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PROBLEM

The suspension of academic activities and patient care due to the COVID-19 pandemic impacted clinical teaching and learning opportunities for students and faculty. The unprecedented situation called for the creation of a novel teaching model to engage students and promote higher-order cognitive skills in an online environment.

SOLUTION

Forced by the situation and encouraged by the need to maintain connections with our students, the introduction of an internet-based Comprehensive Care Clinic was essential to ensure that third- and fourth-year dental students continued their clinical education. Because online learning did not pose the same time and space limitations[1] as in-person teaching, two courses were designed for both D3 and D4 classes where student engagement was facilitated through virtual and clinically relevant learning experiences. The goal was to provide students with a sense of connection to their school, their education, their classmates, and the profession. Among the course objectives were:

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1. Identify different topics in dentistry in order to have a better understanding of a material, technique, or procedure.
2. Demonstrate an understanding of COVID-19 and its impact in the dental profession.
3. Develop treatment plans on select standardized patient cases identifying key principles that are indicative of predictable outcomes.
4. Evaluate sources of dental continuing education and scientific literature for application in a dental practice based on evidence and relevance.

Small groups of nine or ten students were guided by faculty mentors through a weekly combination of synchronous and asynchronous activities. These activities included the completion of treatment plan case studies, COVID-19 related exercises, completion of five hours of applicable online continuing education courses, and participation in student-led virtual study clubs. All activities were reviewed and discussed within the small groups each week, moderated by one to two faculty mentors. Additionally, all groups met together once a week in a class-wide "huddle" to listen to guest lecturers and calibrate goals for the coming week.

RESULTS

There is currently no evidence that online learning is more effective than offline learning.[1] The design of online courses is often different from in-person courses in many aspects.[2] Consequently, student motivation and faculty training in the use of technology as a teaching tool need to be considered and properly addressed. Contrary to previous findings[2,3] reporting educators' belief that online education negatively impacts students' ability to connect with faculty, formal midterm feedback of these courses (requested from faculty and students through an anonymous Qualtrics survey) showed a high level of student satisfaction (90%) regarding interaction with their assigned faculty mentors. Following recommendations from other studies[4], and with the purpose of being both dynamic and responsive to the learning and teaching needs of everyone involved, midterm feedback was used to modify the course accordingly.

During this time we have been able to support our students through the development, improvement, and practice of critical thinking skills, while integrating patient care concepts to facilitate the learning, understanding, and application of learned material. Due to the uncertainty of current events, the course is constantly evolving, and we hope to continue to adapt and be able to support students' transition to lifelong learners and accelerate the development of soft dental skills like diagnosis, treatment planning, and material selection. We know online learning will never completely replace hands-on learning, but we believe in the benefits accrued from a blended learning approach.[5] As we adapt to our new normal, we hope to continue to improve this novel model and use it as an effective alternative until we are able to again work face-to-face with our students in preclinical and clinical settings.

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