

■ ORIGINAL ARTICLE

Perceptions about the Virtual Learning amongst Medical students: A Cross Sectional Study

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ABSTRACT

Background: Covid-19 pandemic has forced the medical education to switch from traditional learning to virtual learning. Many different platforms are available for virtual learning. And like any other teaching-learning method, this new method also has its pros and cons. But the important thing is how the medical students perceive this technique. Hence, the study was planned to understand the student's perception regarding Virtual learning.

Methods: A cross-sectional study was conducted among under-graduate medical students across various medical colleges in India, via a Google form. Total 824 medical students participated in the study.

Results: Out of 824 participants, 36.2% feel that students do not listen to the virtual class attentively from start to end. 79.2% agree that there is more distraction during virtual learning and 77.1% students feel that virtual learning is boring because of lack of interaction between teacher and students. Also 47.3% students don't think that it is easy to clear doubts during virtual learning. 77.5% agree that there are more chances of scrolling the social media during virtual learning. According to 67.7% students, only the knowledge aspect is better learnt during the virtual learning. But the 50.1% students agree that virtual learning is cost-effective and time-saving. Still, 90.9% students prefer traditional learning considering all aspects of medical education

Conclusion: Despite having certain advantages, medical students still prefer conventional method of learning to acquire different competencies, while the virtual learning remains supportive method. Many issues need to be addressed for wide acceptance of virtual learning.

Keywords: Virtual learning, traditional learning, medical students, medical education

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INTRODUCTION

Curriculum designing and its implementation is an integral part of all education systems. Curriculum has broad aspects and it includes various parameters such as its goal and objectives, content (syllabus), teaching and learning methods, organisation and scheduling the course, assessment and feedback from all stakeholders.¹ Teaching learning methods (T-L methods) are one of the most important parameters of curriculum. It can be classified according to listener's size, different domains and either student centered or teacher centered.

Covid-19 pandemic has caused havoc and fear in everyone's mind. Till date no curative treatment is available, only way to prevent is to take proper precautions. Social distancing is one of the most important precautionary measures to be taken during this pandemic era. Government has released the SOP's to higher educational institutions regarding the curricular implementation. As per government guidelines traditional learning is not possible during Covid-19 pandemic. Virtual T-L methods are performing an important role in the global Covid-19 pandemic era. It is not only helping in continuation of education but also supporting to break the chain of disease transmission.

Virtual learning is a learning experience that is enhanced through utilizing computers and/or the internet both outside and inside the educational organization.² The instruction most commonly takes place in an online environment. Virtual learning is known by various names such as digital learning, e-learning, web based learning, Online learning, Distributed learning, Computer-assisted instruction and Internet-based learning.³

There are many virtual platforms available such as learning management system (LMS), Modular Object-Oriented Dynamic Learning Environment (MOODLE) blackboard etc. Virtual learning is technology based T-L method, so it requires installation of softwares, training and technical support.³ We all medical teachers are now well conversant and routinely using Virtual T-L methods since last one year. But, as each T-L method is having its own pros and cons and virtual T-L method is no exception. Being a new technique, many questions including the advantages and disadvantages regarding the virtual T-L methods

remains unanswered. One of the questions is what are the students' perceptions regarding different aspects of this method? Are they really learning with this T-L method? Which type of learning domain they learnt better? Hence, the study was planned to understand these various aspects of student's perception regarding Virtual learning.

MATERIAL

Across-sectional study was conducted among the under-graduate medical students (MBBS) across India in the month of April and May-2021. The questionnaire regarding student's perception about virtual and traditional teaching-learning methods was first designed and then validated by peers. Ethical clearance was taken from Institutional Ethical Committee (IEC). Google form containing the consent and questionnaire was constructed. The survey link is <https://forms.gle/yrt9KqV56czNGrEo8>. Link was then sent to the MBBS students all over India via WhatsApp groups. Those students attending the online classes and give an informed consent were included in the study. In our study, a total of 824 students from different medical colleges from all over India submitted their response. These responses were converted into Excel spreadsheet and analysed.

RESULTS

Results show that 299 (36.2%) participants feel that students do not listen to the virtual class attentively from start to end and large proportion of students 513 (62.3%) disagree that the virtual learning is more convenient than that of traditional learning. Majority of the students 653 (79.2%) agree that there is more distraction during virtual learning than traditional learning and 635 (77.1%) students feel that virtual learning is boring than traditional learning because there is no face to face communication between teacher and students. Almost the equal number of students 639 (77.5%) agree that there is more chances of scrolling the social media during virtual learning than traditional learning. Also 390 (47.3%) students don't think that it is easy to clear doubts during virtual learning. But the 413 (50.1%) students agree that virtual learning is cost-effective and time-saving. According to 558 (67.7%) students, only the knowledge aspect is better learnt during the virtual learning (Table 2). Hence 749 (90.9%) students prefer traditional

learning over virtual learning considering all aspects of medical education (Graph 1). Students feel that convenience and time-saver as the main advantages of virtual learning; while distraction, no interaction between students and teachers and lack of gaining practical knowledge are considered as important disadvantages of virtual learning methods.

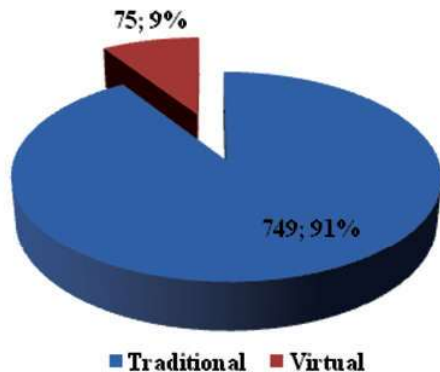
Table 2: As per your opinion, which of the aspects is better learnt during virtual learning?

Knowledge (%)	Behavioural aspects (%)	Practical aspects (%)	All (%)	Total (%)
558 (67.7)	121 (14.7)	38 (4.6)	107 (13)	824 (100)

Table 1: Perception of students about virtual and traditional TL methods.

Question	Strongly agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly disagree (%)
Students listen the virtual class attentively from start to end	41 (5.0)	219 (26.6)	265 (32.2)	208 (25.2)	91 (11.0)
Virtual learning is more convenient than traditional learning	44 (5.3)	121 (14.7)	146 (17.7)	314 (38.1)	199 (24.2)
Distraction is more during virtual learning than traditional learning	286 (34.7)	367 (44.5)	106 (12.9)	49 (5.9)	16 (1.9)
Virtual learning is boring than traditional learning because there is no face to face communication between teacher and students	304 (36.9)	331 (40.2)	113 (13.7)	62 (7.5)	14 (1.7)
It is easy to clear doubts during virtual learning	35 (4.2)	154 (18.7)	245 (29.7)	263 (31.9)	127 (15.4)
Virtual learning is more timesaving and cost-effective than traditional learning	102 (12.4)	311 (37.7)	181 (22.0)	152 (18.4)	78 (9.5)
There is more chances of scrolling the social media during virtual learning than traditional learning	300 (36.4)	339 (41.1)	125 (15.2)	52 (6.3)	8 (1.0)

Graph 1: According to you, which learning method will you prefer considering all aspects of Medical Education?



DISCUSSION

In this cross-sectional study to find out the perceptions of medical students about virtual learning; 824 medical students across various medical colleges in India participated. More than one-third of the students do not listen to the virtual class attentively from start to end. Similarly the students reported to have limited attention span during online learning.⁴ Also the study conducted by Adchitre SA, et al⁵ found out that 52.2% students disagreed that their attention

and focus stayed longer during online learning supporting the findings of our study. Almost 80% students agree that there is more distraction during virtual learning than traditional learning and it is boring than traditional learning because there is no face to face communication between teacher and students; these were considered as major disadvantages by many participants. And similar kind of findings was reported by many previous researchers. Ekarini Daroedono et al⁶ in their study titled "The impact of COVID-19 on medical education: our students perception on the practice of long distance learning" mentioned that 77.6% students agree that there is lack of concentration and 62.9% students mentioned lack of interaction as an inhibitory factor during the virtual learning. Similar views were stated by Shashikant Dhir et al³ that lack of face to face interaction was one of the hurdles in preventing the widespread use of e-learning. Adchitre SA, et al⁵ also mentioned that 71.1% students get distracted during online classes and 64.5% students feel that online classes are less engaging and boring because of lack of face to face interaction between teacher and students. Stuty Jayara⁷, a medical student in her article underlined the role of offline classes in building up strong teacher-student relationship because

of direct interaction. But the Kuldeep Singh et al⁸ had a contrasting finding that 54.8% students believed that interaction with teacher was better than or as good as physical classroom. Also there are more chances of scrolling the social media during virtual learning than traditional learning; which was reiterated by Stuty Jayara⁷ that it is difficult for students to resist the temptation to use social media. In our study 47.3% students don't think that it is easy to clear doubts during virtual learning. This was exactly the same as study by Adchitre SA, et al⁵ where 48.2% students disagreed that it was easier to clear doubts through online discussion.

In spite of these disadvantages; 50% students agree that virtual learning is cost-effective and time-saving; and convenience being the biggest advantage of virtual learning. This observation was similar to many other studies like Rehana Khalil et al⁹, Shashikant Dhire et al³, Adchitre SA, et al⁵ and Stuty Jayara.⁷

Majority of the students feel that only the knowledge aspect is better learnt during the virtual learning and therefore prefer traditional learning over virtual learning considering all aspects of medical education. But Mohammad Rajab et al¹⁰ found that 62.5% students prefer combined method and 25.5% prefer traditional method of learning. Similarly mixed responses were there in the study done by Rehana Khalil et al⁹, whereas the feedback received by Kuldeep Singh et al⁸ showed that the percentage in favour of physical classroom was 50%.

Findings suggest that the convenience, time-saver and cost-effectiveness are the major advantages of the virtual learning. But the medical students will still prefer the conventional mode of learning the medicine as acquiring competencies and developing certain skills are vital while practicing medicine and those cannot be learnt in virtual learning. Still virtual learning has its importance, but there are certain barriers as identified by Diane O'Doherty et al¹¹ as time constraints, poor technical skills, inadequate infrastructure, absence of institutional strategies and support and negative attitudes of all involved which needs to be addressed for wide acceptance of virtual learning.

Limitations

In this study, participants were only medical students and their perceptions regarding virtual learning were recorded. In order to have an comprehensive data and find out the other issues involved in virtual learning, a separate study which will include all the stakeholders such as teachers, parents, institution or university curriculum committee members, etc. should be conducted.

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