



BMH Med. J. 2022;9(1):1-4. **Editorial**

Challenges of Online Education

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Keywords: Online education, e-learning, pandemic, technology skills

Introduction

Information technology has revolutionised the learning methods in the current decade. Online education is made possible by integrating technology into the existing teaching programs. Educational systems all over the world were disrupted by the COVID-19 pandemic and the teachers and students had to rapidly change to e-learning platforms [1]. The world witnessed a paradigm shift in the field of academics, favouring online learning during the pandemic. Online education has been in a rising trend throughout the world [2].

Closure of schools and colleges during the lockdown had forced the educational institutions to resort to online education, in order to ensure continuity of learning. Online learning has now become a vital part of teaching and it has become a powerful educational tool. The online learning environment differs significantly from the traditional classrooms and the online classes have created several challenges for teachers and students all over the world. The main difficulties affecting the implementation of online learning include problems in time management, inadequate technical skills, absence of proper infrastructure, lack of institutional strategies and negative attitudes of individuals [3].

Importance of Technology in Education

Virtual classrooms and augmented reality have significantly improved the learning process. Virtual classroom gives access to learning from anywhere in the world. Virtual classrooms use video conferencing and screen sharing to allow educators to provide online live talks and interactive discussions with students.

Augmented reality offers the students highly interesting academic content through videos and animations which will increase the attention span of learners. It will also lead to better retention of information. Virtual reality is currently used as a learning tool among educators and students [4]. The achievement of students in the science course increased substantially with augmented reality based applications used in online education programs [5].

Good technology skills will enable effective teacher-student interactions. Students can clear their doubts during one-on-one interactions with educators. Personalized learning opportunities can also be provided through online education platforms. Chatbot applications that work with artificial intelligence positively influenced the online learning of fifth grade science students. The students found it useful and such applications can contribute positively towards students' learning during the pandemic [6]. Through the use of technology in education, students acquire the 21st-century technology skills which are essential for future career in this digital world.

Live video classes and recorded lectures are the important means of teaching in online education programs at schools. In the current decade, it is necessary that students develop technology-based communication skills because going online will be the new norm both in education and career.

Barriers for Online Learning

Educational technology has many challenges, especially in implementation. Inadequate access to technology tools is causing significant concern. Several schools do not have the essential technology tools. Schools are not able to provide all the students with a laptop. The internet connectivity is unreliable in many places. Network connectivity problems are barriers for effective communication. Due to the lockdown, higher educational institutions also had to move from the traditional face-to-face teaching to virtual learning methods. Difficulties with Internet connection as well as limited interactions with one another negatively influence student's satisfaction [7].

Excessive screen time and lack of expertise among educators in using the technology are also causing challenges in effective implementation. Several students feel that the amount of learning is inadequate in the online education programmes. Some students experienced physical discomforts including headache and eye-strain as well as lack of concentration during online classes. Many students were not satisfied with the quality of the online teaching. Students also reported feelings of boredom and worry [8]. Most of the students were not satisfied about the online examinations as well as the evaluation processes [9].

For many students, the learning environment at home was not comfortable. Teachers should take effort to engage students with maximum concentration during online classes. Institutions have the responsibility to make sure they reach out to all students and provide scientific guidance. Not a single student should be left out of online learning programmes [10].

Teachers of interprofessional education may lack the knowledge and expertise to create a positive as well as supportive online learning environment for their students [11]. Faculty will have to multitask to obtain the same target in e-learning platforms compared to traditional teaching programmes.

There are several difficulties in conducting online physical education classes which include monotony of the classes, limited educational content and lack of expertise in operating online physical education programs. Through collaboration among physical education teachers, it is essential to improve the teaching expertise of the educators [12].

COVID-19 pandemic has significantly reduced the face-to-face contact of individuals. This has challenged the way in which health professionals can access academic training. Online learning has resulted in the disruption of peer learning [13].

Online Medical Education

The pandemic created a threat to the delivery of traditional medical education. Implementation of online learning has now become inevitable [14]. Online teaching has become the main method of medical education during the lockdown. Medical students perceived online learning programmes as appropriate ways of teaching during the COVID pandemic [15].

Teachers of the medical faculty have found the current pandemic as a chance for the digital transformation of the medical education. Video-based online talks and online chats with teachers have an important role in imparting knowledge to medical students. Medical students should also be taught regarding telehealth programs [16].

Several medical schools have successfully transitioned their educational environment to e-learning platforms. The lack of hands-on training in the preclinical years can have negative implications on the training of the medical students. They may have to struggle hard in the clinical years. Artificial intelligence for adaptive learning, virtual simulation and telehealth can become essential components of the post-COVID medical education [17].

Conclusion

Innovations in information technology have significantly transformed the education system in this digital world. Latest technology skills can be used in the best way by the educators to support the academic needs of students. Online education has provided access for students, to academic information resources throughout the world. Technology provides accelerated learning and several opportunities to practice what the students have learned. But there are several difficulties in transitioning from traditional education to online learning platforms. We can overcome the challenges of online learning through innovative methods. Increasing the technology skills, improving the technological infrastructure and creating positive attitude among students and teachers will lead to better utilisation of online education.

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