

## Adaption of Galgotias university amid COVID-19 Lockdown

As the Nation headed towards Lockdown, during this social distancing period, wherein many are engaged into knowingly unknowingly wasting internet bandwidth , forwarding messages, creating rumours, panic , Galgotias University responded immediately with the advances in technology to bring the classes Online for effective Learning. From 18<sup>th</sup> March 2020, the classes are being conducted on ONLINE mode effectively. For an University that caters to 15000+ students in an academic session, going online was not a tedious task with a strong Integrated LMS system in place. Teaching, Learning, assessment of Learning outcomes were all conducted online. First time in the history that an elite, traditional, campus-based university has moved classes totally online, the faculty members deliver their lectures or teaching through an online learning platform – the Moodle (We at Galgotias already adopted this pedagogy using our own Learning Management System (LMS-moodle), which is one of the open sources learning management system which we have configured as per our requirements. We are running almost 120 programs with 1428 courses, 13700+ students and 600+ faculty members already trained and enrolled in LMS mapped to courses and students), and video conference platforms ZOOM, Webex, Google Classroom and have tried out many different technologies to enable better interaction with students and accessing their learning outcomes.

Following methodology adopted by Galgotias for online teaching pedagogy are as follows:

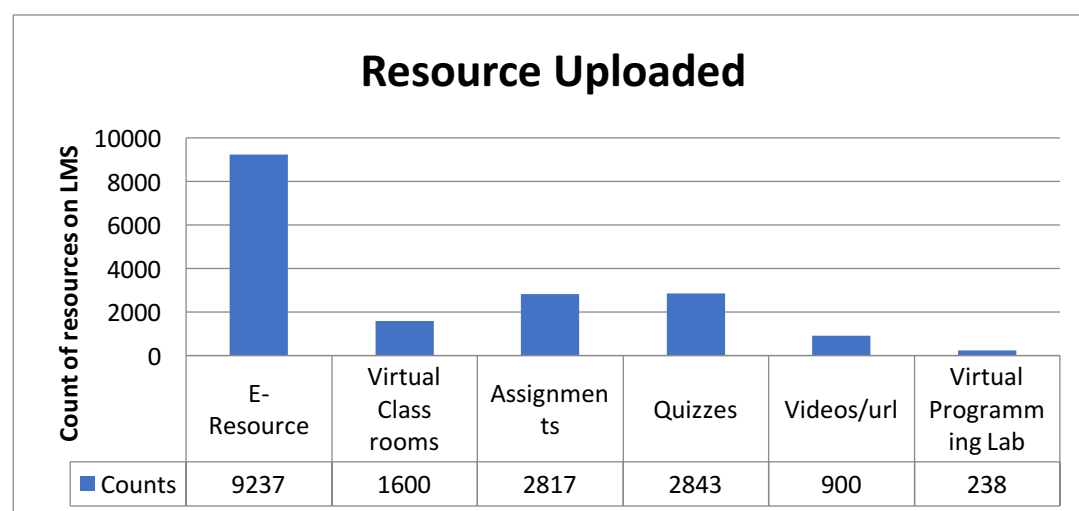
- We have asked all the faculty members to upload all the rich contents in the form of videos, e-resource such as pdf files, e-books and other e-contents on LMS and ERP.
- For virtual class rooms, we have used our LMS with inbuilt features for conducting virtual class rooms like Bigblue Button, Congrea and Zoom for video conferencing with students available in lms courses which requires less internet bandwidth.
- For laboratory based courses, we have used Virtual Programming Lab (VPL) for computer science students. This platforms enables us to create a problem statements and allows students to write their programming source code in any programming language(C,C++,JAVA, Python etc) as per demanded by IT sectors. All the assessments are based on Test cases and automatically graded, when students write their code properly and matches the test cases. For few non- programming lab, we have also provided simulations incorporated within our LMS.
- We have also adopted blended mode learning, in which faculty teach a topic scheduled for that day and upload related videos, e-content for their references. After completion of reading the resources students were asked to attempt Quiz(MCQ, Short answer, match the following, true/false etc) and Assignment

to upload for grading, which are part of their Internal Assessment components. The quizzes and assignments are time bounded and secured with various security features.

- For tracking students presence, faculty used to take attendance by capturing their log reports, which provides them each information's like time spent for the activity and all necessary information like ip capturing, mode of browsing etc with video conferencing based attendance.
- We have shared all the training modules in the form of videos to train the faculty members for utilizing Google Classrooms and its features such as Hangout meet for 250 students virtual class rooms, Microsoft Team for education, Zoom, Skype etc for virtual class rooms as well.
- For UG and PG students undergoing internships, project evaluations and reviews were also conducted online by professors and conducted various different seminars for how to write research paper, book chapters and patents. So that students can utilize this time for publishing research papers in scopus/sci/esci and other indexed journals and conferences.
- Students were time to time encouraged for enrolling online courses provided by NPTEL/SWAYAM/UDEMY/COURSERA etc.
- For placement, prospective point of view students were asked to take online challenges on hackerrank, hackerearth to compete with other students across the world and their star rankings were captured by skill and training team for their progress and performances.

As a result after adopting this teaching pedagogy, faculty have shared and uploaded following contents till 27<sup>th</sup> March for students.

1. 9237 e-contents like pdf, PPT, word files for student.
2. Around 1600 virtual class room instances.
3. Number of Assignments closed to 2817 and Number of Quizzes around 2843 and 900 url and videos.
4. 238 Virtual Programming Labs by School of Computing Science.



A total of 10019 lectures have been conducted across 18 different Schools of the University, between 18<sup>th</sup> March and 27<sup>th</sup> March, in which 90.01% of Galgotias University Students attended the lectures and participated in the assessment. So far the entire online teaching programme has gone smoothly, thanks to the efforts made by the faculty, Support staff and the Administration of the University.

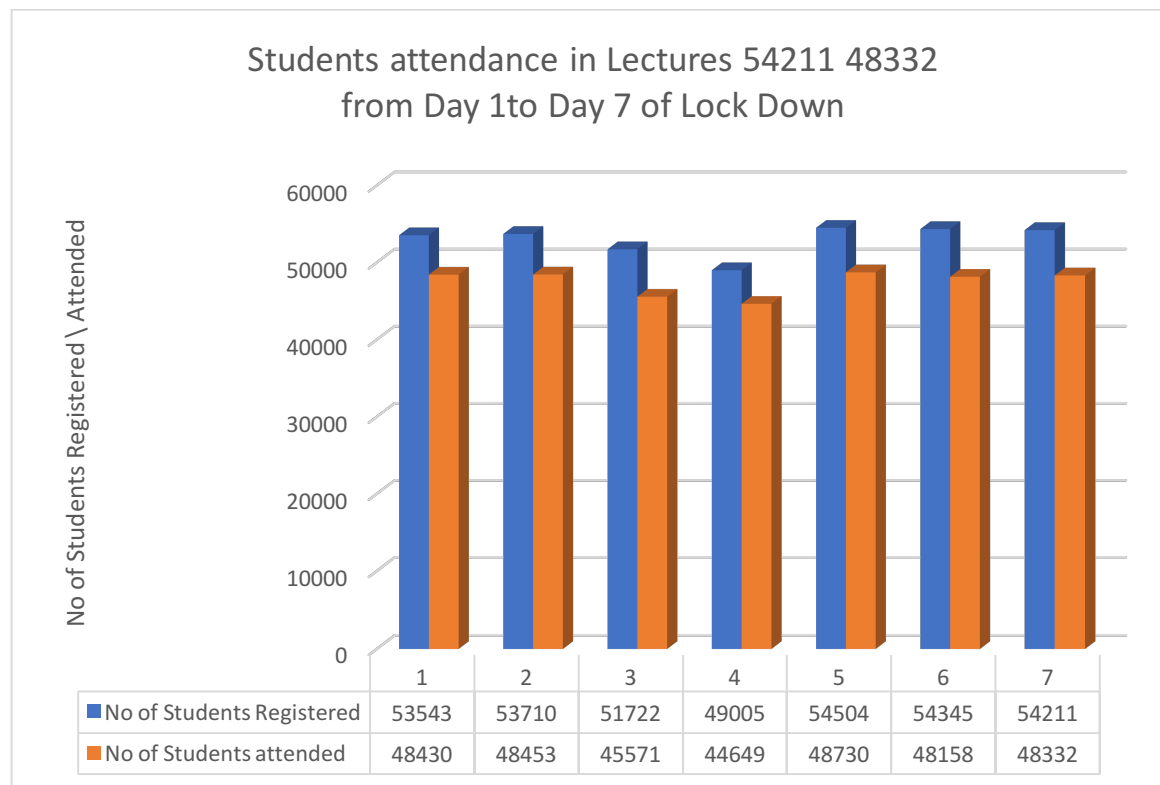


Figure 1: Day Wise Statistics

### Methodology adopted

Like class room teaching, Learning and assessment were carried out simultaneously. Various online platforms like ZOOM, LMS (MOODLE), Google Classrooms, Google Hangout, Skype , Virtual Labs were effectively used for content delivery. Social Networking tools like whatsapp were effectively utilized. Details of various tools are listed in Figure 2.

## ZOOM

Students are connected via ZOOM, where Faculty delivers lecture online and students interact directly with students similar to face to face class room.

## MOODLE

Faculty post the Lectures / Assessment / Pre Recorded videos in Moodle, Students will go through the video and assessment were conducted at pre defined schedules to access the learning

## Google Class room

Course Materials were sent to the students using E-mail / Whats app and students were connected through Google Hangouts / Skype / Whats app for interaction with the faculty and finally assessment was conducted through google classroom

## Group Discussions / Debates

In subjects where case studies / discussions were involved, students were connected through ZOOM and GDS/Debates/Case Studies were conducted and students were assessed

## Seminars / Project Presentations

Seminars for courses (Self Study), PG Desertations and UG Project reviews were taken through Skype / Google Hangout / ZOOM and grading was done as per predefined rubrics

## Virtual Labs

Wherever possible, Virtual Labs were conducted and students were assessed based on H5P, and other online assessment platforms

**Figure 2: Methodology adopted for effective content delivery**

## **The student experience**

The most important factor in teaching is accessing the learners experience and their ability to access the understanding of learning outcomes. According to the student satisfaction survey, and grievance handling mechanism, students have reported very positive learning experiences. Students also reported that they were relaxed and not distracted much by the other students .

Around 50% of the students felt that Online teaching is better compared to traditional face-to-face teaching, 50-55% students were of the opinion that Both online and offline teaching was bale to transfer the objectives equally and around 15% students were of the opinion that traditional teaching was better.

Most importantly, online teaching has helped students to learn in a different environment and has motivated the students for Self-Learning, which is a very important skill, required for Life Long Learning. With ICT tools, the confidence of students in using the latest technology trends and platforms, has improved, which will help them to excel in the future.

In order to build the team sprit, Group exercises such as case studies, Group Puzzle / Problem solving techniques were used to access the learning outcomes.

## **Experience of teachers**

Although it takes a lot of time to prepare and deliver the content online, most faculty were exited and made themselves involved, to ensure that the learning becomes interactive and informative.

Apart from regular class room teaching, the other activities of the university including Prebos, Deans Council, Class Representatives meeting , Research council Meeting, Upskilling of faculty in AIML were conducted during this period through various ICT tools.

This helped the faculty and students to stay in positive fame of mindset and stay focused at the time when the entire Nation needs the youth to be motivated and stay in focus.

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