

## E-LEARNING: FUTURE PROSPECTS IN MEDICAL EDUCATION IN PAKISTAN

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E-learning is also called Web-based learning, Online learning, Computer-assisted instruction or Internet-based learning which includes all forms of electronically supported learning and teaching. The information and communication systems, whether networked or not, serve as a specific media to implement the learning process which involves both out-of-classroom and in-classroom educational experiences with the help of technology.<sup>1,2</sup> The distance and Computer-assisted instruction (also called computer-based learning and training) uses computers to aid in the delivery of stand-alone multimedia packages for learning and teaching. These two modes are subsumed under e-learning as the Internet becomes the integrating technology.<sup>2,3</sup> Due to rapid advancement and increased use of internet since last decade all over the world, the new inventions and innovations has introduced E-Learning for medical students. For them e-learning means increased access and a more learner-centered, enriched, higher quality with new ways of interaction. The developments in e-learning are allowing learning to be individualized (adaptive learning), enhancing learners' interactions with each other (collaborative learning), and transforming the role of the teacher (from disseminator to facilitator). Adaptive learning uses technology to assess learners' knowledge, skills and attitudes at the beginning of training in order to design curriculum most appropriate for each learner.<sup>4</sup> The collaborative e-learning technologies focus to break the isolation of learners by using weblogs, message boards, chats, e-mail and teleconferencing. This contributes to higher levels of learner satisfaction, improvements in knowledge, self-awareness, understanding of concepts, achievement of course objectives, and changes in practice.<sup>5</sup> There is evidence for the effectiveness and acceptance of e-learning within the medical education community, especially when combined with traditional teacher-led activities in a blended-learning educational experience.<sup>6</sup>

An evolving emphasis within medical education on lifelong learning and competency-based education has forced educators to reevaluate their traditional roles.<sup>4</sup> In this changing paradigm, educators no longer serve as the sole distributors of content, but are becoming facilitators of learning and assessors of competency. Learning in this digital age would also require teachers to explore how best to utilize technology to further enhance the educational environment for students. Some pertinent issues in this regard were critical thinking, reflection, self-assessment and actualization, which need to be addressed. E-learning offers the opportunity for educators to evolve into this new role by providing them with a set of online resources to facilitate the learning process.<sup>6</sup>

E-learning is not just about the delivery of content, but it is a pedagogical approach which is flexible, engaging and learner-centric. Majority of medical institutions in our country are still organized on the idea that learning is dependent on a single informed person imparting information by word of mouth, to a large or small group of listeners, in a class room. Teachers in medical colleges need to change their beliefs, behavior, perceptions and assumptions about learning and teaching, in order to provide quality medical education to today's medical students. This will help to transform them into competent and caring doctors of tomorrow.<sup>3,8</sup>

In diverse medical education contexts, such as in Pakistan, e-learning could prove more effective than only traditional instructor-led methods, such as lectures. Students would not see e-learning as replacing traditional instructor-led training, but as a complement to it, forming part of a blended-learning strategy. E-learning should be started as a pilot project in the various medical colleges because by combining traditional face-to-face instruction with web-based learning, i.e. blended-learning, is best suited for the practice-based disciplines in medical sciences.

For the last decade, most attempts to use technology in higher education in all over the world and Pakistan have been very haphazard. It is because the system has been designed according to the already existing processes and computers have not accomplished much more than replacing the type writer and adding machine. Today, however, technology is creating a new educational platform and is reconfiguring the way a student learns. Learning through information technology is evolving a new era of education all over the world. Now in this modern age, it is clear that e-learning will be important for standard education and training systems. It is approaching acceptance within mainstream education and training in such a way that it will make up part of the repertoire of most medical institutions of Pakistan in future.

### REFERENCES

1. Tavangarian D, Leybold M, Nölting K, Röser M. Is e-learning the Solution for Individual Learning? *Journal of e-learning*, 2004;12(1):234-7.
2. Ward JP, Gordon J, Field MJ, Lehmann HP. Communication and information technology in medical education. *Lancet*. 2001;357:792-6.
3. Ruiz JG, Mintzer MJ, Leipzig RM. The Impact of E-Learning in Medical Education. *Academic Medicine* 2006; 81(3): 207-12.
4. Marie CA, Michael L. "Untapped Potential: Seeking Library Donors Among Alumni of Distance Learning Programs". *Journal of Library Administration (Routledge)* 2010;50 (5): 515-29.
5. Wiecha JM, Gramling R, Joachim P, Vanderschmidt H. Collaborative e-learning using streaming video and asynchronous discussion boards to teach the cognitive foundation of medical interviewing: a case study. *J Med Internet Res*. 2003; 5:e13.

6. Khogali SE, Davies DA, Donnan PT, Gray A, Harden RM, McDonald J, Pippard MJ, Pringle SD, Yu N. Integration of e-learning resources into a medical school curriculum. Med Teach. 2011;33(4):311-8.
7. Ansari MT, Zeeshan MA. Perception & Acceptability of E learning in Pakistan. website[<http://www.studymode.com/essays/Perception-Acceptability-Of-Elearning-In-1099323.html>] Retrieved 09, 2012.
8. Galusha JM. "Barriers to Learning in Distance Education".Website [<http://www.infrastructure.com/barriers.htm>]. Retrieved 2012-04-10.

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