Using Learning Experience Design to Optimize Digital Instruction During COVID-19 and Beyond

To the Editor: We read with great interest Dr. Thakur and colleagues’ timely review of rapid design thinking, an especially helpful framework for educators at a time when so many aspects of health professions education are being quickly forced into distance learning formats. The digital adaptation of curricula is proving critical to the continued education of health care professionals during the COVID-19 pandemic. We specifically wish to highlight the practical reality that most uses of the design thinking process require a transition to digital interfaces. Time and again, however, experience has demonstrated that educational material in one format cannot necessarily translate well to another; delivery must be customized for a particular medium.

Learning experience design (LED) is the relatively young field that addresses human–digital interfaces, and its tenets are, we believe, critical to the success of educational programs and materials born out of design thinking. For example, attention and retention during video-based learning vary with screen size; therefore, the simple transition from an in-person lecture to video streaming on personal devices does not necessarily translate the educational advantages of lectures well. As another example, reading digital versions of documents that were originally formatted for print reading, such as those with a small-sized Serif font (e.g., 10 point Times New Roman), on a screen—any screen—also reduces attention and retention. Any digital interface is fundamentally different from any physical interface.

We encourage adopters of rapid design thinking to consider LED principles during the process of adapting to digital interfaces, not only during the COVID-19 era but also beyond, as educators strive for sustainable digital transformation throughout the curriculum.

Funding/Support: None reported.

Other disclosures: None reported.

Ethical approval: Reported as not applicable.

In Reply to Pan et al: We thank the authors for their comments on the significance of learning experience design (LED) in adapting to digital interfaces in the delivery of health professions education. Co-creation and collaboration with learners in the design and testing of prototypes is crucial to the implementation of innovative digital solutions in medical education. In addition to LED principles, learner competence in using virtual tools, appropriate mode of delivery (e.g., synchronous/asynchronous online learning), virtual simulation and virtual reality, as well as a continuous cycle seeking learner feedback and making improvements based on that feedback are crucial aspects of effective teaching through digital interfaces.

Conceptually, LED is firmly rooted in a process of learning and continuous improvement. The COVID-19 pandemic has seen a rapid adoption of digital technology in medical education. LED’s focus on experiential learning and human centeredness are important considerations in educational innovation. We believe these are crucial steps in the implementation phase of rapid design thinking. The increased use of virtual tools and the blurred boundaries between work and home can lead to fatigue and burnout. LED can help to guide wellness practices and strategies during the rapid upscaling of virtual tools.

In a post COVID-19 era, LED must be applied beyond electronic user interfaces to sustain the benefits of design thinking. Emerging technologies such as artificial intelligence and learner analytics will play an important role in future adaptive learning. Virtual tools have a significant role to play in medical education. The application of LED has the potential to increase the quality of learning and thus ensure high-quality medical education during and after the COVID-19 pandemic.

Funding/Support: None reported.

Other disclosures: None reported.

Ethical approval: Reported as not applicable.

Disclaimers: The views expressed in this letter are the authors’ own and do not necessarily represent those of the University of Toronto Department of Psychiatry.

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First published online December 10, 2020
performing procedures and providing in such a case, they may find themselves not receive this help should the COVID-19 pandemic reach its highest peak and going to require much more support than usual—including thorough psychological consequences. In response to their low confidence in comfort into the workforce due to COVID-19 pandemic, which shows they are ready for their lifelong call as frontline staff. The same opportunity was offered to final-year U.K. medical students through the interim Foundation Year (iFY) programme before they formally started Foundation Year 1 (FY1), comparable to an internship, in August 2020. However, the accelerated graduation and deployment of the new physician cohort into the workforce has had negative consequences.

The confidence of prospective FY1 physicians has been rattled by the transition to the online delivery of lectures, as well as the cancellation of final exams, practical exams, and student electives brought on by the pandemic. In a survey carried out by 33 U.K. medical schools, respondents showed that 38.4% had their final objective structured clinical examinations canceled, while 77.3% had electives canceled. The majority of respondents were less comfortable going into their training due to the unexpected curricular changes since the COVID-19 pandemic. In response to their low confidence in joining the workforce during such a demanding period, new physicians are going to require much more support than usual—including thorough psychological support. However, new physicians may not receive this help should the COVID-19 pandemic reach its highest peak and consequently overwhelm the workforce. In such a case, they may find themselves performing procedures and providing care without supervision, which may unfortunately have bad repercussions. New physicians will not quite acquire the same skills they would have in the absence of social distancing rules on wards, as well as virtual clinics and classes, therefore resulting in a difficult transition to the workforce.

Funding/Support: None reported.

Other disclosures: None reported.

Ethical approval: Reported as not applicable.

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In Reply to Ramotshwana et al: We acknowledge the unfortunate consequences that U.K. medical students experienced due to COVID-19 pandemic–related early graduations. We believe that the structural differences in the U.S. medical education system may account for the contrasting U.K. experience. At the University of Massachusetts Medical School, fourth-year medical students rarely complete required clinical experiences in the 2 months before graduation. Most use this time for nonclinical requirements, electives that augment clinical exposure, or personal needs before beginning residency training. Our students front-load their fourth-year required clinical experiences from the prior May through October, completing a few final rotations January through March. Consequently, nearly all of our fourth-year medical students had completed traditional requirements at the time of their early graduation and seemed prepared to join frontline workers as limited-licensed physicians called surge contractors.

To address concerns of early graduates having low confidence in entering the workforce, such as those expressed by Ramotshwana and colleagues, we solicited structured feedback after the 90-day term ended. The majority of both surge contractors and supervising physicians indicated surge contractors had the appropriate level of supervision, emotional support, and preparation to deal with the challenges of COVID-19 patients. Overall, both supervising physicians and early-graduate surge contractors found their experience positive, and the surge contractors practiced skills, particularly end-of-life discussions, that they will carry into future patient encounters.

This experience highlighted the dedication, compassion, and commitment of the medical students in the class of 2020. The early graduates demonstrated readiness and a willingness to serve, with appropriate assignment and supervision, at a time when their contributions were both impactful and appreciated. Although we hope that this decision does not need to be made in the future, we are confident that our curriculum and training structure will prepare our student doctors well should the need for an early graduation arise again.

Funding/Support: None reported.

Other disclosures: None reported.

Ethical approval: Reported as not applicable.

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