

## E-LEARNING IN PRESENT MEDICAL EDUCATION SYSTEM: A NEED OF AN HOUR

Impact of newer and newer information technology on education system has increased tremendously. Highest impact on education technology is of internet which we cannot ignore. The biggest boon that internet gave to education is the concept of e-learning.<sup>1</sup> It means a system of learning in which content is delivered electronically and learning using a virtual learning environment. I don't think e-learning word is new for us. Different people have different concepts about e-learning. E-learning means delivery of learning, training or education programs by electronic means which involves the use of a computer or any other electronic device to provide training, educational or learning material with the help of virtual learning environment. E-learning is also called web-based learning, online learning, distributed learning, computer-assisted instruction, or internet-based learning.<sup>2</sup> E-learning can be of two types; synchronous learning and asynchronous learning.<sup>3</sup> Synchronous learning is that in which learning and teaching takes place in real time while the teacher and learners are physically separated from each other. Students and teachers meet in virtual space through their computers. Examples; Live online lectures, online CME's, listening to a live radio broadcast, watching live television broadcast, audio/video conferencing, skype conversations. Asynchronous learning is that in which teacher prepares the courseware material before the course takes place. The learner is free to decide when he/she wants to study the courseware. Examples; self paced courses taken via internet or CD-Rom, videotaped classes, stored audio/video, web presentations or seminars, recorded audio tapes, e-mail messages. E-learning eliminates geographic constrains, reduces travel cost and time, have option to select learning materials that meets the level of knowledge and

interest of the learner, can be study wherever they have access to a computer and internet. Self-paced learning modules allow learners to work at their own pace, different teaching learning styles can be adopted and facilitation of learning occurs through varied activities, development of computer and internet skills that are transferable to other facets of learner's lives, builds self-knowledge and self-confidence and encourages students to take responsibility for their learning and also for research. E-learners must be self-directed, self-motivated, self-regulating, lifelong learner.<sup>2</sup>

A learning management system (LMS) is software used for delivering, tracking and managing training and education; for example, tracking attendance, time on task, and student progress. Educators can post announcements, grade assignments, check on course activity, and participate in class discussions. Students can submit their work, read and respond to discussion questions, and take quizzes. An LMS may allow teachers, administrators, students, and permitted additional parties (such as parents if appropriate) to track various metrics. LMSs range from systems for managing training/educational records to software for distributing courses over the Internet and offering features for online collaboration.<sup>4</sup>

Internet is also widely used among medical students. E-learning in medical education will undoubtedly have significant impact on newer generation medical students. For that Medical colleges must have a skills lab and adopt information technology in medicine. Colleges must have provision for e-library, computer room and internet facility. Lecture theatres must have provision for e-classes / virtual classes. The Medical Council of India has also directed all medical colleges to use information technology for teaching medicine by

setting up e-classrooms, e-libraries and providing access to e-content. It is also the part in training of medical teachers under MCI national faculty development programme which is conducted through regional /nodal centres in India.<sup>5</sup> Medical educators should continue to engage with e-learning in an effort to come up with innovative approaches to train medical students. Many medical students find e-learning enjoyable and interesting but many do not find it to replace completely with traditional learning.<sup>6,7</sup> So, Blended learning should be used in medical education which combines e-learning tools with traditional classroom learning to ensure maximum effectiveness.<sup>8</sup> Social media apps like Facebook, WhatsApp, and YouTube can also be very much helpful in e-learning if otherwise used wisely.<sup>9</sup>

I acknowledge the MCI nodal/regional centre for medical education, Ahmedabad for their material which helped me a lot in making this article.

**Table 1: E-learning Sources and their uses**

E-source	Use
You tube	Video sharing
Google docs	Collaborative projects
Moodle	Course management system
Skype	Messaging, internet telephony
Slide share	Presentation sharing
Drop box	File syncing software
Wikipedia	Collaborative encyclopedia
Linked in	Professional networking
Blogs	Diary type content sites
Ever note	Note taking tool
Edu blogs	Educational blogging tool
Kindle	E-book reader
Author stream	Uploading and embedding presentations

**Address for correspondence:**

Dr. Arvind Kumar Yadav (MD, ACME)  
 Co-coordinator, Medical Education Unit  
 Professor, Pharmacology  
 Geetanjali Medical College & Hospital, Udaipur  
 (Raj)  
 Email: [drakyadav@yahoo.co.in](mailto:drakyadav@yahoo.co.in)

**References:**

1. Masic I. E-Learning as new method of medical education. *Acta Inform Med.* 2008; 16(2): 102–117.
2. Ruiz JG, Mintzer MJ, Leipzig RM. The impact of e-learning in medical education. *Acad Med.* 2006;81:207-12.
3. Dhir SK, Verma D, Batta M, Mishra D. E-Learning in Medical Education in India. *Indian Pediatrics* 2017;54:871-7.
4. Childs S, Blenkinsopp E, Hall A, Walton G. Effective elearning for health professionals and students – barriers and their solutions. A systematic review of the literature-findings from the HeXL project. *Health Inf Libr J.* 2005;22 Suppl 2:20-32.
5. Medical council of India. Available from <https://www.mciindia.org/CMS/information-desk/for-colleges/national-faculty-development-programme>. [Accessed on 25th March 2018]
6. Roy H. The role of E-learning in medical education. *Academic Medicine* 2017;92(4):430.
7. Warnecke E, Pearson S. Medical students’ perceptions of using e-learning to enhance the acquisition of consulting skills. *Australas Med J.* 2011;4:300–307.
8. Chu LF, Chan BK. Evolution of web site design: implications for medical education on the Internet. *Comput Biol Med.* 1998;28:459-72.
9. Mazloomi Mahmoodabad SS, Barkhordari A, Nadrian H, Moshiri O, Yavari MT. Survey of ownership and use of mobile phones among medical science students in Yazd. *Pak J Biol Sci.* 2009;12:1430-3.