

# Taking semester exams online

**Mercer | Mettl's** resilient solutions ensured examination continuity for 26500 students of **CHRIST University**.





# **About the university**

CHRIST (deemed-to-be-University) is a premier educational institution based in Bengaluru. It was initially established in 1969 as Christ College. It was declared a deemed-to-be-University in 2008 due to its holistic education and adopting global higher education practices.

Being a multi-disciplinary university with harmonious multiculturalism, CHRIST offers programs in various disciplines, such as humanities, social sciences, science, commerce, management, engineering, education, law and architecture, to over 26000 students. These include bachelor's, master's and doctoral programs spread across the deemed-to-be-University's five plush campuses in Bangalore, Pune and Delhi/NCR.



# **Challenges and requirements**

CHRIST is a progressive deemed-to-be-University with a global footprint. It has an incomparable forward-looking approach toward education and examination, along with its unconventional reach, processes and policies. This approach was reflected at the beginning of 2020 when it successfully and seamlessly administered its entrance examination online amid the pandemic.

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Departments

It subsequently prepared a contingency plan for the remainder of the trimester and restored routine learning by adopting virtual education technology at multiple levels. Soon, the first academic session for twenty-nine of its departments neared its end, and semester exams approached.

There was a lack of clarity on the road ahead as CHRIST had no playbook for giving such a crucial exam online. The problem was not a psychological barrier to change. CHRIST was appreciative of the online ecosystem. Adequately replicating every aspect of a classroom-based semester exam with a digital model was the challenge. Academia could neither postpone such a crucial exam nor employ the same solution - as they did for previously administered entrance exams -since the requirements were starkly distinct. Meanwhile, the pressure to maintain continuity in the schedule was mounting.

# What could convince CHRIST's academia and give them the confidence to embrace the digital way again?

Let us first explore the bottlenecks in shifting to the online medium.



#### Access to a dynamic examination platform

CHRIST knew that Mercer | Mettl's platform could easily scale to over 100,000 exams in a day. So offering exams to a sizable number of students was not a challenge. However, it needed to be adequately robust and provide empirical support for conducting and managing diverse assessments remotely. Therefore, CHRIST mandated a resilient platform for its needs, including creating and scheduling exams, ensuring quality proctoring, evaluating answer sheets and frontloading every time-consuming task.



# Managing various question types



# Ensuring a fair test writing experience

CHRIST offered bachelor's to doctoral programs in humanities, social sciences, science, commerce, management, engineering, education, and law to over 25,000 students. Each discipline had diverse user requirements, distinct exam formats such as equations, short and long questions, formula writing, diagram drawing and much more. Thus, the problem extended to finding a rich repository to accommodate miscellaneous question formats.

Students were tech proficient, but not everyone could type fast and manage their efficiency online for the entire duration of exams, given their distinct types. Hence, CHRIST wanted a rational solution that offered students a seamless writing experience in their preferred format for quantitative and qualitative questions without any complexities.



## Complications in human-led evaluation



#### **High integrity**

Another hindrance to CHRIST's move online was the possibility of managing the evaluation process. These assessments were to be conducted remotely. Therefore, it was challenging for the institution to securely collate and manage physical answer sheets from distinct locations. It was the missing cog in the online exam process that was stalling its quick shift online.

Academic and data integrity and security and confidentiality were significantly rigid and high-security prerequisites in administering large-scale semester exams online. CHRIST was already well-versed with Mercer | Mettl's secure and reliable environment, bundled with AI (Artificial Intelligence) proctoring capabilities. But it sought assurance that Mercer | Mettl could seamlessly replicate the same quality and rigor as its physical classroom examination.



#### Flexibility with proctoring

CHRIST, like any other preeminent university, had a strict focus toward its semester exams. Therefore, stringent invigilation to ensure fairness and promotion of only deserving students was critical.

But it did not want external professionals to proctor the exams. Instead, it desired its staff and faculty members to live proctor the applicants and supervise tests in real-time, in a secure environment. Thus, CHRIST sought to train its 900+ faculty, staff and admin members on the proctoring software for a smooth remote proctored online semester exam.

# **Continuity with Mercer | Mettl**

Mercer | Mettl helped execute CHRIST's entrance examination drive, which was conceptualized and delivered within four days to ensure academic continuity. Despite the staggering impact of the pandemic, 43,000 students transitioned online without worrying about geographical boundaries or technical glitches. This superlative experience assured academicians of Mercer | Mettl's abilities. **But the scenario with end-of-term exams was different.** 

Mercer | Mettl was aware of CHRIST'S dilemma and understood that it mandated a new-age solution. Anything off the shelf would not suffice. Hence, Mercer | Mettl's team built context-appropriate digital solutions, suiting every aspect and stage of CHRIST's semester exam needs.

CHRIST witnessed the feature-richness and user-friendliness of Mercer | Mettl's solutions. The team tackled every challenge, making the entire process seamless for all stakeholders involved. Furthermore, efficient execution of entrance examination assured CHRIST of Mercer | Mettl's capacity to meet every demand, prompting it to continue with its academic calendar coherently, using Mercer | Mettl's solutions once again.



Mercer | Mettl's robust system offered much-needed ease and flexibility to our students in taking their exams. The platform evoked a sense of comfort, evidenced by the fact that the students have begun gravitating toward online exams.

#### **Dr. Anil Joseph Pinto**

Registrar
CHRIST (Deemed-to-be-University)





### **Solution**

Mercer | Mettl EXAMIN- an all-in-one online examination system offering an end-to-end digital solution with the platform, proctoring and evaluation.

Mercer | Mettl understood that the various examination stages, i.e., pre-exam, during-exam and post-exam needed context-appropriate solutions. Hence, for the first two parts of the problem associated with administering and invigilating remote online exams, Mercer | Mettl advocated its most viable value proposition- a futuristic online proctoring solution and user-friendly examination platform.



A robust online examination platform that enabled educational institutions to set up question papers, schedule exams and conduct exams in a scalable manner on a single platform offered a systematic and technological alternative to CHRIST's classroom-based semester exams.



AI-powered proctoring tools sanitized the exam environment to ensure cheating-free online exams.

For the third part of the problem associated with grading and evaluation, Mercer | Mettl's team created an entirely new solution, state-of-the-art industry-leading software for marking and evaluating answer sheets online.

#### Mercer | Mettl's ExaminER

It is a centralized and streamlined exam evaluation feature that enables complete management of the answer sheet evaluation process online and offers exam controllers, admins and evaluators a shared ecosystem.



# Here's how Mercer | Mettl's Online Exams Management System met CHRIST's 'before-the-exam' requirements



#### Operational assistance in setting up the exam

The examination platform helped the faculty automate their pre-exam planning process, and Mercer | Mettl's team substituted as administrators and coordinators.

- The team created around 6000+ question papers. They were in varying formats: short answer type, long answer type, formula and diagram-based questions, charts, equations, and many more.
- Aside from uploading the exam papers in the desired format on the platform, Mercer | Mettl's team shared test links with the students and offered constant assistance on the days of the examination.
- The faculty witnessed a considerable reduction in the exam set-up time with increased cost efficiency as opposed
  to offline exams.
- Faculty observed better time management and productivity, with significantly fewer tedious tasks and staffing issues.



#### **Pedagogy training**

To suffice CHRIST's mandate of having its faculty and staff proctor the semester exams, Mercer | Mettl's team undertook the task of training 700+ personnel to increase their efficiency in online proctoring.

- The team began with providing training and preparing them for various situations during the exam days.
- The team even shared some best practices concerning AI-based proctoring to smoothen the learning curve, including assistance in understanding flags and anomalies.
- The staff did not need in-depth technical knowledge or experience to understand its functionality.
- Faculty proctors were up-to-speed in a few days and adept at validating the test-takers' identity to negate impersonation and integrity-related issues.

#### Here's how Mercer | Mettl's Online Exams Management System met CHRIST's requirements 'during the exam'



#### QR code scanning for answer sheets

Mercer | Mettl built a custom-made solution for the exam-takers who were explicitly used to writing by hand than typing. This mechanism ensured equal advantage for all. This feature was called **QR Code Scanning**. The following eased academia's exam writing-related concerns:

- During an exam, students wrote the answers on a physical answer sheet. Once completed, they scanned the document using the phone and uploaded the image onto the system. This was done using a QR code.
- This feature was used for diverse types of exams involving long answer writing, drawing a diagram, or solving an equation, which was otherwise difficult for some students taking their exams online.
- More than 25000 students accessed this feature and were given extra time toward the end of the exam by proctors to scan and upload their answers.
- Since mobile phones were also being employed, strict invigilation was ensured to avoid any wrongful use.



#### Live proctoring flexibility

After Mercer | Mettl's team detailed the entire proctoring session to CHRIST's team:

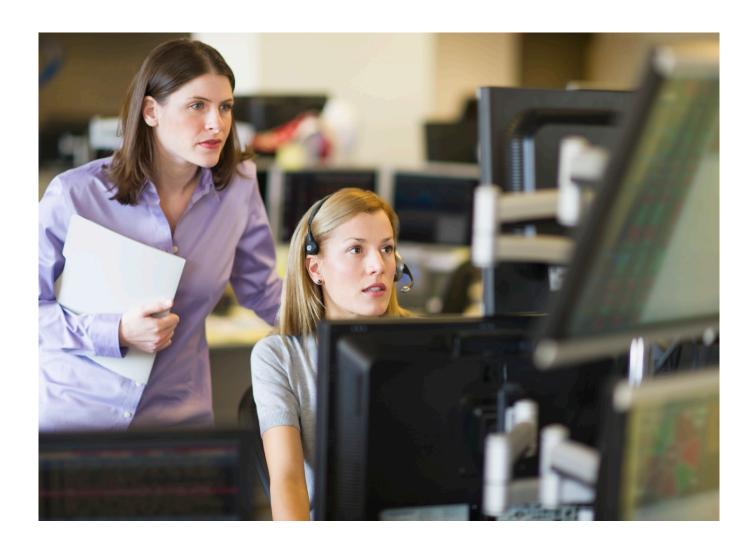
- The in-house live proctors monitored students remotely, from start to finish, to negate any unfortunate incident using one-to-one and one-to-many proctoring view available to them. They even granularly verified the test-taking environment for any anomaly.
- An added feature of pausing /stopping /resuming the exam in real-time, along with a live chat option, enabled inhouse proctors to interact with the exam-takers as desired.
- Offline availability of the recorded video footage of proctors' one-on-one interaction with students was made available to selected authorized staff of the university for future reference.
- With in-house live proctors, CHRIST could eliminate its reliance on third-party proctors, lending greater credibility to the process.



#### AI-powered proctoring

The examination platform's preconfigured AI proctoring technology ensured a stricter focus on monitoring, analysis, and scrutiny to maintain CHRIST's exam's integrity. It gave a wholesome view of the applicants' actions, activities, and environments remotely, in the following ways:

- Mercer | Mettl's futuristic and highly trained AI algorithm proctored more than 25000 unique students, with more than 5000 students simultaneously during peak timings or parallel exams.
- The intelligent algorithm helped faculty flag various suspicious cases, including non-visibility of face/ presence, detection of mobile phone, the presence of an additional person, distracting movements, etc. This enhanced the live proctor's ability to detect cheating and led to proctoring instances going beyond two lakhs (two hundred thousand) in number.
- AI-assisted proctoring even generated recorded feed and flags for review to help examiners filter out candidates
  who may have resorted to cheating. Such levels of reliability lent incredible ease and integrity to the invigilation
  process.



# Here's how Mercer | Mettl's Online Exams Management System met CHRIST's 'after-the-exam' requirements



#### Easy evaluation of answer sheets using ExaminER

CHRIST facilitated a seamless evaluation process for all its exams online with a custom-made feature called ExaminER. It began with providing access and training to over 1,000 evaluators. It was a collaborative effort, but CHRIST managed the process, ensuring seamless exam evaluation.

- A digital evaluation solution ensured there was **no physical handling of answer sheets**. Instead, they were all scanned and uploaded online by students using the QR code. This process eliminated administrative tasks, such as storing, circulating, tracking and collecting answer sheets. Therefore, academia could give more attention to reliable marking and accurate results generation.
- Answer sheets were assigned to different evaluators by the moderator completely anonymously to eliminate any
  possibility of bias.
- With controlled and well-defined access, CHRIST safeguarded the integrity of the evaluation process with no leakages, loss or theft of personal data, question banks or answer sheets.
- Collaboration and real-time exchange of information included the possibility of parallel checking wherein multiple assessors oversaw answer sheet evaluation simultaneously. Such an arrangement helped optimize time and effort and ensured a quick and reliable turnaround of rightly tabulated results.



#### Project governance for timely delivery

The examination controller, administrators and evaluators had access to the user-friendly examination dashboard with the desired checks and controls. Therefore:

- The examination controller could track every exam stakeholder's performance, progress, engagement, and adherence to proposed timelines in real-time. This mechanism saved ample time otherwise spent in reaching out to individuals.
- Inbuilt reminders and alerts ensured automated notifications to the evaluators, informing them of the pending work if they were behind their schedules. This process helped the examination controller ensure that its proposed timelines were being honored without much effort.
- Students were also given limited access to ExaminER to review the evaluated answer sheets. This arrangement replicated the physical examination process, lending tremendous transparency to the entire process.



#### **Quick results declaration**

A faster digital evaluation ensured students did not need to wait for weeks or even months to know the status of their exams' results. This agility helped maintain the intended timeline for the subsequent session.



#### 24x7 support

Mercer | Mettl's technical back-end and customer support team ensured 24\*7 client and candidate support. Mercer | Mettl hand-held, trained and actively assuaged every online examination, proctoring and evaluation concern while working round the clock to keep the software updated, compatible and error-free. Simultaneously, it also mitigated students' concerns throughout the drive.



#### **Data safety**

Mercer | Mettl's stringent policies and extensive protocols ensured information privacy and data security at every stage of the examination process.

- All exam data, including student information, questions, and answer sheets, were stored safely on a cloudbased server (Amazon Web Services (AWS).
- All data exchanged over the network between the test-takers and the invigilators were secured and encrypted via HTTPS (256-bit SSL encryption).
- With clear guidelines on access-right-management, Mercer | Mettl's team allotted only a privileged few staff of the university and itself the right to view and access the various system resources. They could even track who, where and when accessed the data. These mechanisms ensured that sensitive information was free from hacks, leaks and theft.



# **Impact**

Right from managing exam schedules, providing proctoring assistance to setting up evaluation features, Mercer | Mettl provided CHRIST with a cutting-edge all-in-one online examination system. This end-to-end digital solution with a platform, proctoring and evaluation prepared according to its exam-specific needs and requirements made every process easy to conduct, seamless to administer and immune to disruptions.

Mercer | Mettl's team delivered at scale. Its tailor-made offerings such as 'manual digital evaluation' and 'QR code scanning' enabled CHRIST to continue its intended semester exam process seamlessly.

The solutions eliminated bottlenecks, increased online competency and provided seamless advantages compared to traditional methods.

#### Here are some highlights:

- CHRIST shifted 25,000+ students online without worrying about the test-takers' geographies or technical glitches.
- Mercer | Mettl's proctoring technology empowered CHRIST to conduct over four lakh hours of proctoring.
- Mercer | Mettl's team created 6,000+ assessments for CHRIST within the specified time limit.
- The ability to scan and upload answers using QR codes provided all test-takers with a level playing field.
- A suite of user-friendly proctoring features and the training provided by Mercer | Mettl helped CHRIST's 700+ in-house invigilators monitor the exams remotely.
- Optimum reliability and validity of the evaluation safeguarded the institution's integrity.



## **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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