

# Importance of Electronic Learning

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“It is through education that the daughter of a peasant can become a doctor, that the son of a mineworker can become the head of the mine, that the child of farm workers can become the president of a great nation” (Nelson Mandela, 1994).

There was a time when men travelled by horses, camels; after this carriages were made for a more comfortable ride. Decades later automobiles came into existence and slowly adapted by all. This analogy can be used in education when people wrote on stones, wood, papers and now we use computers. This is the evolution of technology, and this generation from a very young age are using technology to enhance their knowledge.<sup>1</sup> Now electronic learning (e-learning) has become part of the main stream in learning, teaching and assessing medical students, therefore, at its heart it is concerned with the educational uses of technology. The purpose of educational technologies is to support any aspect of medical education. Hence e-learning, e-teaching and e-assessment are interrelated but different areas of activity.<sup>2</sup> Common synonyms for e-learning are Web-based learning, online learning, distributed learning, computer-assisted instruction, or Internet-based learning. Integrated e-learning system in the form of virtual learning environments is becoming a norm for students of all age groups.<sup>3</sup> There was a time when knowledge was accessible through limited books available and through teachers, now the emergence of e-library has changed the entire scenario where the student is becoming less dependent on teachers and are more comfortable with acquiring knowledge through research. Due to this change of students' requirement teachers must also become e-teachers, some consider it as a threat to their career, others easily adopt to the ever-changing teaching strategies. Twenty years ago, the world-wide web had not been invented and computers were still somewhat of a novelty. Now the 'net generation' has entered medical universities, they have grown up with these technologies and it has become integrated into their daily lives.<sup>4</sup> Thus, although e-learning may still seem novel and distinct to teachers, learners perceive it as far less of a shock and expect it as part of their education. e-Learning continues to proliferate, fueled by the increasingly ubiquitous availability of computers and the internet, teachers' experience in incorporating e-learning, and perhaps most importantly, learners' comfort with using education technologies. Clinician

educators are increasingly using technology to complement and enhance clinical teaching and learning activities. The use of e-learning is to refer to the use of Internet technologies to deliver a broad array of approaches that enhance learners' knowledge and performance.<sup>5</sup>

A few examples as how novice teachers can work with online learners but this requires particular competencies and approaches of the tutor. The most important competency to be achieved by teachers is to understand and use the computer. Another way is mobile learning also known as m-learning can be used in classroom teaching by giving students tasks and ask them to find the information via internet on their cell phones.<sup>3, 4</sup> Mobile learning affords many new opportunities to work with learners in new contexts. Effective use of m-learning can promote many new kinds of approaches to learning. These devices include personal digital assistants (PDAs), and cellular (or mobile) phones.

A good way for novice e-teachers to begin using audio and video is to create sound or video files that can be placed on a website or VLE for download by students. These might be recordings of lectures, tutorials or clinical narratives, or they may be clinical recordings, such as heart sounds or coughs.<sup>5</sup>

There are many simple recording programs that can be used to create and edit sound files and convert them to the highly compressed MP3 format that allows these files to be both small and agile. For example, 'audacity' (<http://audacity-ty.sourceforge.net>) is a very powerful, multi-platform, and free sound-editing tool that will meet most needs. Once edited and ready for release, these files can be linked to web pages or uploaded to a VLE in much the same way that any other files (documents, presentations) are made available online. These files can then be accessed and played on a myriad of devices, including music players such as iPods, many mobile phones, PDAs, and desktop and laptop computers.<sup>1, 3</sup>

e-Community support- tapping into the deep-seated human will to collaborate, share and engage in community activities of many kinds. The so-called web 2.0 revolution has taken many by surprise as to how many individuals participate in content creation (Wikipedia, blogging), file sharing (YouTube, Flickr) and discussion (Facebook, instant messaging). Although participation in a medical community is an essential part of any student's entry into that community, it is debatable how such online participation is 'e-learning' per se.<sup>4, 5</sup> We would certainly like to believe, however, that what is taught to the students is not only something to be learnt for examinations, but is also internalized, and carried over to that students' role in society. Discussion boards (also called bulletin boards or forums) are a means for participants to communicate asynchronously. This means that some one posts a message and

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Received: 14-12-2016  
Accepted: 20-12-2016

others read and post replies at some later date or time; threads of discussion thereby build up over time. Typically, the threads are track able over time, allowing users to follow many separate conversations. Discussion boards can be private (open only to a group of students), or public (open to everyone on the course).<sup>3,5</sup> Desktop video conferencing, more usually just called 'web conferencing', involves the connection of standard PCs or laptops with webcams, microphones etc. This format aims at bringing two or more individual users together, working through their own computers, rather than the video conferencing model of a group meeting using dedicated room-based fixed equipment.<sup>3,4,5</sup>

As a result, web conferencing is typically cheaper, simpler, and uses less bandwidth, but usually with lower screen resolution. Although web conferencing is now supported in many text or audio conferencing tools (such as Skype, MSN Messenger and i Chat), there is usually greater educational utility in multiple channel collaborative media tools (such as Adobe Connect, Wimba or Illuminate), which allow video, audio, chat and white boards to be used as part of a single integrated system.<sup>3,5</sup>

If medical universities adapt to e-learning and teaching methodologies, they should also assess them through e-assessment. This type of assessment presents particular challenges to both students and tutors. e-Assessment: the use of ICT for authoring, delivery, marking, feedback and analysis of both formative and summative student assessment. Online examination and testing (or 'quiz') tools should be applied, which usually allow for a range of question types such as MCQs, matching and ranking, single word or sentence inputs. These can be set so they can be taken only once or many times and the students' performance can be analyzed using a range of statistical tools. Most question types (except free text) can be automatically graded online. The quiz tool can often also be used for surveys and polls. Once assessments are complete, many systems have a results section or grade book, which allows staff to place marks and upload them to the VLE, and release them to students. Typically, students will see only their own marks and general statistics for the class. By this, privacy of the student may be maintained.<sup>3,5</sup>

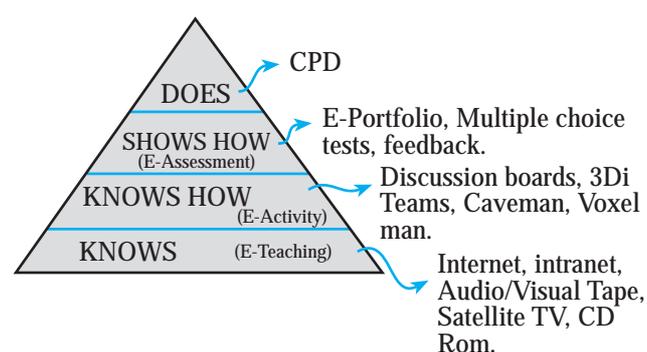
Some systems may provide portfolio tools that allow students to build online repositories of their work, experiences and reflections over time as well as links to external images, documents, and media such as podcasts.<sup>1</sup>

To attain this system of education we must have a strong e-Logistics and e-Administration system: many e-learning applications actually support the administration and logistics of the learning environment and cognitive development. This is especially notable in medicine,

where managing placements and rotations, timetabling, providing exam results, allocation to groups, tracking of content and participants, and other aspects of planning and non-educational communication with students.<sup>2,4</sup>

Such campus environment are essential prerequisites of students' education. More widely, there are many instances where educational systems can, and should, connect to independent administrative systems and services such as registry, finance, human resources and estates and buildings. One often overlooked, but essential, administrative task that increasingly depends on the online environment, including that of audit, quality assurance and compliance, involving both internal and external scrutiny.<sup>3,4</sup>

Figure: 1



Source: [www.google.com.pk/search?qmillertriangleofe-learning](http://www.google.com.pk/search?qmillertriangleofe-learning)

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