



LETTER to EDITOR

Distance learning in pathology for universities with limited resources amid COVID-19 pandemics

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Dear Editor,

Information and communication technologies have become an innovative strategic element for improving health and education in most countries (1, 2). While we are amid covid-19 pandemic, it is necessary to change the educational models in medical sciences.

Telemedicine and distance learning is increasingly integrated into medical education systems (3). Based on requests sent from Afghanistan (4), the present researchers aimed to develop a blended learning system as part of Birjand University of Medical Sciences (BUMS) Online Learning Management Systems (LMS) to train medical students and residents during COVID-19 pandemics.

BUMS is located on the border of neighboring Afghanistan, the country which suffers from limited medical education infrastructure. In this center, the professors are processing histopathologic samples with high-quality imaging for other centers. They would hold a face-to-face course to train medical students and residents of Afghanistan amid COVID-19 pandemics which would continue virtually on BUMS' LMS. After processing pathologic lesions in Afghanistan, high-quality images would be shared via LMS. The professors would report the slides and findings as part of a distance learning program to teach pathology courses to medical students and residents.

In this way, based on the local cases in Afghanistan, blended learning would be implemented. It is noteworthy that in order to implement the above idea, experts from Afghanistan received the necessary training in a blended course for processing histopathological samples. At the beginning of the work and before planning the education section for students, the histopathological slides related to thirty-two lesions that had been biopsied by Afghan

surgeons, were prepared at Afghanistan and their images were sent through dedicated portal; these slides were reported by a pathologist who was a faculty member of Birjand University of Medical Sciences. There is currently a good initial collection of histopathological images of the lesions which were biopsied at Afghanistan; this can be used as a basis for educating medical students in Afghanistan. The present researchers are currently planning to hold short-term virtual courses to train medical students in Afghanistan, and the necessary coordination is underway with Afghan officials.

One of the goals will be development of joint virtual training departments between specialists of two countries, not only restrained to treatment of patients, but also, training medical students.

With the complete integration of digital pathology and the use of virtual slides, some dramatic changes can be made in the future of medical education. As researchers we can even go a step further and play an effective role in health care system, and give the various burdens in less developed countries at the lowest possible costs.

Ethical consideration

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

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REFERENCES

1. Sweller J. Cognitive load theory and educational technology. *Educational Technology Research and Development*. 2020; 68(1):1-6.
2. Del Carmen Ortega-Navas M. The use of new technologies as a tool for the promotion of health education. *Procedia Soc Behav Sci*. 2017; 237:23-9.
3. Ling LC, Krishnappa P. Telepathology- an update. *Int J Collab Res Intern Med Public Health*. 2012; 4:2013-25.
4. Rajabi-Moghaddam M. Request sent by email by Afghan officials to providing pathology education for Afghan students by faculty members of Birjand University of Medical Sciences [Internet]. Birjand: Birjand University of medical sciences; 2021 [updated 2021 January 9; cited 2021 January 9th]. Available from: <https://drive.google.com/file/d/1pDIJtOOHRtbwEokmoPaoYVVdt98akK2F/view?usp=sharing>