

E-learning in Undergraduate Medical Education

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By e-learning we mean the delivery of the educational contents through computers using internet to the students. With the better affordability of computers and internet as well as technical improvement, the e-learning has developed dynamically and aided teaching-learning process.

The idea of Computer-Based Training (CBT) came into being during last decade of the twentieth century and was accepted as an efficient strategy in modern teaching and learning environments. This is also named as Computer Assisted Learning (CAL). Soon, the CBT programs were recommended to be integrated into medical education as a valuable supplement¹. Medical educators took initiative to establish the relevancy and feasibility of learning theories and design principles (e.g., Bloom's Taxonomy and practice fields) to CBT. They observed that all design principles were not fulfilled by the CBT system alone. Finally opined that the integration of the system with adequate teaching and learning environments are essential. CBT programs with adequate integration can become valuable means to build or support practice fields for learners and can build cognitive domain as well as problem-solving skills². The researcher observed that CBT had significant impact on the delivery of training to remote locations, large staff situations, multiple offices, variety of training levels and organizations with high turnover of staff³.

CBT is the basis of today's 'e-learning' and got the name in 1999 when Elliott Masie used the term at a conference in Disneyworld⁴. The e-learning is abbreviation of the term 'electronic learning'. The learning process attracts the learner as it offers flexibility for students to learn at their own pace, provides access to a

wide range of multimedia content and allows for personalized learning experiences. Online education as a whole has been gaining popularity in almost all countries around the world. This paradigm shifting in learning gained momentum during COVID pandemic⁴.

During the early period of present century, a mixed feeling about e-learning was observed among medical educationist. The use was more common in basic medical science courses than in clinical education during the latter part of twentieth century. But during the early part of present century use of clinical problem solving software could attract much along with individual examination services⁵. In an extensive review of studies up to November 2023, technological disparities, inadequate infrastructure and access inequalities were identified as systemic challenges of e-learning⁶. Human-centric challenges observed were engagement struggles, limited social interaction, varying learning preferences and absence of immediate feedback. Lack of direct supervision and feelings of isolation were also found to hinder the learning process.

To get benefit out of this significant potentiality of online education the educators and the institute must realize the importance of the system, identify the barriers and quickly work on solutions for success. For developing competency in the professionals, students need training in clinical settings, practice with patients and regular visits to out-patient clinics. Simultaneously, the system should also be ethical, responsive and accountable to patients, community and profession. So, the idea of blended learning could draw attention of medical educators. Blended learning can include online activities before or after a physical class, or synchronous activities where

some students join remotely. A recent study on MBBS students to observe the acceptance, perception and preferences regarding blended mode of learning showed that 78.2% of respondents believed that combined approach led to improvement in learning⁷. Flexible schedule and personal convenience were reported as the most common benefits of online learning. Main disadvantages found were lack of interaction with peers and connectivity issues.

This issue of journal has published one original article on the blended mode of learning. Students were simultaneously exposed to regular classes and got the opportunity to see online PowerPoint based recorded lectures on the same topics. Recordings were made in both Bangla and in English. The students showed very positive responses to the need and benefit of this mode of teaching.

Because of the limitation of traditional lecture in medical education various ideas are coming up. 'Flipping of the class' combines online instruction and group learning is a reliable and well-received teaching method. Various institutes are practicing this strategy and claiming success⁸. Recent researches showed that the strategy of flipping of class supplemented and expanded existing teaching methods in the field of knowledge retention⁹ as well as skill development¹⁰. So, resources of above mentioned study may be used to arrange flipped class or perform research to observe the students' reaction.

This issue of journal has included a survey on patient satisfaction conducted at International Medical College Hospital. This type of self-evaluation of service provided is always encouraging and identification of areas for improvement is required for progress. A success story of management of a critical polytrauma patient at a hospital with limited facilities is included in this issue of journal. The case report contains a good narrative discussion. It is expected that the discussion will be able to attract the specialist of the

subject as well doctors having interest in casualty management.

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