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**In Reply to the Letter to the Editor Regarding
"Perception of Neurosurgery Residents and Attendings
on Online Webinars During COVID-19 Pandemic and
Implications on Future Education"**



We would like to thank the editor for the opportunity to respond to the letter and comments by Dr. Safa, and we appreciate their comments regarding the need for a more efficient teaching methodology.

The COVID-19 pandemic has affected our lives in so many ways, including the way we triage and handle our surgical practice due to the constraints it put on the health care system.^{1,2} Medical education and residency training have not been immune to those effects, which has led educators and trainees from around the globe to adapt to the issue at hand.^{3,4} COVID-19 caused a paradigm shift in medical education during the past year, and we will continue to see its influence for years to come.^{5,6} The acceleration of online medical education with both asynchronous and synchronous distant education allowed instructors to deliver flexible and safe education during tough times.⁶

Most medical disciplines promptly acted by introducing innovative ways to deliver didactic teaching to mitigate the pandemic effect on training.^{7,8} Multiple studies have reiterated the findings we are showing in our paper that webinar-based education is effective and well adopted by learners. D'Amico et al³ showed in their survey that the online teaching method was accepted by a large number of participants around the globe.

Our study, among others, continued to show an encouraging trend that the use of distant education methods is well perceived by the young generation, which may influence future curriculum development. But despite that, we are still advocating and reiterating the importance of face-to-face contact and traditional education methods. When examining Miller's pyramid, which lays the foundation for modern medical education, distant education methods may allow us to address the "Knows" part. Still, we have to look for other methods to supplement the "further Knows How."⁹ In the second part of Miller's pyramid, we may consider the virtual reality methods to allow trainees to develop specific psychomotor skills.⁹⁻¹¹

We concur with Dr. Safa in their letter that there is a need to look for frontiers in our medical education. We must continue to push the boundaries to improve our ability to deliver knowledge and experience to the coming generation of physicians in training. The

use of adjunct educational methods, such as webinar-based lectures, case-based discussions, and virtual reality simulators, is the future of medical education.

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