

Homeschooling using Technology Enhanced Learning as an adapting learning strategy during COVID-19 Outbreak

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Homeschooling and COVID-19 Outbreak

Nowadays, the outbreak of COVID-19 leads to disrupting routines in medical schools, and the learning process as a whole. This is due to the catastrophic health consequences and possible COVID-19 related that had been documented. The impact of COVID-19 on medical education has been studied and stakeholders think outside the box to find effective alternatives to accommodate and hence homeschooling became mandatory in this national emergency. So, the immediate change introduced has been the urgent shift from in-person medical classes, which are being replaced by the pre-recorded lectures or live streams (Ferrel and Ryan, 2020). This dramatic cancellation of in-person classes carries the possibility to present a challenge to re-engage students within the traditional community spirit of medical school as restrictions are plucked out.

Homeschooling is a measure to establish social distancing that refers to actions to reduce the number and duration of contacts and increase the physical distance between medical students to prevent or at least to slow the spread of a communicable disease (Qualls et al., 2017) like COVID-19. So, homeschooling may protect vulnerable students and limit secondary transmission to their households and communities (Faherty et al., 2019).

Medical schools could represent a challenging setting for social distancing, as multiple stakeholders with different needs and health conditions notably professors with different age groups, students with different health status, and consequently, their parents, are involved.

With the outbreak of COVID-19 in 2020, the start of an exciting era in medicine and science, the development and maturation of several digital technologies that can be applied to tackle major clinical problems and diseases is mandatory. These digital technologies include the internet of things (IoT) with next-generation 5G telecommunication networks, big-data analytics; artificial intelligence (AI) that uses deep learning; and blockchain technology (Ting et al., 2020).

How to teach and assess medical students without in-class activity. and the use of live patients? It is a real challenge. Hence the mandatory use of technology-enhanced learning as a tool of contact, teaching, mentoring, and assessment.

Technology Enhanced Learning becomes the only method in teaching during COVID-19 Outbreak:

By the end of the 20th century, a paradigm shift in medical education was introduced, from an “instruction paradigm or “Instructor-centered learning” to a “learning paradigm” or “student-centered learning”. This student-centered approach empowers students to build up their knowledge and enables them to think critically, work in teams and solve problems collectively (Agrahari, 2016).

In the 21st century, this paradigm shift was supported by the introduction of technology into teaching and learning which has a remarkable influence on the instructional strategies of educational institutions. The traditional instructor-centered method which has been going on for decades has now been modified and enhanced, owing to technology.

Ford et al. (2009) stated that “integrating teaching, learning, and technology is a mandate, not an option, and doing any less would border on professional irresponsibility.”

Higher education in general, and medical education in particular, is now facing various challenges in teaching tomorrow’s physicians in this critical situation of the COVID-19 pandemic. Such a situation makes it mandatory to adopt new teaching methods while maintaining excellence in medical education. Fortunately, technological advances have become integral parts of our lives and changed them forever, increasingly with each new generation (Makhdoom et al., 2013). Thus, technology can help pave the way for both teachers and students and expand the range of possible solutions that can be brought to bear on teaching and learning (Bryan et al., 2016).

However, it certainly requires a teacher who is adept at creating a learning material that raises the pedagogical benefits of that technology to help students meet the desired learning outcomes (Agrahari, 2016).

Currently, online learning, as a variant of Technology-Enhanced Learning, is now the only

convenient learning approach in most universities all over the world. It can not only exceed space and time boundaries and improve convenience and effectiveness for individualized and collaborative learning but also provide reusable and up-to-date information through the use of interactive multimedia (Moreira et al., 2015). However, it also suffers from disadvantages such as high costs for preparing multimedia materials, continuous costs for platform maintenance and updating, as well as learners' feelings of isolation in virtual environments (Wu et al., 2010). That's why, after passing the current situation, we should consider a blend of online and face-to-face learning as it is considered vital in building a sense of community and provide some hands-on and clinical skills that can hardly be obtained in a virtual environment (Kemp and Grieve, 2014).

Personal experience: Blackboard platform and online learning during Reproductive module, School of Medicine, King Abdul-Aziz University, Saudi Arabia.

The effective use of the Blackboard (BB) platform as an online learning community tool was mandatory. During the course Reproductive module, BB was the platform that was used for students' communication, delivery of learning materials, and submission of assignments, presentations, and other activities. The Discussion board and Forum were used for interactive life communication. Formative and summative exams were carried out using BB exam center. Our experience was documented and published (Elsamanoudy et al., 2020). The challenge was the only learning strategy was the online tool only with the non-availability of the blended tool at this time. Some concerns were considered during this challenging management. These concerns included; the rapid and abrupt shift to online learning- associated anxiety, the reluctance of students to be fully engaged. The fear of the prospected distraction and inattention of the students. Lack of direct physical interaction and a high degree of isolation. Lastly, the complicated technology tools and their associated probable error. So, the successful virtual learning process was a great challenge.

Our result provided that the Blackboard Collaborate Ultra's virtual classrooms are very useful tools for online interactive lecturing. The platform was a very successful substitute for physical attendance at traditional lectures during the COVID-19 pandemic restriction measures. We concluded that interactive virtual classroom lecturing could be used in addition to the traditional lectures during ordinary situations and instead of it in a crisis as an effective online learning community tool.

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