

The authors reported no conflicts of interest.

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**REPLY: INNOVATING THE  
VIRTUAL CURRICULUM IN  
CARDIOTHORACIC  
SURGICAL EDUCATION  
DURING THE PANDEMIC**  
**Reply to the Editor:**



In their astute letter, Olive and colleagues<sup>1,2</sup> update the status of cardiothoracic surgical training and recruitment as we pass the 1-year mark of the coronavirus disease 2019 (COVID-19) pandemic. As the authors note, trainees' operative experiences suffered during the pandemic, which required adjunct practicing opportunities for many by using videos and emerging simulation platforms. For those who aspired to apply to a cardiothoracic surgical residency or fellowship, visiting rotations and in-person interviews were severely restricted during the previous cycle. For the foreseeable future, these processes may need to remain hybrid, as institutions must strive to brainstorm new, creative ways of combining both in-person and virtual components to promote their programs and to recruit candidates.

As such, while the pandemic has undeniably been challenging across the board, it has also necessitated innovation and adaptation. This has also been strikingly apparent in the realm of virtual education, and we contend there is far more we can do. Cardiothoracic surgical training programs across all regions have traditionally maintained their own in-person, educational programs, following a curriculum set forth by national organizations. However, as many were required to transition their curricula to virtual learning platforms during the past year, educators embraced an opportunity to come together and to fundamentally rethink what is possible. Given the potential of our virtual generation, educators and trainees alike ventured into websites, applications, and social media platforms. Faculty participation in

webinars and Twitter increased dramatically. National societies have expanded their efforts in creating countless, valuable on-demand resources. For the first time, learning no longer had to be limited to our physical locations or to a specific time of day or week where all trainees had to simultaneously leave their clinical posts. With the ability to record and access on-demand, content could be organized at an international level, combining the expertise of a global pool of educators who share the responsibility and the joy of teaching all trainees regardless of affiliation or time zone.

In these efforts, we must also challenge traditional assumptions of classroom-based learning in this increasingly competitive attention economy.<sup>2</sup> Recognizing that trainees discover and engage with new information from YouTube, Twitter, Instagram, podcasts, Netflix, and more, the virtual curriculum must be integrated across platforms, presenting the material in many diverse forms for all types of learners.<sup>3,4</sup> The core of the curriculum may rely on lectures, but the branches can consist of concise video summaries, eye-catching infograms, or #Tweutorials. As the pandemic strongly encourages us to adapt our ways of learning and working, we must innovate. Together, we can help bring surgical education to the virtual era, thinking beyond physical or logistical limitations of the past, and creating the new gold standard that can be implemented across the globe.

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<https://doi.org/10.1016/j.xjon.2021.09.018>