



MEDICAL EDUCATION BY E-LEARNING METHODS: A TEMPORARY ALTERNATIVE OR A NEW BEGINNING

Medical Science

Dr Suneel Kumar Assistant Professor, Department of Pharmacology, PGIMS Rohtak.

Dr Kamaldeep Singh* Demonstrator, Department of Pharmacology, PGIMS Rohtak. *Corresponding Author

Mr Dheeraj Kumar Jakhar Demonstrator, Department of Pharmacology, PGIMS Rohtak.

ABSTRACT

The Covid-19 epidemic made the educational institutions to adopt online education systems in an attempt to continue teaching safely as well as to comply to the instructions from the government. Online education systems have been there for many years but they have gained popularity recently, more in the form of a necessity rather than a luxury. This presented a new challenge for the institutions, teachers and the students as they needed to adapt to the online teaching systems. E-learning is the outcome of development of science and technology and is different from traditional teaching in many ways. In traditional teaching the physical presence of the student and teacher at same site is a very crucial factor, while in E-learning the presence is virtual. There are two types of e-learning, synchronous and asynchronous. E-learning has many advantages as well as disadvantages, but how gracefully it gets incorporated in the traditional medical teaching, that only time will tell.

KEYWORDS

e-learning, online teaching, medical education

INTRODUCTION

The COVID-19 pandemic has proved itself to be one of the most terrible catastrophic events in the recent times.¹ It has claimed the lives and livelihood of millions all over the world. It has not spared any aspect of human existence. Education sector has also been drastically affected. The medical education institutes have been hit more harder as compared to other educational institutions as on one hand they were unable to continue regular classes and on the other they were expected to deliver good quality doctors to deal with the ongoing epidemic.

The medical students cannot solely depend on books for knowledge, the exposure to patients and practical sessions are crucial.² The risk of getting infected during clinical classes is very much high as compared to students of non-medical streams. Even a student can become a source of infection to fellow students, teachers, friends and family. So, in all of the medical colleges, the students were sent back to their homes and teaching remained suspended for a brief period. The educational institutions were forced to find new methods of continuing teaching during lockdown.

This epidemic made the educational institutions to adopt online education systems in an attempt to continue teaching safely as well as to comply to the instructions from the government. Online education systems have been there for many years but they have gained popularity recently, more in the form of a necessity rather than a luxury. This presented a new challenge for the institutions, teachers and the students as they needed to adapt to the online teaching systems.

What is E-learning

It refers to the usage of electronic resources like internet, computers and smartphones to acquire and disseminate knowledge.³ The use of audio-visual applications in e-learning can offer educational curriculum so as to provide the students with all subject related knowledge. It also provides interface facilities between the students and teachers who may be separated by distance. E-learning is the outcome of development of science and technology and is different from traditional teaching in many ways. In traditional teaching the physical presence of the student and teacher at same site is a very crucial factor, while in E-learning the presence is virtual. The student and teacher interact through the use of internet and computer or mobile based software applications or websites. The mode of teaching in traditional teaching is through classrooms, blackboards, textbooks and exams. While in E-learning, the live or recorded audio-visuals, software applications, websites, online assessments etc are used.⁴

Types of E-learning

E-learning is broadly classified into two categories: synchronous e-learning and asynchronous e-learning.⁵

1. Synchronous e-learning: In this type of e-learning, all the enrolled

students learn at the same time. The teaching faculty is also available at same time on the same learning platform and the communication between teacher and student is in real time or live. This mode provides more involvement of teachers and students and is thus more effective. There is instant feedback and doubt clearing by the teachers. Examples of this type are live online classes, seminars, webinars, live chat etc. Some common internet websites that provide services for synchronous e-learning are

- <https://zoom.us>
- <https://www.microsoft.com>
- <https://help.blackboard.com>
- <https://www.skype.com>
- <https://gsuite.google.com>
- <https://www.gotomeeting.com>
- <https://www.webex.com>

2. Asynchronous e-learning: In this type of e-learning different students learn at different time and the communication between the student and the teacher is not live. This mode is more flexible and convenient because the student can choose to use this mode at his or her preferable time. The feedback and doubt clearing facilities depend on the system. Examples of this type are recorded audio/video, e-mails, blogs, mobile applications etc. Some common internet websites that provide facilities for asynchronous e-learning are

- <https://www.blackboard.com>
- <https://moodle.org>
- <https://slack.com>
- <https://www.schoolology.com>
- <https://www.edmodo.com>
- <https://flock.com>

Advantages of e-learning⁶

- Gives students flexibility and control
- Exposes students to new resources of knowledge
- More convenient and saves travelling costs
- More engaging due to variety of educational content
- Online tools provide variety of assessment methods

Disadvantages of e-learning⁶

- Distractions due to home and family
- Requirement of laptop/mobile/internet connection/training
- Heavy investment may be required at level of teaching institutes
- There may be hesitancy and resistance from senior teachers who prefer traditional teaching
- Essential skills in medical teaching need hands on practice

DISCUSSION

The present circumstances have changed medical education scenario vastly and the conditions are also very different than they were during the dawn of medical education systems. The most important factor has been the invention of internet. Present day medical students are exposed to computers, mobiles and internet at a very early age. The primary and secondary education schools are also adopting and using e-learning platforms increasingly. E-learning provides more control over the content and speed of learning to medical students. The teachers also get opportunities to evaluate their students objectively by online tests. The students can also get personalized attention and feedback which provides them better chances of self-improvement and better future guidance.

A study conducted Dost et al, in United Kingdom in 2020 found that according to students, the two main benefits of online teaching were flexibility and saving of travelling time. The two main barriers to online teaching were family distractions and unstable internet connections. The students also asserted that online teaching cannot replace direct patient contact teaching and that practical clinical skills cannot be taught through it.⁷

Pei et al, in 2019, conducted a systematic review of literature in medical education related to online teaching extending from 2000-2017. They concluded that there was no evidence that offline learning works better as compared to online learning. According to their results, online learning can be considered as a potential method in undergraduate medical teaching.⁸

CONCLUSION

With the advancement of technology and the given circumstances, e-learning has become the need of the hour rather than a fancy gimmick. But, how gracefully it gets incorporated in the traditional medical teaching, that only time will tell. Integration of online and offline teaching methods can be better alternative rather than focussing only on one.

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