

# **A Case Study on Virtual Supervised mode of teaching-learning practices at Dayalbagh Educational Institute during COVID-19**

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## **1. Dayalbagh Educational Institute**

Dayalbagh Educational Institute was established in Agra, the city hosting one of the wonders of the world, the Taj Mahal in the state of Uttar-Pradesh, India in the year 1981. 8,846 students study a host of courses spanning under-graduate, post-graduate, PhD, post-doctoral and diploma courses. Women comprise 60.2% of the total student strength. The Department of Management was commenced in 1991 as a separate department under the Faculty of Social Sciences. The Department offers various courses like Bachelors of Business Administration, Masters of Business Administration (MBA), MBA in General Management, MBA in Innovation, MBA in Waste Management and Social Entrepreneurship, PhD, PG Diploma in Urban Planning and Management, among others. It has an accomplished Faculty drawn from various streams of pure academics, and industry-academia experience, supported by mentors from Alumni groups and friends of Dayalbagh to make management education as near a real-life experience as possible. The Co-operative Management Internship programme, a 6 months internship is a unique feature of the DEI MBA programme and is based on the Co-operative model of education pursued at the University of Waterloo. Nestled between the green eco-village ashram of Dayalbagh, the Radhasoami agricultural dairy farm, and green fields, DEI is reminiscent of a community of students and staff pursuing the aim of establishing a „healthcare habitat,” under the guidance of its Chairman, Advisory Committee on Education, Revered Prof. Prem Saran Satsangi Sahab for a quality life. In 2021, DEI stood resolute to abide by the time tested, broad-based, integrated and inter-disciplinary system of education from nursery to higher education. The purposive and conscious thought leadership at DEI pursues the lofty ideals of higher-order quality education for self-realization.

## **2. Challenges of COVID-19**

The COVID19 pandemic is one, which according to a multiple author study (Bozkurt, et al., 2020) of 31 countries across the world, predicates that “90% of the global student population experienced an interruption of education” (UNESCO, 2020a; 2020b; UNICEF, 2020). Moreover, “social injustice, inequity and the digital divide” exacerbated the situation, requiring distinctive and “targeted” measures. In India, the report of the Parliamentary Standing Committee on Health and Family Welfare, Government of India, titled “The outbreak of Pandemic COVID19 and its management”, portrayed an alarming scenario of compromise of educational efficacy and jeopardized futures especially of the weaker sections of society, delivering trauma on affected students and families, especially in the context of digital access inequity, and poor connectivity

networks. Further, unplanned remote education models at variance with planned online and distance education modes, replaced the face to face instructor-led teaching worldwide, requiring considerable flexibility and mental adjustment, and sometimes an adverse consequence on the mental health of students.

While the COVID 19 threat subsumed other threats like “unfettered markets, unlimited growth and unregulated capitalism” (Rand, 2020), leading to reports of nature bouncing back, the world continued to witness climate disruption. One of its forms, more than 130 storm systems in 2020, including India’s own Typhoon Amphan and Nisarga, continued to ravage manifold lives and the global economy to the tune of approximately \$62.24 billion.

### **3. Issues of concern concerning the interruption of higher education**

Higher Education sector faced a variety of issues. In some Universities, students were asked to vacate their hostels and accommodations at short notice requiring special efforts in the case of international students to get them home. Universities needed to adapt to the digital and online mode of education. The government empowered the Top 100 Universities to commence online courses in June 2020. The Pradhan Mantri e-Vidya programme unified all efforts related to digital, online and on-air education. The online component was permitted to be raised from 20% to 40%. Faculty development programmes were needed to train them on how to make online teaching effective. However, with only 23.8% of Indian households having internet access, with the figure being only 14.9% in rural areas; disruption of online education was experienced, exacerbating the problem of the digital divide (Sahni, Brookings Institute). The New National Education Policy was rolled out, with the impact of phasing out affiliated colleges. AICTE regulations were brought into play which prohibited students from participating in onsite firm internships or dealing with the public. Conferences moved from onsite to online modes. Counselling processes came to a stop generally at University location. Faculty hiring and career advancement were deferred in various institutions. In terms of support communities, EdTech platforms helped talented teachers reach a greater number of students. Social media platforms emerged as choices to create more awareness of stress and anxiety and associated disorders, especially in the case of challenges faced during the lockdown. Surveillance, ethics and data privacy issues were highlighted, with the need being felt for enhanced cybersecurity (Davey, 2020). In this scenario, online proctoring services experienced a surge, especially to control cheating and dishonesty. In rural areas, there was limited availability of technological devices. Students didn’t have access to personal laptops or computers and phone screens, which were not conducive to long hours of learning. Therefore learning would remain restricted with the limited availability of technological devices. According to the Brookings Institute (2020), only 16% of the women had access to mobile internet.

### **4. DEI Response to Education challenges during COVID-19**

DEI responded to the Lockdown in full conformance with government regulations with students and staff engaging in teaching-learning activities from home. Google Class

Rooms and other online platforms were utilized to send study material to students, who were enrolled in the class-rooms. Initially, various meeting platforms like Google meet, Zoom, and Cisco Webex was utilized not just for classroom interactions, but also to host Guest Lectures and Webinars for skill enhancement of students. Management students who were in internships took up work-from-home internships, leveraging the vast network of Alumni and Friends of DEI, and government organizational forums like Internshala by AICTE. Google meeting and other forums were utilized to remain in contact with office supervisors and to engage in work during internships. Select DEI students were mentored by industry mentors in Canada, the United Kingdom and Germany. Once the lockdown restrictions were removed, the innovative feature of Virtual supervised mode of teaching-learning was adopted for the benefit of the students. Virtual Supervised mode of teaching-learning may be explained as a combination of notes and assignments for students using Google classroom by the teacher, supplemented by a doubt clearing session which the students were to attend from the learning centre near to the place of residence in the presence of mentors. Students were to attend doubt clearing sessions from open green spaces of the Institute to attend these sessions which the Faculty member could run from home or the Institute, or by being present in the location of gathering. Women and male students attended from different locations like the Bio-diversity parks, or Dairy Solar Farm Grounds. Outstation students attended these sessions from the nearest learning centre from amongst 435+1 centres across the country. Students were hence present at each location with Faculty members supervising the interaction, while the Teaching Faculty was present in online or physical mode to clear doubts. Multiple faculty members teaching a subject were present in the google meeting to answer student queries and aid the learning process. Students also had the facility to use Google classroom or email to ask questions at any time, which helped the faculty, understand student progress. Students needed to attend in the Institute Uniform, with masks, head-gear for protection, gloves and sanitisers. When attending the online meeting from these centres, they needed to keep their videos open for the Faculty to not only identify them but also to ensure they were physically present at the centre. This helped instil confidence in the students and their parents about safe surrounding at the time of interaction. Students were to maintain 2 feet distance from each other while being seated. Students attended the meetings either through their mobiles or laptops. Desktops were made available at centres in case needed.

For class tests and examinations to the same format of virtual supervised mode was adopted. There was no physical interaction of the Faculty with the question paper and answer sheets. Students undertook the examination in the presence of invigilators on clean sheets brought from home. The question papers were loaded into the classroom by the concerned Teacher approximately 5 – 10 minutes before the start time. Students were asked to be seated 15 minutes before time, in uniform, with mask and headgear, in open gardens or solar farms or bio-diversity parks. They were to note down the questions onto their sheets from mobile phones, post which the phones were switched off. After writing the answers, they were to scan the answer sheets and email the pdf to a pre-determined email id shared by the Examination Department. Verification at a distance of the paper with the received copy was undertaken by the Invigilating staff, without touching any papers. This ensured receipt of complete answer sheets of the students.

For admissions too, the Aon Co-Cubes system of virtual proctoring was used. This had the feature of giving warning prompts to candidates during invigilation of admission tests. The system itself was inbuilt with artificial intelligence prompts if the system found a candidate to be cheating through multiple screen switching, talking, presence of multiple faces, etc. Multiple checks aligned with warning prompts allowed Invigilators to successfully execute the admission tests online.

As a Faculty member, involved in participating in this Teaching-learning process, I wanted to understand student feedback on their experience with the online platforms. A key question in my mind and the minds of the Faculty members was how effective were the different features of the online platforms. Different students have different ways of learning. Which features of the platforms were being utilized the most for learning? Moreover, what challenges were being experienced by the student? What other features would they recommend could be beneficial as enhancements in any of the online platforms being used? What emotion did the online platform create and what were the reasons?

## 5. The survey

A questionnaire was designed by going over related literature for online platforms and user experience. Specific questions related to the virtual supervised mode of learning were also included to get a better feel of student experiences. The survey was deployed in survey monkey to students of Master of Business Administration at the Institute. They were given 4 days to respond to the survey. 163 responses were received, which were then further analysed.

## 6. Results

### 6.1. Student profile, Devices and Online Platforms used during COVID-19

The primary observations associated with the profile of the students were that during the lockdown 72% students were residing in urban areas, but 27% were in rural areas, and 15% were in semi-urban areas. Mobile was the most commonly used device used for learning. The most used online platform for learning was Google Class Room. 46% of the students spent between 3 – 4 hours on the online platform for learning. For continuous assessments, 51% of the students stated they were assessed using Google form, followed by survey monkey ( 37%).

Parameter	No. of Respondents	Percentage of Respondents
Course		
Integrated MBA	18	11
MBA (1 <sup>st</sup> and 2 <sup>nd</sup> year)	125	78
MA Social Science (Specialization: Business Management)	17	10
Not Declared	3	1
Area of Residence during Lockdown		
Rural	20	27

Semi-urban	25	15
Urban	117	72
Device used for Learning		
Mobile	144	88
Tablet	4	2
Laptop	77	47
Desktop	7	4
Online Platform used for Learning		
Coursera	3	1.8
EdX	1	0.01
Google Classroom	113	70
Google Meet	30	18.6
Internet Websites	2	0.01
Microsoft Teams	1	0.01
NPTEL	2	0.01
Whatsapp	1	0.01
You Tube	6	0.03
Zoom	2	0.01
Average number of hours spent on the online platform		
Less than 1 hour	14	8
1-2 hours	46	28
3-4 hours	76	46
More than 4 hours	27	16
Online Platform used for Continuous Assessments		
Google Form	83	51
Survey Monkey	60	37
Email	14	8
Other Responses	9	5

## 6.2. Student Learning Modes

Student agreement/disagreement with modes of learning was sought in the questionnaire. It is observed that the salient aspect of importance in student learning during this period was being able to reflect on the information provided. Flexibility in being able to access information was the second important feature of the online platform. Ability to access audio-visual aids like videos were the third important way of learning for the students. It is also observed that teacher ability to ask a question from a student at random was impacted adversely in the online teaching mode using classrooms. Students were also not able to hold discussions with Faculty or amongst themselves using the online platforms.

Modes	Number of Students	Percentage
I could ask a question at any time (Independent speech)	8	5
I was able to clear my doubts using the online platform	10	6
I was able to read and revise at any time of the night or day	31	20
I was able to see videos provided for learning	25	16
I would have been able to hear audio recordings if provided	3	1.9

by the teachers		
It was possible for students to engage in a Discussion	6	3.8
It was possible for the teacher to discuss a case via an online platform	4	2.5
The online platform allowed me to reflect on the information provided by the teacher and to make notes	37	24
The platform allowed for a Panel Discussion to take place	8	5
The platform allowed me to take assessments	19	12
The teacher could decide whom to ask a question to check for understanding	1	0.01
Teachers could look at roll call to take attendance	2	1
Others	4	2

### 6.3. User Experience

This section is devoted to understanding the student experience concerning the online platform.

Parameter	Dimension	Agree (Percentage)	Disagree (Percentage)
Assessment & Feedback	The online platform allowed me to check my grades (N=160)	142 (88.7)	18 (11)
	I was able to get immediate feedback on assessments done through the online mode e.g quiz (N=160)	129 (81)	30 (18.8)
	The online platform allowed me to respond to the teacher if required (N=160)	145 (90.6)	15 (9.3)
Student Engagement	I was able to keep in touch with the class through the online platform (N=161)	131 (81)	30 (18.6)
	I felt connected to the Institute and the course through the online platform (N=159)	119 (74.8)	40 (25)
	I felt I was a part of the Institute by being a member of the online platform (N=160)	130 (81)	30 (18.7)
Learning	I believe I have learnt many new aspects of the course since I joined the online platform (N=158)	121 (76.5)	37 (23)
Flexibility	The online platform allowed me the flexibility	134 (85)	24 (15)

	to learn at convenience (N=158)		
Price	The online platform was free of charge (N=159)	137 (86)	22 (14)
Ease of Use	The online platform was easy to use (N=158)	149 (94)	9 (6)
Transcending spaces	The online platform could be used creatively to do things in the physical space and share in online mode (N=159)	144 (91)	15 (9)
Responsibility for work	I believe with the online platform I felt more responsible for my work than I would have felt in a classroom (N=158)	110 (70)	48 (30)
Peer Pressure	I believe when using the online platform I was not affected by how others in my class were performing but only with how I was learning (N= 157)	131 (83)	27 (17)
Virtual Supervised Mode	I feel that doubt clearing sessions by coming to green open spaces (Dairy Agricultural Farm or Bio-diversity parks)/centres provided an opportunity to interact more with teachers and students than by being on the online (N=157)	113 (72)	44 (28)
	I believe doubt clearing sessions in supervised mode are not needed if we only use the online platform (N=157)	82 (53)	75 (47)
	I believe that I was able to learn more by the combination of self-study followed by a doubt clearing session at Dairy/Bio-diversity park/Centre (virtual supervised mode) (N=158)	108 (68)	50 (32)
Technology orientation	I believe I am more computer literate than I was at the beginning of the Lockdown (N=159)	133 (84)	26 (16)
	I believe I am more comfortable using technology by using the online platform for learning during COVID-19 (N=159)	145 (91)	14 (9)
Relevance	I believe that using online platforms is a waste of time for learning purpose (N=158)	39 (25)	119 (75)

**Note:** N stands for the number of respondents

#### 6.4. Challenges experienced with online platforms during COVID-19

Students experienced several challenges while using online platforms. Network unavailability was experienced by 42% students, followed by buffering and delay (13%), and inability to communicate with the teacher to clarify doubts (13%)

Broad area	Concern areas	Number of Respondents	Percentage Respondents
IT	Buffering and delay	22	13
	Network unavailable	68	42
System Features	An email was received anytime anyone posted a comment	13	8
	Grade statistics were wrongly calculated by the online platform	5	3
	The system not able to hold many learning resources	7	4
	Unable to login	5	3
	Unable to hear audio	6	4
	Unable to play videos	1	1
	Unable to check deadlines for submission of assignments	2	1
Technology awareness	Nor computer literate- hence found it difficult to follow instructions	1	1
Initiative	Unable to communicate with the teacher to clear doubts	21	13
Time Management	Unable to manage my time efficiently using the online platform	9	6



## 6.5. Student suggestions for the improvement of online platforms

Table 5: Suggestions for improvement	
Platform	Suggestion for Improvement
Google Class Room	<ol style="list-style-type: none"> <li>1. More convenient to use</li> <li>2. Should provide instant answers to questions</li> <li>3. Audio Live Class feature should be added</li> <li>4. Folders to keep assignments and materials</li> <li>5. Search Option</li> <li>6. Separate Doubt clearing window</li> <li>7. Should show the time at which assignment was submitted</li> <li>8. Should recognize multiple email ids of an individual so that assignments are not marked absent if submitting from another email id</li> <li>9. Interactive classroom feature should be added</li> <li>10. Should provide real-time supervision of online assessment</li> <li>11. Notes feature</li> <li>12. A To-Do List column should be there which shows deadlines in an orderly fashion</li> <li>13. Reduce excessive data usage</li> <li>14. Help improve features so teachers can check subjective answers easily</li> <li>15. Manage video calls so classes do not clash</li> <li>16. Tabular presentation so students can check their grades in one place</li> <li>17. Feature of hosting recorded lectures in each classroom</li> <li>18. Option to check all grades in the same platform where I am studying</li> </ol>
Google meet	<ol style="list-style-type: none"> <li>1. Should add privacy features</li> <li>2. A button for marking attendance of participants can be added</li> <li>3. Improve app performance</li> <li>4. While the presentation of videos, audio is adversely impacted</li> <li>5. Should enable more number of participants to attend meet than 250 currently</li> </ol>
Cisco Webex	<ol style="list-style-type: none"> <li>1. Should have the ability to hold notes, pdf etc</li> </ol>
Zoom	<ol style="list-style-type: none"> <li>1. Waiting room</li> <li>2. Personal meeting room</li> <li>3. Appearance refinement</li> </ol>

## 7 Discussion/Conclusion

The present study was aimed at understanding student experience with online platforms and the virtual supervised mode of teaching-learning at the Dayalbagh Educational Institute (Deemed University), Agra. It has highlighted not only their experience, but the students have also provided many insights into feature enhancement, which the service providers may find useful to improve upon. Faculty members also need to search for innovative ways to make it easier for the students to continue with their learning rather than depending on system capabilities. As part of

the Teaching Fraternity, it may also be proposed that a consolidated approach may be taken by the Government to facilitate better networks, data packs and connectivity for the mission of educating the people in the country. It is a time for introspection on the way forward and to create a new vision for the next decade.

***"Proceedings of the Software Product Management Summit India 2021"***