



LETTER to EDITOR

How have infectious diseases been able to change educational approaches?

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Dear Editor,

Changing educational approaches from traditional to modern methods is one of the concepts that have received a lot of attention since the outbreak of COVID 19 (1, 2). Today, information and communication technology (ICT) has become an innovative strategic element to promote health and education in most developed countries by enabling the processing and conversion of information quickly (3). When classes are held in absentia, this means that teaching styles have changed due to concerns about getting COVID 19. In fact, the emergence of this pandemic could revolutionize medical education by integrating e-learning into all levels of education and continuing education programs.

If we want to save education from the threat of emerging diseases, we must learn lessons from the past; undoubtedly this pandemic provided opportunities for learners to invent new learning experiences, and take us beyond traditional classrooms and lecture-based learning. It is important to note that the main player in "e-learning" is the e-learner. An e-learner is anyone who mediates some learning activities online. It is worth mentioning that a new generation of learners is evolving (4). It is said that all aspects of the lives of these digital natives are intertwined with technology, so that their use of information and communication technology distinguishes them from previous generations of their learners and teachers, and the differences are so significant that the nature of Education must be fundamentally changed to suit their skills and interests. These "digital natives" are known as active experimental learners, skilled in multitasking and dependent on communication technologies to access information and interact with others. Therefore, designing for effective e-medical learning requires real-world practice as well as provides effective learning opportunities. It is important to note that many of the issues related to the use of technology in medical education are not related to the technology itself, but to the approaches to education.

From the learners' point of view, e-learning does not replace traditional education, but complements it and forms a combined learning strategy. Advances in concurrent distance learning and collaborative technologies such as blogs, bulletin boards, chats, emails and teleconferences make shared learning easier to access. Studies have shown that in medical education,

collaborative learning is associated with a higher level of learner satisfaction, progress in knowledge, self-awareness, and understanding of concepts, achieving course objectives, and change in practice (5).

Therefore, due to the educational disruption in the COVID-19 pandemic situation, we decided to change the methods of teaching medical students anatomy lessons and use the Flipped classroom educational design model with Small Private Online Course (SPOCs), the best combination of educational strategies, to produce effective learning outcomes in terms of using new technologies. (6-7) In fact, we tried to actively involve education in this comprehensive method so that we could facilitate learning.

However, there are numerous barriers to integrating educational technology into higher education. Learners have different learning styles and preferences. Some may find it more difficult to learn electronically and they prefer traditional speech-based education.

What is important is to note that new methods of education should be used in a complementary way, but they cannot replace traditional methods of medical education. Undoubtedly, the role of good teachers in the learning process is negligible; they can shorten the learning process by providing tips and examples, motivate learners, create live interaction and share their experiences and skills for the learning process to show that they are all very valuable in a positive learning environment. Therefore, in order to develop e-learning, efforts should be made to bring learning theories closer to practice; because there is currently no e-learning model on its own. A model of e-learning should show what educational principles are operated on. Therefore, the constructive alignment of technology-based integrated methods can ensure a good educational design and be effective in making e-learning design decisions in a principled manner by managers and other stakeholders.

Ethical Considerations

Ethical issues including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc. have been completely observed by the authors.

Financial support: There was no financial support.

Conflict of interest: None

REFERENCES

1. Zivina JG, Sandersc N. The spread of COVID-19 shows the importance of policy coordination. *PNAS*. 2020; 117 (52): 32842-44.
2. Zehry Kh, Halder N, Theodosiou L.E. Learning in medical education in the United Kingdom. *Procedia - Social and Behavioral Sciences J*. 2011; 15 (1): 3163- 67.
3. Keller J, Heiko A, Gracht VD. The influence of information and communication technology (ICT) on future foresight processes - Results from a Delphi survey. *Technol Forecast Soc Change*. 2014; 85: 81-92.
4. Monaco M, Martin M. The Millennial Student: A New Generation of Learners. *Athletic Training Education Journal*. 2007; 2 (2): 42-46.

5. Hyo-Jeong So, Brush T. Student perceptions of collaborative learning, social presence and satisfaction in a blended learning environment: Relationships and critical factors. *Comput Educ.* 2008; 51(1): 318- 36.
6. Ruiz-Palmero J, Fernández-Lacorte JM, Sánchez-Rivas E, Colomo-Magaña E. The implementation of Small Private Online Courses (SPOC) as a new approach to education. *Int J Educ Technol High Educ.* 2020; 17 (27): 2-12.
7. Akçayır G, Akçayır M. The flipped classroom: A review of its advantages and challenges. *Comput Educ.* 2018; 126 (1): 334-45.