Challenges Faculty Faced Transitioning to e-Learning Platforms during the Current Pandemic in the United Arab Emirates

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ABSTRACT: The authors recount the challenges they overcame to deliver lecture content and assessments while engaging students at their newly established medical school. Faculty must multitask in new and added ways to achieve the same goal in e-learning platforms. Online course delivery introduces additional barriers to engaging students, atypical of face-to-face sessions. We received valuable feedback, adjusted our delivery, and allowed our students to access lecture recordings at their convenience. Our sessions with students were more than just a lecture but a way to help people through a unprecedented time. Remote learning platforms also provided faculty with opportunities to develop new pedagogical skills and alternative assessments.

KEYWORDS: COVID-19 pandemic, e-learning, premedical, medical education, United Arab Emirates

Introduction

The combination of a new medical school, a new education style, and a new virus set the stage for a unique group of challenges

The College of Medicine and Health Sciences at Khalifa University is the first and currently, the only institution in the United Arab Emirates (UAE) to offer US-style medical education.[1,2] This medical school is in its infancy, having only its second cohort. Many of our international students were unable to relocate to the UAE due to the global pandemic and commenced their first year of medical school online, while their local classmates received face-to-face instruction. With this unprecedented use of online pedagogy as an emergency measure, faculty were faced with both challenges and opportunities, as they focused on course preparation and content delivery while simultaneously trying to create an engaging and equitable learning environment.

Creating pre-recorded lectures: an effort all on its own with great benefits and potential side effects

The COVID-19 lockdown was initiated, and we were asked to teach online and/or pre-record our lectures. In March and early April 2020, we started preparing pre-recorded lectures. At that time, our faculty possessed different levels of exposure to e-learning, ranging from those who had previously created such lectures for several years to those preparing them for the first time.[3] Overall, the experience was challenging for all faculty members, as there was little time to create new presentations. We created pre-recorded lectures by adding voice-over narrations to each slide using Microsoft PowerPoint. This proved to be a useful and simple method. In comparison, presentations were also created using multifaceted techniques that relied on third-party software, like Explain Everything, which allowed the presenter to concurrently add narrations, annotations, and sketches to individual slides.

We received valuable feedback, adjusted our delivery, and allowed our students to access these recordings at their convenience. This appeared to be an effective online teaching approach and was confirmed in the literature retrospectively.[4] A pre-recorded lecture's positive features include:

1. The presenter can focus solely on the lecture while recording rather than multitasking during a live online session;
2. A pre-recorded lecture is independent of internet usage, so unexpected technical difficulties are usually not an issue versus live online lectures; and
3. The lecture can be recorded at any time, uploaded on a standard learning management platform (LMS), and viewed asynchronously to provide students flexibility.

However, there are disadvantages related to the duration of the lecture. In some instances, lecture recordings went beyond the prescribed class length. While this practice was a noble endeavor to ensure all learners could understand the concepts presented,

many students believed that longer recordings exceeded their attention span. This viewpoint is supported by studies outlining that some students may start losing their attention 10 to 15 minutes into a lecture.[5] Moreover, audio and video quality varied and could reflect the presenter's experience and stress placed on vocal cords to record sessions in a short period.

The online lecture is not the same as the in-person lecture: faculty must multitask in new and added ways to achieve the same goal

There are many technologies available for online teaching. Some are complex LMSs, like Moodle and Blackboard, and others are better suited for virtual classrooms or meetings, such as Teams and Zoom. Before the pandemic, faculty only needed to be familiar with one LMS, but with the rapid transition to e-learning platforms, many faculty members had to learn how to use multiple platforms in a short period, as no best practices were defined at that time. This approach provided the flexibility needed to quickly transition between platforms when unexpected technical issues occurred to minimize classroom disruptions. However, this tactic simultaneously introduced redundancies that increased class preparation times and anxiety levels among faculty as they scrambled to prepare for their courses.[6]

Furthermore, in an online teaching environment, faculty retain an educator's role while gaining additional roles as a technologist, designer, manager, and facilitator.[7] These roles also necessitate aspects of social, pedagogical, managerial, and technical competencies.[8,9] Unfortunately, it was not possible to provide an effective amount of training needed to equip faculty with a diverse set of skills required to meet the demands they faced with such a rapid transition to online learning.

Engaging students in an equitable learning environment: our sessions with students were more than just a lecture but a way to help people through an unprecedented time

Student engagement is paramount in all our classes, irrespective of the content and format of delivery. Online course delivery introduces additional barriers to engaging students, atypical of face-to-face students.[10] Thus, we created an inclusive and collaborative learning community, embedding active learning tools into classes. Transitioning from large classroom didactic teaching to small group sessions, problem and project-based learning, and flipping lectures made learning more student-centered, effective, and enjoyable. Opportunities to engage our students involved having quizzes with Kahoot! and Turning Point that provided real-time feedback on performance. These tools motivated and engaged students, while group work projects provided ways to foster creativity and communication.[11]

Adopting a fully remote learning platform also provided faculty with opportunities to develop new pedagogical skills and alternative assessments to safeguard academic integrity. Recreating on-site testing conditions using virtual proctoring software like Respondus provided a way to monitor student behavior during exams. However, we encountered many obstacles related to the software's reliability and compatibility across different operating systems. In some instances, we had to eliminate its use and rely on our students' integrity to uphold the institution's honor code. The reliance on unproctored assessments presented unique challenges that limited our ability to ensure fairness, and thus we relied on group projects and assessed live presentations as a supplement.

Conclusions
To summarize, we recount challenges our faculty encountered transitioning to e-learning platforms during the pandemic at a medical school in its second year of operation. Considerable matters related to lecture preparation and delivery, student engagement, and integrity were presented. In the future, more emphasis can be given to the faculty's technical and cultural resistances to online learning environments.

Author Contributions
PRC and SMO devised the project, and PRC and SMO structured the main conceptual ideas. AAK and WC further supported the development of the project's theoretical framework. All authors contributed to the writing, editing, and final version of the manuscript.

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