exam was to allow the sharing of students' screens, video and audio, following which Mercer | Mettl's best-in-class proctoring solutions effectively monitored the proceedings.

### Advanced AI proctoring

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Mercer | Mettl's futuristic AI algorithm trained with more than 2.8 million proctored assessments efficiently detected up to 18 dynamic digressions during the exam. With over 95% accuracy, the intelligent algorithm helped human proctors flag various suspicious cases, such as the non-visibility of face/ presence, detection of mobile phone, presence of an additional person, distracted movements, etc.

### Human proctoring view

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With one-to-one and one-to-many proctoring features, live proctoring offered CEM's proctors the flexibility to monitor remotely, from start to finish. An added feature of pausing /stopping /resuming the test in real-time, with the live chat option, enabled the invigilators to interact with students to allay suspicions or queries. The entire recorded session could be viewed later, using the proctoring software.

### Mettl Secure Browser

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Mercer | Mettl's suite of advanced solutions included an additional core element that offered a distinct advantage to during the online testing- a limited navigation control feature to prevent on-screen cheating. The brand's avant-garde offering- Mettl Secure Browser (MSB) - locked the students' test screens and prevented them from opening new browser tabs/incognito tabs/windows. It blocked functions such as copying/pasting and restricted keys, such as Alt+Tab/ Cmd+Tab/ 3-finger swipe. It also prevented access to secondary devices, such as cables, hard drives or external devices such as USBs or internet dongles, during the exam. If students had synced any such device before the test or attempted to sync them during the test, the MSB did not commence the test or immediately terminated it, logging them out.



**Mercer | Mettl has been an excellent experience for our entire organization. It enabled a smoother adjustment to the digital world, and we plan to employ more of its services. We are certain we will continue using Mercer | Mettl's online proctoring services in the foreseeable future.**



### Jasmine Calpo

Assistant, Aptitude & Special Tests Unit  
Test Development Section



# Impact

Mercer | Mettl's offerings enabled CEM to seamlessly scale one of its largest admissions tests, the NMAT, on the online platform, amid the pandemic.

Mercer | Mettl's superior platform and proctoring, coupled with top-notch security features, upheld the sanctity of the prestigious test. No concerns were raised about unfavorable instances, nor was the integrity of the high-stakes test compromised, which upheld CEM's painstakingly built credibility. CEM also owned all the rights to the test even after its completion.



**Mercer | Mettl's superior platform and proctoring, coupled with top-notch security features, upheld the sanctity of the prestigious test.**

1. The **platform's robustness** and **easy-to-use advanced features** enabled CEM to scale its assessments from 2,000 to 20,000.
2. A low internet bandwidth requirement of **512 kbps ensured a glitch-free test-taking experience** across the country's 7641 islands and islets.
3. **No student was deprived** of the exam-taking process due to technical complexities.

## The way forward

Impressed by the scope and quality of Mercer | Mettl's offerings, CEM plans to continue using its online service in the foreseeable future. It intends to leverage both platforms and proctoring for various ad-hoc tests for partner schools, colleges, universities and entrance tests, such as Phil-SAT and medical exams for nurses. CEM is open to conducting remote examinations, even after the COVID-19 subsides, to offer students a level-playing field and enhance its outreach across the nation.

# About us

At Mercer | Mettl, our mission is to enable organizations to make better people decisions across two key areas: acquisition and development. Since our inception in 2010, we have partnered with more than 4,000 corporates, 31 sector skills councils/government departments and 15+ educational institutions across more than 90 countries.

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🌐 [www.mettl.com](http://www.mettl.com)

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## Robust Information Security System



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