

# Impact of On-line Teaching during ‘COVID-19’ Pandemic

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## **Abstract**

During ‘COVID 19’ pandemic situation, the regular classes were suspended and online classes were conducted for the Semester II and Semester IV for 78 and 98 students, respectively for five weeks. The feedbacks from students were taken at the end of week on Saturday for five weeks. The objective of the study was to understand the utility of online classes in comparison to regular class room classes and to understand the problem of the students during online classes. The results indicated that online classes were not able to compensate for participation of students and interaction with the teacher to clear their doubts. The face-to-face interaction of students and teacher is essential. However, it was possible to improve the objectives of the clear understanding of online session, to cover the topics as per course curriculum and organizing the contents which were easy to follow. The online teaching was not able to compensate the practical hands-on teacher training wherein the teacher is in one-to-one interaction with its pupil. It was recommended to plan online teaching training programmes for teachers online teaching may also be included a part of the course curriculum and this will become a reality in the future teaching programmes in school and colleges.

Keywords:

COVID-19, education system, interaction, online teaching, participation week

**Suggested Citation:** Mahajan, R. (2021). Impact of On-line Teaching during ‘COVID-19’ Pandemic. *The Research Probe*, Volume 1, Issue 1, pp 45 - 54

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## 1. Introduction

The evolution of man depends largely on the continuity of our education system which has continuously evolved over centuries. Revolutions in science, information, and communication technology have added new dimensions in imparting education. Today it has transcended into a potent system of imparting knowledge. At present, the modern education system has blended new technologies for effective teaching and learning. Despite the effective use of these new innovations like laptops, mobiles, internet etc., the teacher continues to be the main key player in imparting knowledge and education to the young and growing.

The internet has made online learning possible. Many researchers and educators are interested in online learning to enhance and improve student learning outcomes while combating the reduction in resources, which is very common in higher education (Farinella *et al.*, 2000; Kim and Bonk, 2006; Pape, 2010). This new mode of learning has been embraced by the academic community which has been labeled ‘e-learning’. Lee *et al.* (2009) defines e-learning as web-based learning which utilizes web-based communication, collaboration, multimedia, knowledge transfer, and training to support learners’ active learning without the time and space barriers.

In addition to natural development, certain situations sometimes force the system to evolve so as to meet the present day needs. For instance, the global health pandemic brought by COVID-19 is one such situation that changed the learning modality overnight. As the whole world stood still and complete lock-downs were in place, learning had to continue. Presently, the physical “brick and mortar” classroom is starting to lose its monopoly as the place of learning. There have also been increases in demand for online learning from students from all walks of life. The present circumstances led to new utilization of laptops, mobiles and internet as the platform for the delivery of education services. These gadgets brought a ray of hope for the education system. Truly, the COVID-19 brought major change to the current education system. At this stage, it is essential for the academic community to be prepared and accustomed as this may be the ‘new’ normal in the future of education.

In view of the impact of COVID-19 in the India’s education system, online courses have expanded rapidly and have the potential to extend further the educational opportunities. The online courses are difficult, especially for the students who are least prepared (Bettinger

and Loeb, 2017). Accordingly, the students' learning and persistence outcomes are worse when they take online courses than regular face to face classes.

It is important that researchers and educators examine the effectiveness of online learning in educating students compared to traditional face-to-face learning. Guided by what Confucius once said "*Tell me and I will forget. Show me and I will remember. Involve me and I will understand*", this study assessed the actual implementation of the online classes in one of the private college in India. The objective of the study was to understand the utility of online classes in comparison to regular class room classes. It also identified the problem faced by the students during the online classes.

## 2. Literature Review

The positive effects as well as negative effects of online teaching have been discussed in most literature. Several authors noted the benefits and uses of online learning as well as its effectiveness in educating students. It has been identified that the online learning modality is useful for professional development. Its cost-effectiveness is used to combat the rising cost of postsecondary education, credit equivalency at the postsecondary level, and the possibility of providing a world class education with a broadband connection (Bartley & Golek, 2004; De la Varre *et al.*, 2011; Gratton-Lavoie & Stanley, 2009; Lorenzetti, 2013). For instance, Nesler and Lettus (1995) reported higher ratings on clinical competence among nurses graduating from an online program than nurses who were traditionally prepared. This also gives hope that online learning will be able to provide a world class education to anyone, anywhere, and anytime as long as they have access to the internet. As Nguyen (2015) felt that it would be too easy to jump on the online learning or dismiss.

However, there were number of reports indicating no difference between online and traditional approach. Fallah and Ubell (2000) compared midterm exam scores between online and traditional students at Stevens Institute of Technology and found little or no difference in student outcomes. Similarly, Freeman and Capper (1999) also found no differences in learning outcomes between business students participating in role simulations either face-to-face or asynchronously over distance. Furthermore, Arbaugh (2000) compared the course grades of classroom-based and Internet-based MBA students and found no significant differences between them.

### **3. Methodology**

#### ***2.1. Research design***

This study utilized the quantitative research method. Through the use of a questionnaire, the feedback of the students was generated to assess their use of the online classes.

#### ***2.2. Research instrument***

In order to understand the utility of online classes in comparison to regular class room classes, the feedback of the students was taken each semester. The survey questionnaire was in the form of closed questions. There were four simple but critical questions asked.

Q1: Are the objectives of the online sessions clearly understood?

Q2: Is there an effectiveness of participation and interaction in the online sessions?

Q3: Are topics covered in the online classes were relevant to the course curriculum?

Q4: Are contents were organized and easy to follow?

Each question has three options namely Good, Average or Poor. In addition, an open unstructured response of students was also collected for the specific problems faced during the online classes.

#### ***2.3. Participants of the study and Data Gathering***

At the height of the COVID-19 pandemic last 2020, the regular classes were suspended during the second-half of March 2020. Steps were taken to start online classes for the Semester II and Semester IV for a period of five weeks. There were 78 students in Semester II and 98 students in Semester IV. There were two (2) to three (3) one hour classes per week for these students. During these periods, feedback was solicited from all the students on their use of online classes. The feedback was received at Saturdays of each week. The periods of gathering students' feedback were the weeks of 23-27 March 2020, 29 March- 3 April, 7-9 April 2020, 13-17 April 2020 and 20-24 April 2020.

#### ***2.4. Data Analysis***

The data were analysed using frequency count, percentage and weighted mean.

## 4. Results and Discussion

**Table 1**

*Summary of Students Feedback by Question*

Question	%
1	64.3
2	45.9
3	77.3
4	61.2

Table 1 shows the overall feedback received from the students. There was 100% students' attendance in online classes for five weeks. The feedback was received during Saturday at the end of week. The results show that the highest percentage was for Question 3 on the topics covered relevant to the course curriculum with 77.3%. It was followed by Question 1 on the students' understanding of the online session objectives with 64.3% and Question 4 on the organized contents with 61.2%. The lowest response of students was for Question 2 on effectiveness of the participation and interaction in the online class with 45.9%.

**Table 2**

*Summary of 'Good' Students' Feedback*

	Semester II	Semester IV	Average %
Week 1	52.6	42.9	47.8
Week 2	21.8	17.3	19.6
Week 3	77.0	29.0	53.0
Week 4	70.5	47.0	58.8
Week 5	51.0	34.0	42.5
<b>Overall %</b>	<b>54.6</b>	<b>34.0</b>	<b>44.2</b>

Table 2 shows the summary of the students' feedback with 'Good' ratings. The percent response was higher for the students of Semester II than Semester IV while the overall percentage response was 44.2%. After first week, there was a dip in the response of the students during second week which may be attributed to lack of interaction between teacher and student

as well as due to poor network. As the online teaching was new experience for the students, it was difficult for the students to concentrate. After the second week, steps were initiated to re-orient the students on the nature and purpose of online teaching up. This led to a dramatic increase in the responses of the students during 3<sup>rd</sup> and 4<sup>th</sup> week. Moreover, the response of students in Semester II was much higher in comparison to the students in Semester IV.

**Table 3**

*Comparison of Students' Feedback by Semester*

Question	Good		Average		Poor	
	Semester	Semester	Semester	Semester	Semester	Semester
	II	IV	II	IV	II	IV
1	72.7	55.8	26.7	38.9	0.5	5.2
2	50.2	41.6	47.5	46.0	2.3	12.4
3	83.9	70.7	16.1	25.9	0.0	3.4
4	71.6	50.8	26.3	41.2	2.1	8.0
Mean	69.6	54.7	29.2	38.0	1.2	7.2
<b>Overall %</b>	<b>62.2</b>		<b>33.6</b>		<b>4.2</b>	

Table 3 shows the comparison of the percentage of responses as 'Good', 'Average' and 'Poor'. It was evident from the results that the maximum number of students at 62.2% considered the online teaching as 'Good'. Furthermore, there were number of students in Semester IV who considered online teaching as 'Poor' in comparison to their normal class room teaching. There were more students in Semester II who considered online classes 'Good' compared to more students in Semester IV who considered online classes as only 'Average' and 'Poor'. Furthermore, the "Good" response of the students was highest for 'Question 3' followed by 'Question 1' and 'Question 4'. On the other hand, the 'Average' or 'Poor' response of students was highest for 'Question 2' followed by 'Question 1'.

**Table 4*****Summary of the Students' Feedback by Week***

Question		1		2		3		4	
Week	Grade	Sem II	Sem IV	Sem II	Sem IV	Sem II	Sem IV	Sem II	Sem IV
1	<b>Good</b>	<b>70.7</b>	<b>47.6</b>	<b>48.8</b>	<b>35.7</b>	<b>82.9</b>	<b>61.9</b>	<b>73.2</b>	<b>38.1</b>
	Average	29.3	40.5	46.3	42.9	17.1	31.0	24.4	45.2
	Poor	0.0	11.9	4.9	21.4	0.0	7.1	2.4	16.7
2	<b>Good</b>	<b>64.7</b>	<b>88.2</b>	<b>35.3</b>	<b>64.7</b>	<b>76.5</b>	<b>94.1</b>	<b>64.7</b>	<b>58.9</b>
	Average	35.3	11.8	53.0	23.5	23.5	5.9	35.3	35.3
	Poor	0.0	0.0	11.8	11.8	0.0	0.0	0.0	5.9
3	<b>Good</b>	<b>70.0</b>	<b>42.9</b>	<b>46.7</b>	<b>25.0</b>	<b>78.3</b>	<b>60.7</b>	<b>66.7</b>	<b>60.7</b>
	Average	30.0	42.9	51.7	57.1	21.7	28.6	30.0	32.1
	Poor	0.0	14.3	1.7	17.9	0.0	10.7	3.3	7.1
4	<b>Good</b>	<b>72.7</b>	<b>58.7</b>	<b>52.7</b>	<b>45.7</b>	<b>92.7</b>	<b>73.9</b>	<b>78.2</b>	<b>47.8</b>
	Average	25.5	41.3	45.5	47.8	7.3	26.1	20.0	47.8
	Poor	1.8	0.0	1.8	6.5	0.0	0.0	1.8	4.3
5	<b>Good</b>	<b>82.5</b>	<b>63.6</b>	<b>57.5</b>	<b>48.5</b>	<b>82.5</b>	<b>78.8</b>	<b>70.0</b>	<b>66.7</b>
	Average	17.5	36.4	42.5	45.5	17.5	21.2	30.0	30.3
	Poor	0.0	0.0	0.0	6.1	0.0	0.0	0.0	3.0

Table 4 shows the summary of the students' feedback by week. On analysing the data week-wise and question-wise, the response of students to online in comparison to class room teaching were rated into 'Good', 'Average' and 'Poor'. It was observed that the objectives of the online sessions (Question 1) were better understood by the students in Semester II than Semester IV. It was also observed that on making efforts to make them understand better the objectives of the online classes, the score has improved.

The participation and interaction of the student and teachers (Question 2) are most important in any class room. The results indicated that participation and interaction was limited to students of both the semesters. Most of the students had 'Good' or 'Average' participation and interaction. Initially, there were more students with low participation and interaction which was improved in the later weeks. It was clear that the students were not fully satisfied with the online interaction and prefer regular class room studies.

Sometimes, students and teachers fear that it was not possible to cover and complete all topics (Question 3). As per the students' perception, there was fairly high percentage in both the semesters. It implies that the topics relevant to the course curriculum were completely

covered although the percentages were higher for Semester II students than Semester IV students.

Though the teachers were also new to the online classes, the contents also need to be organized and easy to follow (Question 4). Most of the students felt that the contents were fully organized and it was much easier to follow which make the online teaching equally useful as class room teaching.

## 5. Conclusion

It was evident from the study that the online classes were not able to compensate for participation of students and interaction with the teacher to clear their doubts. The face-to-face interaction of students and teacher is essential that give better understanding of the subject. On the other hand, it was possible to improve the objectives of the clear understanding of online session and to cover the topics as per course curriculum. The teachers were efficient on organizing the contents which were easy to follow. It may be noted that online teaching was not able to compensate the practical hands-on teacher training wherein the teacher is in one-to-one interaction with its pupil.

It was suggested that the teachers may go through training programmes for online teaching. In view of the COVID-19 emergency, the concept of online teaching may also be included as part of the course curriculum and teaching programmes in school and colleges in the future. Continued improvement of online curricula and instruction can strengthen the quality of these courses and hence the educational opportunities for the most in-need populations.

For schools and colleges, it would be too easy to implement online learning or cancel the classes. At this circumstances, online learning is at least as effective as the traditional format, but the evidence is, by no means, conclusive. At present, we feel that the online learning story is still being written. How it progresses will likely depend on many factors.

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