

# Virtual Teaching in COVID-19 Era: A Medical Teacher Perspective

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## Abstract

Virtual teaching mode gets accelerated during the COVID 19 pandemic. Medical educators are looking at virtual classroom teaching rather than classroom teaching owing to the strict restrictions. The pandemic has gifted challenges and glitches given redefining the medical education training to the medical fraternity.

**Keywords:** COVID-19 pandemic, medical teacher, virtual teaching

## INTRODUCTION

The undergraduate and postgraduate teaching training with clinical orientation and teaching are the backbones of any medical institution. It immensely contributes to channeling the trained personnel to the health care system in a country like India. After the declaration of the pandemic of COVID-19 worldwide on March 11, 2020.<sup>[1,2]</sup> Almost all classroom teaching shifted to the virtual teaching model in various fields of nonprofessional and professional courses.<sup>[3]</sup> Medical professional education is no exception to the above impact.<sup>[4]</sup> It has lead to many unprecedented challenges, particularly opening up the new opportunity to medical educators and the medical institutions in terms of virtual platform.

The government of India opted for the nationwide lockdown strategy followed by the declaration of the pandemic as prevention and control measures. The guidelines of social distancing and other preventive measures have been initiated.<sup>[5,6]</sup> social distancing is one of the most effective preventive strategies since the emergence of the pandemic of coronavirus SARS CoV2. In this regards, the students gathering in lecture halls, wards, and operation theaters in the teaching hospital are strictly prohibited.

The present article focused on the perspective of medical teachers on virtual teaching and training during COVID-19. The teacher's role gets uncertain in many ways like teaching and assessment of the students during the internal and final examination (formative and summative assessment).

## CHALLENGES TO VIRTUAL TEACHING

Uncertainty of the current situation, the COVID-19 pandemic has affected all aspects of life including medical education. India is the 2<sup>nd</sup> among the worst affected countries. The conventional teaching was forced to change to an online platform for the continuation of medical education in this ongoing pandemic.<sup>[7-9]</sup>

The teachers have a huge task ahead of them by not only adapting to this new teaching-learning method, i.e., virtual teaching but also to overcome this and impact quality training to the beneficiaries. This transformation was not smooth for all of them because many of them are not tech-friendly and they were not adequately trained to do that. Sometimes, this becomes a burden even to the finest teachers who were previously comfortable with the traditional teaching/classroom teaching methods. The technology requires much support to conduct the class on the virtual platform.

William Osler's words "medicine is learned by the bedside and not in the classroom."<sup>[10]</sup> Practical, bedside teaching and

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training of basic surgical skills were worst affected. The gap can be filled by showing the video of a laboratory experiment, clinical examination, and surgical procedure, but it was evident that it is not enough on the virtual platform. The affective and psychomotor domains of learning are worst affected with hardly any scope for its assessment.

## ASSESSMENT OF STUDENTS THROUGH VIRTUAL MODE

Formative assessment of the student needs some sort of written test after every part completion. During the pre-COVID era the formative assessment usually being done as a physical question paper and answer sheet, but during this COVID-19 pandemic and lockdown situation, different modes were adopted for the same. We utilized the Google form for this purpose. The benefit of adopting this model is easy to prepare a question paper, easy to administer and the score can be declared simultaneously as soon as the student completes the test or at a fixed time for all the students. Other modes were students were asked to complete the assessment on their own at home after receiving the question paper and used to scan the answer paper and send it through the E-mail for evaluation. The utmost care has to be given and taken to maintain the standards of the different ways and methods that are to be employed which would be alignment with the pre-COVID era. Other modalities include structured viva voce, use of logbook for assessment, virtual patients, e-portfolios.<sup>[11]</sup> Entrustable professional activities allow (distant) monitoring of some predefined task, for example, history taking.<sup>[12]</sup> Tools like miniCEX can be utilized for the same formative assessment.<sup>[13]</sup> However, fair assessment of the student is a big challenge on the virtual platform. The traditional professional exposure of a clinical posting in a hospital setup can never be a replacement or alternative to the online methods of teaching in the medical institution.<sup>[14]</sup>

A disadvantage of adopting google form is that it is very suitable for the type of multiple-choice questions when it is a long answer type question it becomes a cumbersome process for the student if he or she is not good at typing and the result of the assessment can be declared only after answers are being reviewed or evaluated by the teachers.<sup>[15,16]</sup>

The challenge for the online google form evaluation is that it largely depends on the integrity of the students and the seriousness of the assessment, one cannot ensure total cheating-free assessment without the support of the students. Another challenge for the online assessment or overall virtual teaching is that it depends on the Internet accessibility by the student which is sometimes problematic in rural, semi-urban, and tribal areas.

Summative assessments are important in medical education. After completion of the summative examination, only the students step up the ladder of next year and become professionals after the final year examination. Social distancing and hand hygiene would be the most critical part. With the help of technology assessment methods-online web-based clinical case viva voce, skill demonstration can be done with the help

of mannequins and objective structured clinical examination. Self-assessment and peer assessments can be utilized at the fullest to get the benefits. The students and teacher/educators have to play a vital role.

There was also a big hurdle for students as well as their guide and co-guides regarding completion of ongoing thesis/dissertation required patients to continue their study/research. The online platform requires robust high-speed Internet connectivity for a seamless teaching experience. A weak Internet leads to interruptions and stops the flow of a class-leading to a lack of interest in the students toward online lecture/class. Home-based learning does not provide an adequate learning environment as the students are often interrupted by family members, especially if the students belong to low socioeconomic status and overcrowding. The outcome of this lack of focus, concentration, and low understanding of the subject or topic. Monitoring of each student on the virtual platform can not be possible. Often lack of discipline among students. This can be witnessed with poor response to call in between the lecture and putting off their videos purposefully. One more doubt on active listening during the class cannot be assessed.

## FUTURE PERSPECTIVE

The technological infrastructure is the demand for future virtual teaching. The advancement and quality of technological facilities are the two pillars of web-based medical education. Virtual learning enormously benefits the ease of communication (both for educators and learner ) and easy access to reading materials, power points, books, documents, references shared by the educators. It has also the added advantage of home easiness, and safety from infections by virtue of no clinical or community exposure. The combined face-to-face and virtual mode both can be used in the postpandemic era. The future is again unpredictable, if a similar pandemic happens in that scenario the medical education can be spare. Future preparedness and mechanism of virtual learning seem to be attractive options.

## CONCLUSION

Uncertainty of the COVID-19 pandemic will be remain, but medical educators/teachers need to transform with the skill and adaptation to the virtual platform to provide effective medical education. Innovation needs to be put forward for medical education excellence during the current and future pandemic situations. A necessary advisory working group with the academic and information technology department, medical educators teachers should foresee the consequences and address them effectively. Faculty development program platform may be utilized to train teaching faculty on the virtual platform. The new normal teaching platform on virtual mode may be vital in the second wave of the COVID pandemic.

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## Conflicts of interest

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