

# Online examination system

Guide for Universities to Shift Online



welcome to brighter

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# Introduction

The COVID-19 crisis has created perceived headwinds in the global economy leading to business losses and layoffs. In a recently held press conference, Kristalina Georgieva, Director, International Monetary Fund (IMF), admitted that the world had entered a recession. There is major disruption across industries and the higher education space has not remained untouched from its evolving impact. The disruption in routine life has led universities globally to cancel lectures and shut down campuses to avoid the spread of the coronavirus.

Higher education in India, too, has taken a hit due to these unprecedented circumstances. As the Ministry of Human Resource Development (MHRD) requested universities to take precautions, the University Grants Commission (UGC) sent the following directive to all the Indian universities.

*“All universities and affiliated colleges should postpone exams till March 31 and suspend evaluation work. (A) Further schedule should be decided following a review of the situation.”*

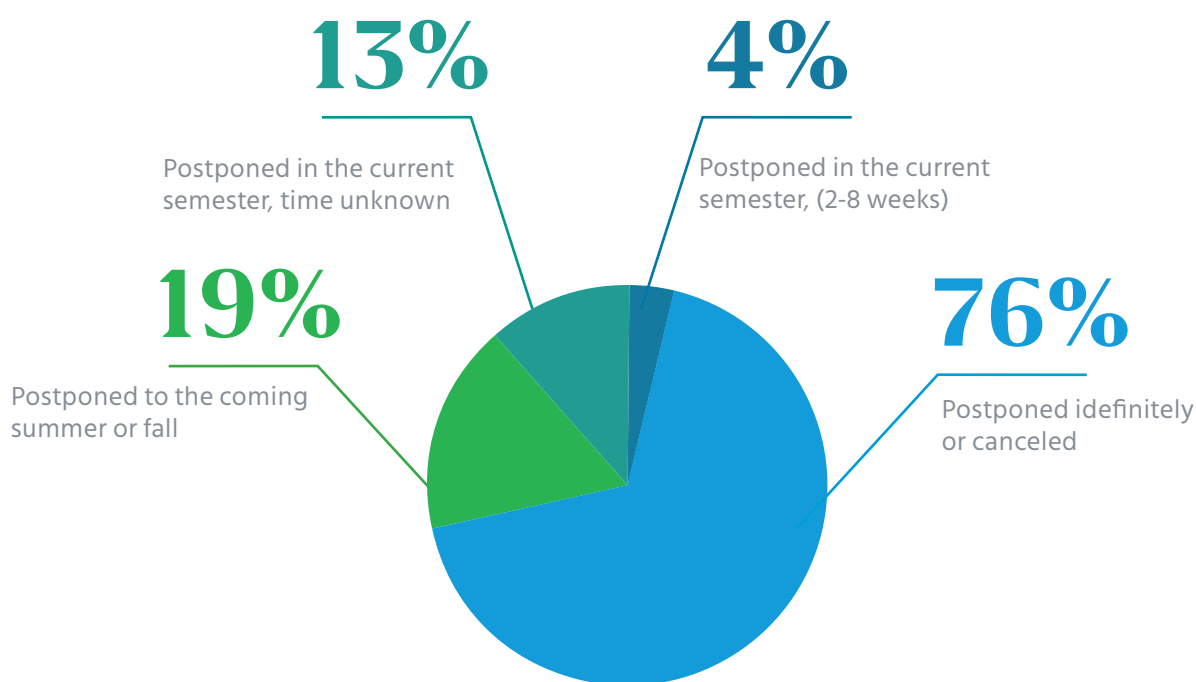
The Ministry also announced that the Joint Entrance Examination (JEE), a preliminary test for admission in premier institutes like IITs and NITs and other engineering colleges had been postponed from mid-April to the last week of May.

**The International Baccalaureate Organization cancelled the examinations for its diploma program and career-related programs scheduled between 30 April and 22 May 2020, reportedly affecting more than 200,000 students worldwide.**

Similarly, Chinese students studying in the United States of America (USA) are at the receiving end of the current situation. Due to the travel restriction imposed on China, the spread of the coronavirus has been slow but has left international students stranded. As per the survey, 'COVID 19 Effects on US Higher Education Campuses', 830 Chinese students have not been able to return to the US to continue their studies. These are just a few instances that balloon to staggering numbers when accounting for students from South Korea, Hong Kong, Macao, Vietnam and other such countries under lockdown.

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# Effects on students planning to study abroad in China



To avert a scenario that endangers the students' career, universities need to take the necessary steps to address the situation. Instead of canceling or postponing the exams indefinitely, it is time to embrace technology. When classes can be taken online, exams, too, can be conducted virtually. The technological advancement in the higher education space has made teaching and learning seamless. Now, students can take lectures, make notes and solve queries by communicating with teachers in the online classes. With an online exam system, students will be able to appear for exams from any part of the world.



**Digital exam to help Monash University save AU\$7 million. By the end of 2020, 80% of all exam issuedd by the university will be e-assessments.**

ZDNet



A report published in ZDNet in August 2019 revealed how Monash University would cut down AU\$7M of the examination cost by moving 80% of its exams online. The growing adoption of online assessments in higher education has been tempting universities to shift to an online examination system for the past couple of years. It is only after the outbreak of the coronavirus that universities previously averse to adopting online examination systems, have to, now, select digital platforms to conduct their exams.

Change can be daunting. But, universities that are yet to move to virtual platforms can take cues from the ones that have already made the transition. Universities must take prompt action to safeguard the interests of students. It must be noted that the termination of lectures, a decrease in new admissions and cancellations may just be a temporary effect of the outbreak. Once normalcy is restored, higher education will resume as usual. By then, students and faculties would have adapted themselves to the digital learning and exam platforms, which are far more convenient to use.



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# How are universities tackling the Covid-19 lockdown

The London School of Economics, University College London, Durham University, Manchester Metropolitan and Loughborough became the first centers of learning in the United Kingdom to do away with classroom teaching, embracing the online platform. Though students and faculty are gradually adopting the new mode of teaching, there are apprehensions on conducting semester and annual exams. The lockdown mandates people to stay indoors, causing a worldwide postponement of exams, delaying the onset of the next academic year too. Universities that still follow traditional examination systems are contemplating conducting online examinations to circumvent the delay.

Universities of Oxford, Cambridge, and Durham have decided to replace the summer term exams with an online examination system as thousands of students petitioned the administration to allow them to opt-out of appearing for their finals or start anew. Similarly, the London School of Business has given the go-ahead to conduct online exams until the end of the academic year. It has come as a respite to students who have been concerned about their future. Sharing an email with students earlier in March, Prof Martin Williams, Pro-vice Chancellor for Education, Oxford University said, "There would be no conventional exams next term and the university is expected to include open-book exams taken remotely and submitted online."

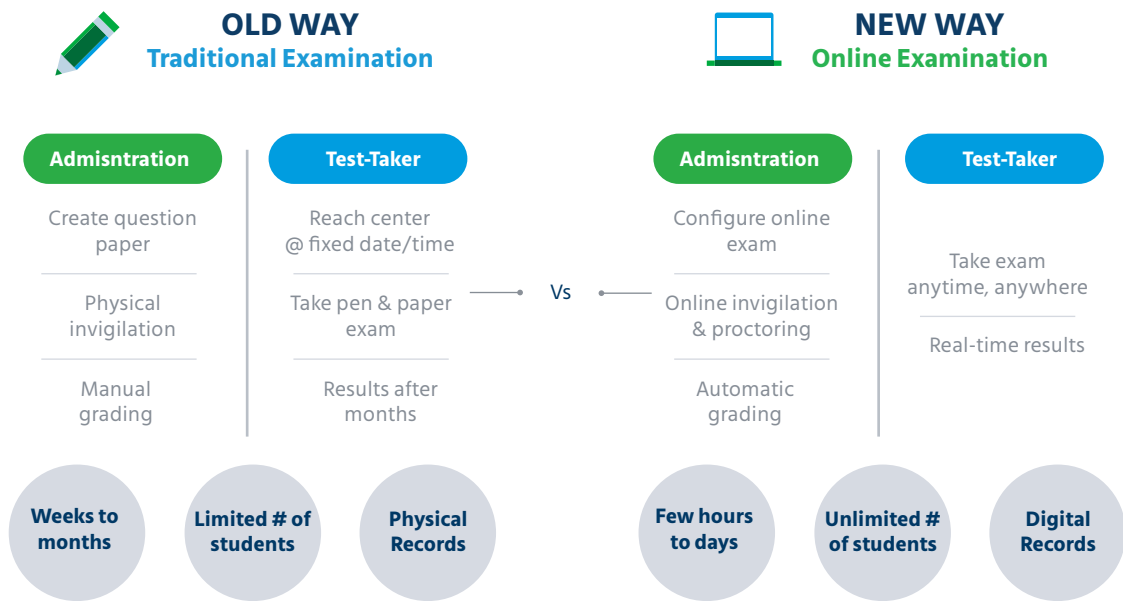
Leeds University is also preparing to shift to an online exam management system shortly. Its dean of digital education, Prof Neil Morris, said: *"In some disciplines, (the) administration will consider enabling remote proctored online examinations, which means having someone watching you through a webcam while you do an exam in a secure browser."* A majority of universities would consider timed open-book online exams, he added.

In the USA, Stanford University has terminated the remaining two weeks of classroom learning and moved to online lessons. After a staff member contracted the coronavirus, the University of Washington has also stopped ongoing classes on the campus. Even though several universities had distant learning courses, focus on online teaching was not profound. But, the current situation has pushed institutions to move to online learning



# Traditional V/S New-age Methods

The steps mentioned above taken by educational institutions indicate the scope of the online examination system in battling the current situation. Even though the existing situation has deemed universities to utilize technology in conducting exams in a streamlined manner, many educational institutions would gradually embrace online platforms as the mainstream approach to conducting exams. This is because the traditional methods are cumbersome, require more time and resources, manual invigilation and grading, and create a logistical hassle. However, exams can be easily configured on a digital platform with the availability of numerous online exam management systems. Additionally, online proctoring and auto-grading brings down cost and reduces turnaround time, allowing the flexibility to take exams from anywhere in the world.



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# Why do universities have reservations in shifting to online examination system

Educationists have preferred traditional means of imparting education to the students. Even though digital transformation has continued to disrupt the education sector, not many universities have entirely moved to the online teaching and examination model. But, the COVID-19 pandemic has fastened the transition in the education sector. Now, it has become critical to conduct online exams to avoid delays in starting the new academic year. However, let's try and understand the reservations among universities in shifting to an online exam management system.

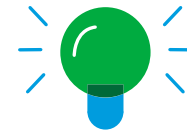




## Lack of awareness

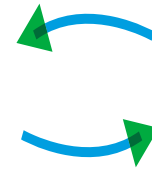
The lack of awareness is one of the biggest hurdles in transitioning to an online examination management system. The administration is not aware of the ready availability of online platforms for hosting exams. Online exam management systems software are capable of hosting low and high-stakes exams with ease. Universities are also concerned about invigilation, and thereby the credibility of such exams.

Anyhow, it must be highlighted that proctoring technology flags instances of cheating and all other malpractices that may be undertaken by students while appearing for exams online.



## Resistance to change

Despite the digital revolution, many universities remain averse and non-committal to the change. They continue to take pen-and-paper tests or even delay the term exams when facing unprecedented circumstances. Change can be difficult, especially when giving up on a set and time-tested process. However, change is the only constant and embracing the digital examination platforms would go a long way in simplifying examinations.



## Security concerns

In traditional examinations, invigilators ensure that the students taking the exam have authentic IDs. However, university administration exhibit skepticism if this kind of scrutiny would not be available in the online examination platform. Thereby, this skepticism and lack of knowledge leads to a lack of faith in the authenticity of online examination management software.



## Communication gap with students

Teachers and administration prefer to connect with students in-person when conveying the necessary information. They assume that the absence of human touch can create a communication gap between students and universities. Little do they know that conducting online exams facilitates effective communication. Proctors can even resolve any queries made by students and communicate with them during the exam.



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# How students cheat in online examination system

Preventing instances of cheating is one of the major concerns of universities for students who attempt to use unfair means to fare better in online exams. The most common forms of cheating are:

## Impersonation

In high-stakes exams, students may often find impersonators to take the exam on their behalf. They may even forge admission cards. Hence, universities are skeptical about the veracity of the identity of students in online exams.

## Suspicious behavior

When a student has a friend or family member helping them from behind the webcam with answers, they may have to hide their face, beguile someone or stay away from the screen to seek answers from the ones helping them. It raises concerns for the authorities.

## External help

It has been observed that students use smartphones or smartwatches to cheat on their online exams. They may even log in to a different web browser or open new windows to google search for the answers. Such malpractices hamper the integrity of the examination.

## Easy navigation

The systems used by candidates for taking exams serve as a potent medium for cheating. With easy access to a multitude of web applications and software, students go to great lengths to score good grades in their exams. Connecting external storage devices, screen sharing, keeping answers handy, and switching screens effortlessly, are a few of the many methods that aid students in cheating.



# How technology prevents cheating in online exam management system

There have been monumental advancements in online examination system software. The technological developments have enabled educational institutions to counter cheating in the following manner:

## 3-Step authentication

The first layer of anti-cheating measure urges students to click their picture, furnish an identity proof and share registration details. The proctors available round the clock verify the photo ID against registration details to attest if the candidate is bonafide.



**Photo verification**



**ID card verification**



**Quick authentication via OTP**

## Proctoring

Auto proctoring and live proctoring have emerged as antidotes to rising instances of online cheating. AI-based proctoring monitors the candidate's live webcam feed, auto-flags a variety of cases like detecting a smartphone, another person in the background, or the absence of the candidate.



**Facial detection**



**Detection of mobile phone**



**Detection of candidate distraction**



**Detection of multiple people**

Auto proctoring and live proctoring have emerged as antidotes to rising instances of online cheating. AI-based proctoring monitors the candidate's live webcam feed, auto-flags a variety of cases like detecting a smartphone, another person in the background, or the absence of the candidate.

Meanwhile, live proctoring has a human invigilator supervising the exam remotely via webcam. It comes with the functionality of pausing, resuming, or halting the test in real-time if deemed necessary. The proctor can communicate with the students through a chat window if they wish to seek clarification on any undesired activity.







## Secure browser

Once the university authorities have defined a list of restricted apps and websites, the secure browser restricts students from screen sharing or accessing different websites by sending a warning. The feature disables screen recording or projection and any application that is not whitelisted.

## Shifting paradigm of the online exam system in the wake of social distancing

Pen-and-paper tests have been the norm in the education sector. The COVID-19 outbreak is just one instance that has forced universities to conduct online exams. However, in a world of constant upheaval, a catastrophe of any nature can keep disrupting the normal pace of events. Hence, it is crucial to shift our energies and focus on what is required to stay abreast and mold our approach to adapt to the changing times.

## Advantages of online examination management system

 <b>Conduct exam seamlessly</b>	 <b>Scalable platform</b>	 <b>Online invigilation</b>
 <b>Automatic grading</b>	 <b>More secure</b>	 <b>Saves cost and time</b>



### Conduct exam seamlessly

Online examination platforms are easy to use. With simple configuration, teachers can create questionnaires or seek help from the question bank. Quick scheduling of exams intimates the students in any corner of the world. These exams support multiple languages and question types like MCQs, short or descriptive questions and more. The quick test results and analytics further help the administration in drawing insights that could be used in the future. Thus, an array of functionalities assist universities in effortlessly managing the entire examination process.



### Scalable platform

The online exam system works on a highly robust platform. Unlike pen-and-paper tests, online assessments can be scaled minus the cost escalation. The platform does away with all the logistical hassle that involves scheduling and physically conducting exams at different exam centers. Since the exams can be taken from anywhere and anytime with a stable internet connection and a system, it enables students from all corners of the world to take exams without the need to commute to the examination centers physically.

## Online invigilation

Allotting invigilation duties and managing teachers' availability are some of the main concerns in undertaking written exams. However, with the readily accessible remote proctoring technology, universities no longer need to assign invigilation responsibilities to teachers. Solutions like online authentication, secure browser and online proctoring erode the possibilities of cheating on the exam, thus maintaining the integrity of the assessment.

## Automatic grading

The intervention of Artificial Intelligence has changed the way exams are being graded. The automated grading feature has eliminated the need for assigning and managing teachers. It removes the scope of human error and provides faster results. Auto-grading does not stop at MCQs but also expands across essay-type questions and extensive codes that demand considerable time from the invigilators. With this feature, universities can significantly cut down on the turnaround time with ease.

## More Secure

Allotting invigilation duties and managing teachers' availability are some of the main concerns in undertaking written exams. However, with the readily accessible remote proctoring technology, universities no longer need to assign invigilation responsibilities to teachers. Solutions like online authentication, secure browser and online proctoring erode the possibilities of cheating on the exam, thus maintaining the integrity of the assessment.

## Saves Cost and Time

There is a string of procedures associated with the examination- creating questionnaires, editing, registration, managing physical exam centers, evaluation, result declaration and re-evaluation. But, online examination system software solves these problems by automating all the manual tasks, thus significantly reducing efforts. Universities can now cut down on the cost incurred on question papers, answer sheets and invigilation duty. The resources required to manage transport facilities, supply questionnaires and answer sheets are eliminated.

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# How to Conduct Online Exams Seamlessly?

## Conducting Online Exams is a 5-step process

### 1. Set-up exam

The first step to hosting exams on an online examination management software is to upload questions or choose questions from the bank. The platform supports different question formats. At this stage, university administrations integrate the examination platform with the existing Learning Management System and configure the results.

### 2. Invite test takers

The online exam management system enables authorities to upload candidate data in bulk. Time-slots are selected as per convenience and test invitation and follow up e-mails are sent to the students.

### 3. Authorize and proctor tests

ID-based authentication serves as the first step in assessing the students' credentials. AI-based live proctoring averts any cheating instances. The credibility score generated by the AI upholds the candidates' integrity while taking the exam. The entire test can also be recorded for human proctors to examine at a later stage.

### 4. Real-time updates

The online examination system software can provide real-time results. The results can be duly customized by university authorities and can be shared with students in PDF or HTML formats.

### 5. Group-level analytics

It is a step ahead of individual results. The online exam system efficiently analyzes bulk student data, analyzes a diverse set of students and provides useful group-level insights. The analysis can be customized as per the university's requirements.



# How a Top Indian B-School Moved to Online Exams

The business school (B-school) had been conducting traditional pen-and-paper exams since its inception. However, these exams were incurring huge costs. The institution was thus looking for a cost-effective and scalable means to conduct exams.

## About the Client

Established in the year 2001, this private B-school has three campuses across India that provide certificates in various post-graduate management and executive programs.

## Challenges

The pen-and-paper tests for entrance exams had raised the following challenges for the administration:

- The financial burden of booking exam centers
- Operational hassles
- Accommodating all candidates within the campus
- Disruption in the regular college life

## Solution

Mercer | Mettl provided a completely digitalized examination platform. The remote proctoring feature eliminated the need of examination centers and the hassle of managing a large volume of test-takers.

## Impact

Mettl Examine helped the B-school in significantly reducing the costs associated with managing the test center. Our team also provided deep question analytics and benchmarks, which have now become an asset to the institute.



# Conclusion

The online exam management system benefits institutions in maintaining the integrity of the test, data and attendance records by ensuring that the data is safely stored on the cloud. There is no concern over misplacing manual entries. With proctoring, authentication and browsing tolerance, the concerns surrounding malpractices have also been addressed. Most importantly, the ease of use, candidate experience and quick turnaround time make online examination a hassle-free process. Witnessing the multi-fold benefits of online examinations, it is high time that universities realize the importance of making the digital shift, and for good.

## Why choose Mercer | Mettl?

Across various programs:

**Entrance exam**



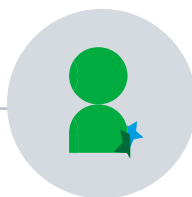
**Distance learning**

**College quizzes  
& assignment**



**E-learning courses**

**Controller  
of examination**



**Executive programs**

**Mid and end  
tern exam**



**Part-time courses**

**Digital courses  
& certification**

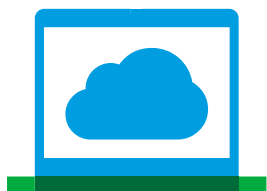


**Full-time courses**



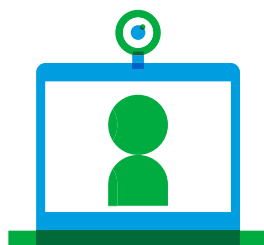
# Reinvent examination in the digital age

## Efficient



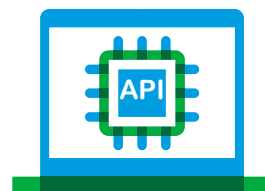
Highly scalable cloud based platform

## Secure



Wide range of Anti-cheating feature

## Seamless



Integrate with LMS using API support



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# 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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