

## ORIGINAL ARTICLE

# Awareness of Ethical Issue in Online Teaching for Medical Education, West Bengal, India

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## Abstract :

Currently, the world is responding to a pandemic of contagious respiratory disease caused by a novel corona virus and its emerging new variants of concern, COVID-19 that has impacted all aspects of our lives, including education. Hence, online classes have become a key component in the continuity of medical education, it allows the students to interact with their teacher face-to-face through the internet using online tools and so on, which can be combination of blended learning (attending classes along with virtual class). In online learning, academic dishonesty in institutions is one of the major ethical challenges which is affecting negatively on the character and personality of student. The present study is conducted to assess the perceptions and awareness of ethical issues in online learning by study participants. A self-administered online questionnaire using Google Forms® having combination of closed- and open-ended questions was given to participants. The data collected was analyzed in excel sheets using simple statistical tool. 62 (36%), out of 171 students disagreed that online teaching sessions were more effective and helped them to study better, they considered it is not effective in delivering or promoting effective teaching learning in medical education considering various barriers to it. However, 19 (76%) out of 25 faculty agreed that Online learning in medical education enables students to continue their education similar to the traditional approach. Participants awareness on ethical issues was good when using online learning systems in medical education and the students should be made fully knowledgeable about ethical issues to avoid unethical behavior during their academic period.

**Keywords :** Medicolegal case; Interns; Knowledge; Awareness; Medical negligence.

## Introduction :

The nationwide lockdown restrictions to control the spread of the current pandemic of COVID-19 disease and the need for social distancing will continue and the possibility of medical students acting as vectors of COVID-19, as seen in the SARS (severe acute respiratory syndrome) epidemic remains.<sup>1</sup> This has impacted all aspects of life; inevitably, medical education has also been affected. This has led to the halting of lectures, clinical placements and key examinations; such measures have resulted in a sudden shift in teaching methods towards online teaching. The environment in which medical students learn today is vastly different than it was 20 years ago when the Internet was not such a dominant tool in medical education.<sup>2</sup> Online learning can be described as the combination of blended learning (attending classes along with virtual class) and e-Learning and it generally uses online tools like Microsoft team, webinars, zoom, Cloud Meeting and so on. As technology has been incorporated into the educational process, the online teaching demand has increased tremendously to promote the implementation of online teaching-learning system due to its feasibility and accessibility, to meet the need of students as well as faculties during the outbreaks of emerging infectious disease. Additionally, eLearning can

potentially provide many advantages in terms of flexibility and convenience to complete learning requirements, reduced overall cost and provide an efficient way to communicate with students and capitalize on their feedback.<sup>3</sup>

These educational media possess several distinct advantages over traditional didactic models of instruction, including the ability to update material in a timely manner to ensure delivery of the latest evidence-based content to trainees as instructors must deliver lectures safely, while ensuring the integrity and continuity of the medical education process.<sup>4</sup> E-learning has been demonstrated to be as effective as conventional didacticism and can be used to foster self-directed learning.<sup>2</sup> It encourages medical students to exert greater control over their learning by allowing flexibility over content and pace. In such models, educators can evaluate competencies objectively through online assessments, enabling students to receive personalized feedback for self-improvement. The gradual shift towards e-learning is seen as a catalyst for applying adult learning theory, which will see more medical educators taking on the role of facilitator and assessor of competency. Most medical students view e-learning as enjoyable and effective but, interestingly, do not see it replacing traditional didactic methods. The educational scenario of the post-COVID-19 outbreak would not be easy to manage teaching-learning situations without using online teaching platforms rigorously.<sup>5</sup>

Ethics are a vital part of any type of education, that is moral values and principles accepted by society and regarded as right versus wrong. In online learning, academic dishonesty in institutions is one of the major ethical challenges which is affecting negatively on the character and personality of student.<sup>12</sup> When using

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information technology for online learning we tend to break the ethical rules because the act feels less personal as we cannot see or hear the other person. Using digital health platforms for both patients and students will remain an integral part of care even after the COVID-19 pandemic. Thus, having a greater understanding of the perceived advantages and drawbacks will allow medical schools to improve their delivery of online teaching. The COVID-19 pandemic has put us in a unique position to evaluate the significance of online teaching platforms in medical education. Therefore, we aimed to study their perceptions on the role of online teaching and awareness of ethical issues in facilitating their medical education.

### Aims and Objectives:

**Aim:** To assess the perceptions of online teaching in medical education and to analyze the awareness of ethical issues during online teaching.

### Objectives :

1. To analyze the perceptions of online mode of teaching-learning and assessment in terms of its efficacy, advantages, disadvantages, communication and feedback.
2. To explore the awareness of ethics amongst the learners and facilitators in imparting online teaching-learning-assessment.

### Materials and Methods :

This descriptive cross-sectional study is conducted at the department of Forensic Medicine and Toxicology, IQ city medical college and hospital, Durgapur, West Bengal, from march 2021 to august 2021, using a self-administered anonymous online questionnaire by Google forms®. Emails of all faculties and students of phase 2 MBBS was obtained from the academic section of the college. A link to the survey was delivered to faculties and students via e-mail, and two reminders were sent in the subsequent week following the initial invitation. Two separate questionnaires designed, one for student and one for faculty that has combination of closed and open-ended questions.

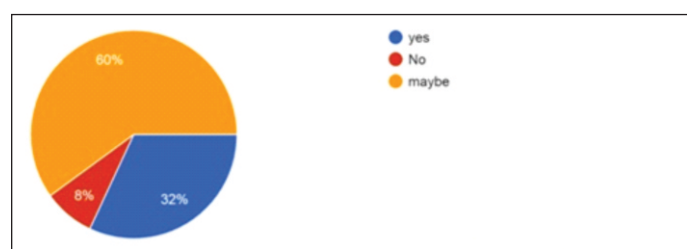


Figure 1: Faculty perception on students browsing the Internet to find the correct answers (N=25).

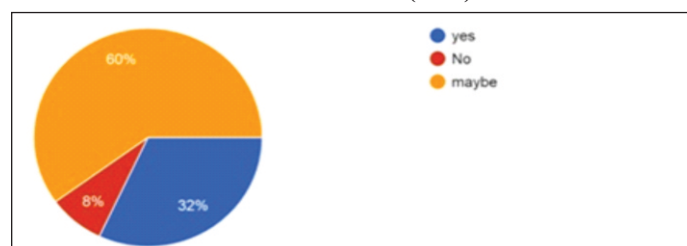


Figure 2: Faculty perception on students sending virus filled files (N=25)

Table 1: Perception of students in online learning (N=171).

Question	Yes	Maybe/NA	No
Comfortable in communicating with classmates and sharing your opinions with teachers	41 (24.3%)	43 (25%)	87 (51.5%)
Ward/ clinical practical and teaching is dealt with efficiently	9 (5.3%)	15 (8.8%)	147 (86%)
Assignments given during online classes are helpful	33 (19.5%)	53 (31%)	85 (50.3%)

SA-Strongly agree, A-Agree, NA/D/N-Neither agree/disagree/neutral, D-Disagree, SD-Strongly disagree.

Table 2: Students awareness on ethical issues in online learning: N=171.

Questions:	Yes	Maybe	No
Asking other to get Assignments done and send by student	13 (7.7%)	12 (7%)	146 (86.9%)
Photocopy the assignment documents from others and send	7 (4.1%)	6 (4%)	158 (92.9%)
Send files filled with viruses through e learning system	1 (0.6%)	12 (7%)	158 (94.6%)
Publish the educational material files (uploaded by teacher) via social networks without their permission	9 (5.3%)	9 (5.2%)	153 (90.5%)
Use the assignments of old students/seniors and send without their permission	3 (1.8%)	4 (2.3%)	164 (97%)
Is it ethical to track and record students' and staff activities	19 (11.2%)	44 (25.9%)	107 (62.9%)

The closed-ended questions were designed to elicit response as yes/no/maybe and using 5 point likert scale. Open-ended questions were asked to give free form descriptive answers. Questions were selected by the authors and peer reviewed by the faculty of MEU department for the content validity of the questions. The face validity of questionnaire was ascertained by project guide and content validity was checked by faculties of FMT department and MEU members of the institution. Pretesting of those questionnaires was done on 10 students and 10 faculties to ensure it is understandable and aim, use of data of the questionnaire was briefly explained. Based on their feedback, questions having CVI  $\geq 7$  were selected, and below 7 were reframed or omitted as per their suggestion. Final CVIs of the Questionnaire were 8.7 (Faculty) and 8.9 (Student) with CVR 6.9 (Faculty) and 7.3 (Student). Cronbachs' alpha value 0.68 (Faculty) and 7.3 (Student) suggestive of good internal consistency. Students and the faculty of 2nd MBBS were included in the study and students and faculty who are included but not willing to participate are excluded from the study. It is an anonymous online questionnaire-based study which was done on two homogenous population hence demographic characteristics like sex, age etc. is not included in the study. The responses received in the questionnaire during the survey was analyzed using Microsoft Excel. Descriptive statistics were calculated. Categorical variables are presented by number and percentages.

### Results :

A total of 171 students are considered out of which 150 students were from regular batch and 21 students from repeater batch and a total of 25 responses were recorded from the faculty of 2<sup>nd</sup> MBBS. Many students 144 (84%) are of the view that online learning in medical education can be used only for sharing learning material, rather than for any other purpose which requires face to face

interaction to be effective and for this 92 (53.8%) of them preferred classroom lectures combined with e-learning for effective learning process, that can act as blended learning. 169 (98.8%) students use Google Meet for online learning as our institution predominantly use this as learning management system, as it is one of the most effective platform used for various webinars/seminars compared to other platforms like Zoom, WebEx etc. Many students 62 (36%), responded that online teaching sessions were not effective and did not help them to study better as there was less interaction and not comfortable in communicating with teachers and teaching of practical's/wards was in effective as shown in table 1.

On the other hand, though 19 (76%) faculty agreed that Online learning in medical education enables students to continue their education similar to the traditional approach, rather than not having any teaching learning sessions during Covid lockdown period but 15 (60%) disagreed that online teaching sessions were more effective and helped students to learn better. 12 (48%) of them agreed for effectively carrying out interactive sessions with students while taking online classes but majority 22 (88%) denied for not carrying out efficient ward/clinical, practical teaching during online learning. Many faculty preferred 19 (76%) both classroom teaching and e learning and none of them responded for e-learning only, for which Google meet was the preferred mode of online learning. 23 (92%) of them said it is essential to get trained for using different e learning platforms. 22 (88%) agreed that online learning can be useful for sharing learning material only, as 14 (56%) agreed that as Assignments given during online classes are not helpful to students as compared to those given in the classroom.

Table 2, shows the various ethical issues that can arise during online teaching learning and responses by students. 110 (65.5%) students denied when asked if they get access to the e-learning system from other student accounts without seeking their permission. But 12 (50%) faculty agreed students perhaps get access to the e-learning system from other students accounts and 17 (68%) agreed that students send photocopied assignment or documents of others. 11 (44%) faculty also agreed that students perhaps Publish files related to educational material that is uploaded by faculty in the e-learning system via social networks without seeking their permission. The most important ethical issue as one of the academic dishonesty is copying the answers is depicted in figure 1. Figure 2 shows another major ethical issue faced by faculty in online learning sessions.

Major benefits perceived by many students in online learning was time saving as no transportation is required, easily accessed lectures and vast resource material sitting at their homes and learning at their own pace. Students mentioned Use of prepladder application where it is more oriented learning by use of technology skills and applying in their learning. Faculty response to benefits were continuous learning rather than no learning at all, sharing of vast amount of resource material, time flexibility in taking classes, social distancing and exposure prevention in pandemic, learn anywhere at any time, assessment by Google forms is easy in grading marks and less administrative work involved in evaluation, participation in webinars and seminars

makes it convenient to gather knowledge. Barriers or difficulties faced by students were majorly with network issues like lack of data, connectivity issues in rural areas that interrupted their classes, lack of face to face communication, distraction from home and from social media, also many faced health issues like headache, fatigue and eye strain. Possible difficulties encountered by faculty were interaction and attention of the students is lacking, internet connectivity issues, difficulty on student monitoring and while assessment, lack of practical skills demonstration, lack of comprehension by students, lack of feedback, and technical glitches.

### Discussion :

Results in our study show that 71% of students disagree that online teaching sessions were not effective and they could not study better as compared to traditional classroom teaching as online learning reduces the quality of knowledge attained and is not an efficient method of teaching. This is similar to study by Ronald olum et al. 52% students in our study were not finding it comfortable in communicating with fellow classmates and sharing their opinion with teachers. This is strikingly in contrast with finding in study by Alsoufi A et al., Anjali verma et al. where it was shown many students agreed in interacting effectively with teachers. In the present study 34% of students did not understand the topic in online classes as they did not have sufficient time to discuss with the teacher, however 33% of students were having neutral opinion in this regard. 84% students perceive that online learning can be used for sharing learning material only and 56% for revision of topics as compared to lectures/discussion and very few 8% for clinical rounds which can justify that assignments given during online classes were not helpful either. 86% said that ward/clinical/practical teaching was not dealt with efficiently or was not effective as compared to face to face interaction in clinical rounds. Similar findings were seen in other studies.<sup>4,5,14</sup> Majority of students 98% have used google meet and 83% google classroom for online learning compared to other platforms like zoom and webex, many students were well versed in using microsoft word and powerpoint and having sufficient knowledge and skill.<sup>4,5</sup> 76% of students prefer using both classroom and e learning (blended learning) and none of them prefer to use online learning alone. However in a study by Ronald olum et al majority of students were not aware of using such online platforms.

Majority of the faculty 92% think it is essential to get trained for using different on learning platforms, and 76% of them prefer to use both classroom and online learning for effective learning process and none of them prefer e-learning alone and consider online teaching in medical education does not enable students to continue as compared to traditional classroom as ward/clinical/practical teaching is not dealt with sufficiently and also assignments given during online learning were not helpful. However 48% faculty say that they can effectively carry out interactive sessions with students while taking online classes which can be related to as 88% of faculty say e-learning can be used for sharing learning material only, 56% say for taking lectures/discussions/revisions. Like students 92% of faculty have used google meet for online classes compared to others like zoom, webex. Our findings are justified in other studies.<sup>6,11</sup>



Our study highlights the awareness of ethical issues, which can be grouped into three categories: Intellectual Property Rights (IPR), Vandalism and Privacy.<sup>7</sup> From table 3 it is seen that awareness on ethical issue pertaining to IPR was high as majority of them denied to questions like getting assignments done by others, using assignment solution of old students/seniors, photocopying the assignment documents from others, sending files filled with viruses, publishing files related to the educational material that is uploaded by the teacher via social networks. Also many students have strongly disagreed to browse the Internet to find the correct answers during online test. 63% of them agreed it is ethical to track and record students' and staff activities as many individuals can view what students and teachers do during online learning sessions. These findings are similar from a study by Talib et al. which showed the awareness for ethical issues amongst students was low in all three categories mentioned. Our study indicates that the students have high ethical awareness about the discussed issues in these categories.

On the contrary to students awareness on ethical issues, Majority of faculty agreed that Students send assignments that are photocopied from others and send them through the e-learning system, students get Access to the e-learning system from other students' accounts, also Send files filled with viruses through the e-learning system. Majority agreed that students do not publish files via social networks related to educational material that is uploaded by them without their permission. This perhaps can be attributed to as students tend not to disclose their dishonesty to avoid any punishment or suspension from classes and its common practice not to disclose openly that they copied the answers from other source. 40% faculty felt it is ethical to track and record staff activities as many individuals can view what teachers do during online learning sessions.

Faculty were of opinion that online assessments can be made more authentic as many students tend to copy by ways like One to one viva, increasing difficulty levels of the questions, decreasing duration of response time, Only viva tests on video, MCQS, structured essay questions, problem based questions and open book examination, expertise of software to detect whether any other page is going on operated or not.<sup>11</sup> A study by Olt, recognized some academic misconduct due to use of internet and electronic resources by students which include students may work together among themselves while in assessment activities, students may use illegal resources in completing their assignments, copy/paste from the internet is common practice among students.<sup>12,13</sup>

### Conclusion :

Our study showed that participants perceptions towards e-learning was not very effective in delivering or promoting effective teaching learning in medical education considering various barriers to it. Study participants awareness on ethical issues was good while using online learning in medical education. To use an online learning system by the students within their academic period, the students should be fully knowledgeable about ethical issues to avoid unethical behavior. Limitation of the present study is relatively small sample size, limited time period and also the reluctance on part of the faculty

to respond to the questionnaire. More studies to be done intending to increase awareness and knowledge of ethical issues related to online learning.

**Recommendation :** Educational institutions must build proper rules and policies for students involved in e-learning and should adopt multimedia tools and monitoring tools in e-learning environment.

**Conflict of Interest :** The Author (s) declare (s) that there is no conflict of interest.

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