

## EDITORIAL

## MEDICAL STUDENTS' E-LEARNING DURING COVID-19 LOCKDOWN

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E-Learning is 'learning utilizing electronic technologies to access educational curriculum outside of a traditional classroom'. During COVID-19 lockdown, the idea of e-learning is being debated rigorously to guide the medical students at their homes. In Pakistan, many believe it to be simply providing the instructional material to the students on college website which they can access through internet. It is a very efficient way of delivering courses online. Due to its convenience and flexibility, the resources are available from anywhere and at any time. Everyone can take advantage of web-based learning. Medical faculty try to transform a student into a 'self-learner', i.e., one who can read the book comprehensively and can extract what is relevant and important and inculcate this knowledge into his or her behaviour. Apart from economic restraints and other limitations like unavailability of internet in remote areas, our teachers are not well-versed with this instructional methodology. A doctor has knowledge, attitudes and skills which he applies to treat patients. What we can or want to impart through e-Learning is 'Knowledge' and the other two traits, attitudes and skills, cannot be imparted through e-learning. Other aspects of a medical students' training like interpersonal skills and teamwork, communication skills and behavioural skills cannot be learnt through e-learning or tele-learning. Nevertheless, e-learning modalities are widely integrated in medical education. During the lockdown due to COVID-19, whatever type and to whatever extent e-learning is used, it is a better alternative.

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E-Learning is a type of distance learning. By definition e-learning is 'learning utilizing electronic technologies to access educational curriculum outside of a traditional classroom'.<sup>1</sup> There are different types of e-learning: Computer Managed Learning (CML), Computer Assisted Instruction (CAI), Synchronous Online Learning, Asynchronous Online Learning, Fixed E-Learning, Adaptive e-Learning, Linear E-Learning, and Interactive Online Learning. Advantages of e-learning are: It is a very efficient way of delivering courses online; Due to its convenience and flexibility, the resources are available from anywhere and at any time; Everyone, part time students or working full time, can take advantage of web-based learning.<sup>2</sup> Students are usually attracted to this type of learning experience and according to teachers practicing this mode of instruction report a very high percentage of attendance of students although making online lessons and assignments are extra burden on teachers.

In these days of COVID-19 lockdown, the idea of e-learning is being debated rigorously to guide the medical students staying at their homes. Although, in Pakistan many believe it to be simply providing the instructional material to students on institutional website which they can access through internet, there are a wide range of e-learning modalities used in medical education. E-learning is not a course delivered via a DVD or CD-ROM, video tape or over a television channel; it is interactive in that the learners can also communicate with the teachers or other students in the

'classroom'.<sup>1</sup> Many new softwares like Blackboard System, Microsoft Team, Zoom and Edmodo can convert your virtual learning environment into a classroom or a one-to-one experience. Other technologies are available like simulated patients, simulated operation theatres and Mini-Clinical Evaluation Exercises (Min-CEX) to guide and assess clinical performance.<sup>3</sup> Online technologies are very useful in taking assignments from the students. Conduction of examinations with the help of QuestionMark and Edmodo softwares have made the examinations practically devoid of cheating because of time barred questions and automatic randomization of questions. So, in expert hands these technologies can work wonders in this lock down period.

Although e-learning is very effective, there are certain limitations also. A student entering a medical school is a 'student', i.e., one who studies under the supervision of a teacher. We try to transform this student into a 'self-learner' i.e., one who can read the book comprehensively and can extract what is relevant and important and inculcate this knowledge into his or her behaviour. Self-learning is a very important characteristic of a doctor which converts a doctor into a lifelong learner. To emphasize this lifelong learning of a doctor, we, time and again, heard the phrase 'a doctor remains a student throughout his life; if he ceases to be a student, he dies'. One very important point to note regarding ultimate outcome of medical education is a doctor who has knowledge, attitudes, and skills which

he can apply to real world situations (patients).<sup>4</sup> This is also the ultimate outcome of a spiral curriculum.<sup>5</sup> What we can or want to impart through e-learning is 'Knowledge', and the other two traits, attitudes and skills, can only partially be imparted through e-learning as they need a supervisor or a teacher. Apart from economic restraints of our students and other limitations like unavailability of internet in remote areas, lazy, resistant and non-believers are everywhere. Lastly, majority of our 'traditional' teachers are not well-versed with this instructional methodology.

Regarding attitudes, we know that students entering medical college have their characters or attitudes partly formed, yet they are still malleable and can improve their professional attitude during the course of their professional training. Students, primarily, learn professional attitude from the faculty. They also learn from the policies and decisions of college administration, college traditions and ceremonies, and the scientific, technical and ethical atmosphere created in unison by all staff and administration of the institution.<sup>6</sup> Parameters to assess the unprofessional attitude (misconduct) of students may be repeated absenteeism, dishonesty, e.g., marking proxy, unreliability, e.g., not submitting assignments on time, disrespect to others (students, faculty, or other staff), disobedience to administration or teachers.<sup>7</sup> Hence teaching and assessment of attitudes need direct student-teacher interaction and supervision.

Likewise, medical-lab skills and clinical skills cannot be perfectly taught through e-learning or tele-learning means. The laboratory skills in pre-clinical subjects, and clinical skills in clinical subjects, are usually taught in a three stage process of observation of a demonstration, practice under supervision, and

independent practice until perfect.<sup>8</sup> All this needs a direct supervision in addition to a simultaneous background theoretical knowledge. Other aspects of a medical student's training like interpersonal skills and teamwork, communication skills and behavioural skills (student-teacher, student-student, student-staff, and student-patient) cannot be learnt through e-learning or tele-learning.

In spite of all limitations mentioned above, during this lockdown period due to COVID-19, whatever type, and to whatever extent e-learning is used, it is a better alternative because 'something is better than nothing.' This situation also uncovered the need to include these modern technologies to be included in the training programmes of medical teachers.

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