Digital learning in medical education

There are over 76,000 MBBS students in about 534 medical colleges across India.[1] We perceive that there is an advantage in the addition of accessible-quality virtual education and assessment to traditional teaching. The advent of the internet and its universal accessibility has made digital learning prevalent.[2] As students across India and developed countries seamlessly adapt to online education and self-learning aided by conventional teaching.[3] The current coronavirus disease (COVID-19) pandemic caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has thrown a light on this form of learning world-wide. The pandemic is basically a flash point in expediting the inevitable adoption of virtual networks and nodes. Such an unprecedented situation calls for the inevitable switch to the digital approach for teaching.

'Digital India' was launched in India by the Prime Minister of India Narendra Modi, with an objective of connecting remote areas with high-speed internet networks and improving digital literacy.[4] Digital India flagship programmes empowered citizens by eliminating middlemen and promoted the four 'E' s, namely education, employment, entrepreneurship and empowerment. This further reiterates the need to move towards this mode of attaining knowledge that brings with it a myriad of advantages.

The lack of infrastructure, combined with price sensitivity in the market, leads to an inelastic demand, thus impacting the adoption of any new technology. With substantial penetration of high-speed telecom internet, achieved through subsiding data for the rural populace, there is a momentous opportunity to push digital learning forwards that was previous deemed not feasible. With the internet reaching all Indians and the ubiquitous use of smartphones by most students, we are positive that this contemporary medium of learning would be beneficial.

To gauge the effectiveness of digital learning, we looked at one of the oldest organisations of Association of Professors of Gynaecology and Obstetrics.[5] They provide didactic videos to students through the registered medical colleges with a subscription costing US $15–20 per student. They provide 50 interactive videos and 600 multiple-choice questions (MCQs), and assessment results are given back to colleges across India and developed countries.[6] These are free videos on YouTube for any students to watch across the globe. These videos were shared with 63 MBBS students, nursing students, postgraduates and faculty members, and they were asked to take a survey after watching them; 63% of the respondents felt that the videos were adequate for learning.

Bearing in mind these compelling results, we think developing a similar module and product tailored to the Indian syllabus and guidelines including clinical, pre-clinical and para-clinical subjects aided with MCQ assessments, which would be instrumental in revolutionising the standards of medical education and also more appealing compared to the mainstream rote learning in India. This medium of education has also proven to be efficacious in the preparation of the National Eligibility cum Entrance Test (Postgraduate) and other competitive exams and the subsequent achievement of desired ranks. Another noteworthy benefit is the economical nature of online material in contrast to the relatively expensive set of textbooks in a resource-poor nation. This method will also serve as a segue for the need to change the pattern of examination from written to MCQ, which is practiced in developed nations that are the epitome of cutting-edge healthcare systems.

Although education is seen as a huge driver for adoption of technology, evolution of education is necessary to suffice the needs of studying medicine.[7,8] Health sciences being a hands-on learning experience has to face special challenges such as the need for the ability to interact with the specimen, need for physical affinity and the need for dispensation of a large amount of data.[9] With deeper adoption of artificial intelligence, holographs and virtual reality, the challenges can be effectively tackled and thus real compatibility can be enjoyed.

The objective is to deliver superior educational material and to ensure the making of well-trained healthcare professionals, which will positively affect the patient care. This might be possible by advocating the need to upgrade to this method of training. Unity in diversity can be achieved by virtually adapting to gold standard curriculum, which will subsequently put the Indian healthcare professional on the global map. These reforms can be further facilitated through various journals pertinent to medical education.

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