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'The Impact of COVID-19 on Medical Education: How do the Professors and Students React?'

'Using Online Education effectively in Higher Education after the Pandemic'

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It is a pleasure to take part in your conference. This panel is about the impact of covid-19 on medical education: how are the professors and students reacting? I am joining you from Vancouver, Canada so I do not know how your professors and students are reacting to the covid-19 pandemic. But Iran still has a high rate of new infections every day, so I imagine that your senior students have been pressed into service in hospitals even before they finish their training. Also, that your professors have spent more time practicing medicine and less time teaching it than they normally do.

Medical schools have long been pioneers in using educational technology to make their teaching more efficient, because time saved in training doctors is more valuable than time saved in training philosophers. I expect that during the pandemic you have made greater use of online learning in your courses. Do you expect that to continue after the pandemic is over? Will you use online teaching differently in the future based on your experience? In these brief remarks I will try to shed light on these questions. The title of my remarks is: 'Using Online Education effectively in Higher Education after the Pandemic'.

Over a year ago, as covid-19 struck, universities around the world were told to vacate their campuses and teach their students at home. They had to convert to distance teaching in only a few days, so they turned to interactive video technologies like Zoom and taught their classes live. I observed this process in my role as Chancellor of the Acsenda School of Management, a small private higher education management school in Vancouver. Here are the two main lessons that we learned as the pandemic dragged on for over a year and we understood better how to use the online technology respond to our students' needs.

The first, and most important lesson is to use asynchronous learning. Live synchronous Zoom lessons are less useful for students and more stressful for professors than offering some courses asynchronously. This gives teachers flexibility in preparing learning materials and allows them to draw on the rich pool of Open Educational Resources to put together engaging courses. It also gives students the flexibility to juggle the demands of home and study.

Asynchronous learning works best in digital formats. Teachers do not need to deliver material at a fixed time: it can be posted online for on-demand access and students can engage with it

using wikis, blogs and e-mail to suit their schedules. Teachers can check on student participation periodically and make online appointments for students with particular needs or questions. Creating an asynchronous digital classroom gives teachers and students more room to breathe.

Video lessons are more effective and easier to prepare if they are short (5-10 minutes). Organisations offering large-enrolment online courses, such as FutureLearn, have optimized approaches to remote learning that balance accessibility and effectiveness. You can look at one of the many free FutureLearn courses on a medical topic to see how they do it. You can also direct your students to relevant FutureLearn courses. The pandemic has stimulated a huge increase in the numbers of people looking for free online courses, particularly in the health sciences. For example, in 2020 the UK Open University had 13 million visitors to OpenLearn, its free online course platform, which was 50% more than in the previous year. I give references below in the print copy of these remarks.

The second lesson that we learned in Vancouver is to use every possible mechanism to increase the intensity and quality of your interactions with students. Attention to students, their support and guidance, and their progression and achievement, contributes more to quality than the latest online technology. Your students, particularly those who have recently joined the Medical School, may be disoriented by having to study independently from home. They will certainly miss the interaction with fellow students if this is constrained by lockdown measures. Stay as close to them as you can and project student services into their homes.

A good way to summarize these recommendations is to think of distance and online education as a student sitting on a three-legged stool. One leg is learning materials; a second is student support; the third is logistics. If any of these legs is weak, the student may fail. So, if you continue to use distance learning after covid-19 you must build stools with three strong legs.

For learning materials you should focus on making a large part of the teaching asynchronous. That gives you the opportunity to invest time in putting together material that can be used repeatedly. You can take time to make good videos and you can use the pool of freely usable Open Educational Resources, which has a huge amount of medical education material from around the world. I noticed that American universities are using Open Educational Resources from African universities in some of their medical training about tropical illnesses, which seems like a very sensible thing to do.

If you create excellent asynchronous courses that can be used widely and repeatedly, they will reach large numbers of students, more than an individual professor can mentor or monitor. In that case you should appoint teams of tutors/mentors to support the students. These can be senior or graduate students or medical professionals in practice who are interested in contributing to medical education.

Finally, quality distance and online education requires excellent organisation and logistics. In face-to-face settings informal contacts among students and staff usually get problems addressed, but remote students are helpless if IT systems fail or the instructions they receive are not clear.

I wish you and all Iranians a quick end to the pandemic and I hope that this advice from Canada will be useful as you apply what you have learned during covid-19 to the way you teach medicine in future.

References

FutureLearn (2021).

<https://www.futurelearn.com/subjects/healthcare-medicine-courses/healthcare>

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<https://www.open.edu/openlearn/health-sports-psychology/mental-health/introduction-mental-health-science>