

Transformative Online Education in Medical Training: Innovations, Challenges, and Future Directions [Letter]

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Dear editor

The COVID-19 pandemic brought a seismic shift to the landscape of medical education, compelling institutions worldwide to adopt online learning modalities. The study by Alshammari et al which explores the transformative impact of online education on medical student learning outcomes offers critical insights into the advantages, limitations, and future implications of online learning in medical education.¹ This letter aims to elaborate on these findings and discuss innovative teaching alternatives to optimize online education in health professions.

Online education has provided unprecedented access to learning during the pandemic, ensuring continuity in medical training despite significant disruptions.¹ However, the findings reveal that while online learning achieved outcomes comparable to on-campus learning for initial lecture segments, it failed to sustain these outcomes in the latter parts of lectures. This observation aligns with Zgheib et al who noted decreased focus and engagement among students in prolonged online sessions.² The study underscores the need for strategic interventions to address challenges like diminished attention spans and engagement. Key challenges identified in online learning to include technical issues, reduced interaction, and lack of clinical skill development.³ In countries like Saudi Arabia, where the study was conducted, technological advancements have enabled seamless online learning for theoretical content.¹ However, these advancements must be coupled with robust engagement strategies to address limitations in clinical education. Studies by Gao et al emphasize the necessity of blended learning approaches to integrate practical and theoretical components effectively.⁴

Incorporating interactive elements such as game-based learning (GBL) and student-facilitated sessions can significantly enhance online learning experiences. Xu et al demonstrated the effectiveness of GBL in fostering active engagement and improving learning outcomes.⁵ Similarly, Shrivastava and Nurhidayati highlighted the transformative potential of student-led facilitation in medical education, promoting collaborative learning and professional growth.⁶ Blended learning (BL) emerges as a particularly promising model, combining the strengths of online and face-to-face teaching. As highlighted by Stojan et al, BL offers flexibility, personalized learning, and enhanced communication between educators and learners.⁷ Institutions must invest in technological infrastructure and faculty training to maximize the benefits of BL.

The role of educators in online and blended learning environments is pivotal. Custer emphasized the need for comprehensive professional development programs to equip educators with the skills required to navigate digital teaching platforms effectively.⁸ The E-Portal training program, as detailed by Sadiq et al, serves as a model for empowering educators through customized training on digital tools, course design, and quality assessment.⁹ To ensure the efficacy of online education, continuous evaluation and refinement are essential. Sisson et al highlighted the importance of incorporating learner feedback into curricular revisions to enhance educational outcomes.¹⁰ The study

by Alshammari et al also advocates for systematic assessments to address gaps in engagement and concentration, particularly in extended online sessions.¹

The transformative impact of online education on medical student learning outcomes is evident but not without limitations. Institutions must adopt innovative teaching methods, invest in professional development, and implement robust evaluation mechanisms to optimize online education. The findings by Alshammari et al serve as a clarion call for stakeholders to reimagine medical education in a post-pandemic world.¹ In conclusion, while online education has demonstrated potential, its full transformative capacity can only be realized through concerted efforts to address existing challenges and leverage innovative approaches. By doing so, we can create a more inclusive, flexible, and effective medical education system.

Disclosure

The author reports no conflicts of interest in this communication.

References

1. Alshammari H, Shaheen S, Mahmoud S, Al-Rabiah A, Alyahya K. Evaluating the transformative impact of online education on medical student learning outcomes. *AMEP*. 2024;15:1103–1111. doi:10.2147/AMEP.S444830
2. Zgheib NK, Ali A, Sabra R. Experience with forced transition to online learning during the COVID-19 pandemic: students' cognitive performance and their perceptions of teaching. *Asia Pacific Scholar*. 2021;6(3):45–55. doi:10.29060/TAPS.2021-6-3/OA2377
3. Dergham P, Saudagar FNI, Jones-Nazar CC, et al. Medical students' perceptions towards online teaching during the covid-19 pandemic: a cross-sectional study from Saudi Arabia. *Adv Med Edu Pract*. 2023;14:407–419. doi:10.2147/AMEP.S396912
4. Gao M, Cui Y, Chen H, Zeng H, Zhu Z, Zu X. The efficacy and acceptance of online learning vs. offline learning in medical student education: a systematic review and meta-analysis. *J Xiangya Med*. 2022;7:13. doi:10.21037/jxym-22-3
5. Xu M, Luo Y, Zhang Y, Xia R, Qian H, Zou X. Game-based learning in medical education. *Front Public Health*. 2023;11. doi:10.3389/fpubh.2023.1113682
6. Shrivastava SR, Nurhidayati R. Breaking the mold: encouraging student-led facilitation in medical education to transform learners into leaders. *Anatolian J Fam Med*. 2024;7(1):37–40. doi:10.5505/ajfamed.2024.02886
7. Stojan J, Haas M, Thammasitboon S, et al. Online learning developments in undergraduate medical education in response to the COVID-19 pandemic: a BEME systematic review. *BEME Guide No 69*. 2022. 44;2:109–129. doi:10.1080/0142159X.2021.1992373
8. Custer T. Preparing health professions educators for online and blended learning environments: a mixed methods study. *Online Learning J*. 2024;28(3):263–298. doi:10.24059/olj.v28i3.4515
9. Sadiq N, Fatima SH, Shabnam N, Rauf A. Empowering health professions educators: enhancing curriculum delivery through customized e-tutorial training on fundamental digital tools. *Front Med*. 2024;11. doi:10.3389/fmed.2024.1342654
10. Sisson SD, Rastegar DA, Hughes MT, Bertram AK, Yeh HC. Learner feedback and educational outcomes with an internet-based ambulatory curriculum: a qualitative and quantitative analysis. *BMC Med Edu*. 2012;12(1). doi:10.1186/1472-6920-12-55

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