



Response to “Remote Medical Education: Adapting Kern’s Curriculum Design to Tele-teaching”

Aaruran Nadarajasundaram¹ · Simeon Harrow¹ · Albert Mensah¹ · Karusan Srithar¹

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To the Editor:

We read the article by Said & Schwartz [1] with great interest. The article provides an insight into the dynamic shift in medical education in response to the COVID-19 pandemic. The point on assessments was of interest to us and having experienced different examination formats in the last 12 months, we would like to share our perspectives on open book examinations (OBE) which the authors did not elaborate on.

Having sat OBEs, we agree there are positives and negatives to this format. Advantages to OBEs include removing exam stress and pressures during unprecedented times [2, 3]. We believe OBEs foster an environment mimicking the realities of working as doctors. It encourages utilisation of resources and shifting away from rote memorisation. We propose that in time, it could aid in reducing errors in clinical settings, which previously may have occurred due to lack of resource experience or awareness.

Virtual examinations do raise concerns regarding academic misconduct. However, a systematic review comparing proctored closed booked examinations (CBE) and OBEs found no real evidence to suggest one method was superior to the other [4]. Analysis of OBEs results from final year medical students at Imperial College London supports this [5]. Despite the high-stake nature of the examination, analysis showed the median marks to be identical to CBEs of the previous 3 years. Our medical school implemented a similar OBE format, ensuring it was sat simultaneously irrespective of time zones, with randomised question order to discourage collaboration. The style of the questions limited the ability to search for answers, forcing students to rely on their understanding and judgement. However, we were still concerned about cheating. Despite studies reassuring OBE reliability,

we worry the mental health of medical students could deteriorate in an already competitive environment, where mental wellbeing is poorer compared to the general population [6], regarding fears of academic misconduct.

We view proctored CBEs as a better alternative, having sat an examination that utilised this. The presence of an invigilator meant greater standardisation of exam conduct. We believe proctored examinations alleviate anxieties around academic misconduct, improving student satisfaction.

Overall, we consider proctored examinations to provide the best solution during these challenging times. They best replicate “normal” exam conditions and promote the application of knowledge without potential overreliance on external resources. However, we acknowledge the merits of OBEs and believe there is a place for them such as formative examinations.

Declarations

Conflict of Interest The authors declare no competing interests.

Disclaimer The authors alone are responsible for drafting and producing the article.

References

1. Said JT, Schwartz AW. Remote medical education: adapting Kern’s curriculum design to tele-teaching. *Med Sci Educ.* 2021;31(2):805–12.
2. Monaghan AM. Medical teaching and assessment in the era of COVID-19. *J Med Educ Curric Dev.* 2020;7:2382120520965255.
3. Stowell JR, Bennett D. Effects of online testing on student exam performance and test anxiety. *J Educ Comput Res.* 2010;42(2):161–71.
4. Durning SJ, Dong T, Ratcliffe T, Schuwirth L, Artino AR, Boulet JR, Eva K. Comparing open-book and closed-book examinations: a systematic review. *Acad Med.* 2016;91(4):583–99.
5. Sam AH, Reid MD, Amin A. High-stakes remote-access open-book examinations. *Med Educ.* 1 Aug 2020.

✉ Aaruran Nadarajasundaram
aaruran.nadarajasundaram@kcl.ac.uk

¹ GKT School of Medical Education, King’s College London, Hodgkin Building, Newcomen Street, London SE1 1UL, UK

6. Bergmann C, Muth T, Loerbroks A. Medical students' perceptions of stress due to academic studies and its interrelationships with other domains of life: a qualitative study. *Med Educ Online*. 2019;24(1):1603526.

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