

To be (virtual) or not to be: six ways to get a grip on choosing a delivery method for your educational program

Être (virtuel) ou ne pas être : six façons de choisir une méthode de diffusion pour votre programme éducatif

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Abstract

In the post-pandemic era, modalities for delivering medical education are at a crossroads. The pandemic disrupted the traditional in-person model, and a boom of virtual meetings and sessions quickly found their place in medical education. Now, educators are left with a selection of in-person, virtual, and hybrid approaches to structure medical education programming. We provide six tips to help guide medical educators on deciding between the variety of educational delivery methods.

Résumé

Dans l'ère post-pandémique, les modalités d'enseignement de la médecine sont à la croisée des chemins. La pandémie a bouleversé le modèle traditionnel en personne, et un essor de réunions et de sessions virtuelles a rapidement trouvé sa place dans l'enseignement médical. Aujourd'hui, les formateurs ont le choix entre des approches en personne, virtuelles et hybrides pour structurer les programmes d'enseignement médical. Nous offrons six conseils pour aider les formateurs médicaux à choisir entre les différentes méthodes d'enseignement.

Introduction

The mandate away from in-person educational events as a result of the COVID-19 pandemic resulted in a sharp acceleration of virtual delivery for all levels of medical education.^{1,2} Now, with the return of in real life IRL sessions, educators are left with more options than ever before with in-person, virtual, or hybrid delivery. Picking the wrong format for the desired goals of the educational program may lead to negative consequences such as less engagement and connectedness amongst attendees as well as resource and accessibility concerns. To guide educators through the plethora of choice, we present six practical tips, directed by the literature and our own experience as educators, on how to select the right format for your educational program.

1. Determine the objectives of the session and program: setting goals

The session goals are critical to deciding which format to select. For educators and participants alike, sessions such as clinical skills or simulations may be more meaningful in-person as the feedback and critique for procedural-based skills are often difficult to deliver virtually.³ For attendees, in-person learning fosters a greater sense of collegiality and social connections.^{4,5} For example, our year-long workshop series for new faculty switched from virtual to in-person attendance; evaluation data indicated that the social connection from attending the sessions in-person were more valuable than the ease of attending virtually, understandable for this group of new clinical faculty who did not have pre-existing relationships with each other. Therefore, the building of community as an objective amongst facilitators and participants in this example

strongly influenced which modality was best suited for the session.

2. Consider your level of participant interaction: drilling down on interactivity

For educators, active learning strategies often lead to increased engagement with the presentation of new information.^{4,5} Many unique features of virtual platforms such as chats, breakout rooms, and whiteboards can promote active learning in ways that mimic the IRL environment.⁶ However, the facilitator's comfort level with these features of the technology may also influence the success of an online format.^{7,8} With the rapidity of modern technology's changes, some facilitators may not feel they have the skillset to manage the myriad of interactivity tools available. To this end, educators are tasked with the added difficulty of engaging participants when cameras are turned off, so a careful balance and negotiation can be required to best suit the desired level of interactivity.⁹ We recommend that educators consider what interactivity is necessary to achieve the specific learning outcomes of the session, and also their ability to support these active learning tools.

3. Balance accessibility and costs: reflect on your priorities

Virtual delivery can be more cost-effective and flexible as it does not require costly investments such as physical venues and catering;⁵ however, technical infrastructure and support still have costs, which can be significant in venues not already technically equipped. For educators and attendees alike, virtual participation avoids the need to travel which saves time, individual costs, and lessens the environmental impact.^{2,8} Furthermore, virtual sessions can be more accessible for individuals with mobility and health challenges, or those with family/personal commitments that may preclude travel. Geographically distributed audiences may therefore find particular benefit from virtual delivery; two studies of grand rounds delivered virtually during the pandemic found greater attendance and participation due to this flexibility.^{4,5} Similarly, in our experience with a faculty development program, participation numbers increased significantly allowing faculty from a large geographical region to participate when the program shifted online compared to in-person, reflecting the wider reach of virtual delivery. Even more compelling is that this increased participation rate has persisted several years after the shift to virtual delivery. It is therefore important to consider if the increased accessibility that may help engage a wider audience is an important value for the session.

4. Behind the scenes: find and use appropriate technical support

All educational events take planning and require support. Arranging for in-person sessions can require significant event management support (e.g. finding/setting-up venues and having on-site technological support). However, in our experience, given the inherent technologic component of virtual facilitation, moderators are often charged with additional unique tasks such as managing the written chat, responding to both written and verbal questions, problem solving technical issues, and assigning breakout rooms, which all hinge on smooth technology support for success. The facilitators' comfort with technology and the available technological support may largely impact the decision.

5. The best of both worlds: consider hybrid options

Hybrid options that offer both in-person and virtual options simultaneously have the potential to be the best of both worlds, harnessing the strengths of in-person sessions for supporting social connection³⁻⁵ with the flexibility and accessibility of virtual sessions.^{2,4,5,8} For facilitators, a major consideration would be that synchronous delivery requires the infrastructure of both (e.g. in-person venues equipped with internet and wall screens) which can bring additional cost, preparation, and overall effort. For attendees, there is a risk that virtual participants may feel excluded, as it can be difficult for moderators to engage equally with both in-person and online attendees simultaneously.¹⁰ This option may therefore be more compelling for large scale delivery where wide attendance is the primary goal, and where there is access to moderation and facilitation support for both the virtual and in-person groups. Additionally, for a multi-session event, another solution might be to offer some sessions virtually and some in-person in a sequential fashion, to lessen the simultaneous support demands.

6. Getting input: ask the participants what they prefer (and why)

With affordances and hindrances for both in-person and virtual formats, even with all the above considerations, there still may be some uncertainty with modality selection. Polling participants or basing decisions on what has previously seemed preferable for similar sessions may provide additional decision-making clarity and insight. For example, in our group of program participants, the overwhelming majority felt that future in-person sessions would further develop connections and relationships with other faculty. Evaluation data from this cohort in subsequent IRL sessions confirmed that the in-person delivery did, uniquely, facilitate valued relationships.

Furthermore, they also echoed the sentiment that future offerings should be held in-person, despite the recognized barriers that it can bring. Nonetheless, online learning can be just as efficacious if attendees are self-motivated, engaged, and if the course is thoughtfully designed.¹¹

Certainly, in a booming era of technological advancements, medical educators must adapt to the ever-changing opportunities and changes that affect medical education. Using these six tips to comprehensively consider the goals of the session weighing accessibility, resources, and social connectedness as values, we hope medical educators will have greater insight and clarity on how to best serve their audiences.

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References

1. McCarthy C, Carayannopoulos K, Walton JM. COVID-19 and changes to postgraduate medical education in Canada. *Can Med Assoc J*. 2020 Aug 31;192(35):E1018-20. <https://doi.org/10.1503/cmaj.200882>
2. Evans AZ, Adhaduk M, Jabri AR, Ashwath ML. Is virtual learning here to stay? A multispecialty survey of residents, fellows, and faculty. *Curr Probl Cardiol*. 2023 Jun;48(6):101641. <https://doi.org/10.1016/j.cpcardiol.2023.101641>
3. Giudice EL, Lewin LO, Welsh C, et al. Online versus in-person screening, brief intervention, and referral to treatment training in pediatrics residents. *J Grad Med Educ*. 2015 Mar 1;7(1):53-8. <https://doi.org/10.4300/JGME-D-14-00367.1>
4. Beaulieu-Jones BR, He K, Sell N, Whang E, Kristo G. Online morbidity and mortality conference: Here to stay or a temporary response to COVID-19? *Am J Surg*. 2021 Dec;222(6):1183-5. <https://doi.org/10.1016/j.amjsurg.2021.05.006>
5. Reddy GB, Ortega M, Dodds SD, Brown MD. Virtual versus in-person grand rounds in orthopaedics: a framework for implementation and participant-reported outcomes. *JAAOS Glob Res Rev*. 2022 Jan;6(1). <https://doi.org/10.5435/JAAOSGlobal-D-21-00308>
6. Buckley H, Nimmon L. Social connectedness in virtual learning contexts. *Clin Teach*. 2021 Jun;18(3):208-9. <https://doi.org/10.1111/tct.13281>
7. Delunahawatta T, Dunne SS, Hyde S, et al. Advances in e-learning in undergraduate clinical medicine: a systematic review. *BMC Med Educ*. 2022;22:711. <https://doi.org/10.1186/s12909-022-03773-1>
8. Cheng C, Papadakos J, Umakanthan B, et al. On the advantages and disadvantages of virtual continuing medical education: a scoping review. *Can Med Educ J*. 2023;14(3):41-74. <https://doi.org/10.36834/cmej.75681>
9. Yeung, M WL, Yau AH, Lee C YP. How should webcams be used in online learning under COVID-19: a co-orientation analysis of teachers' and students' perceptions of student social presence on webcam. *J Computer Assist Learn*. 2022 Oct;39:399-416. <https://doi.org/10.1111/jcal.12751>
10. Lee ICJ, Wong P, Goh SPL, Cook S. A synchronous hybrid team-based learning class: why and how to do it? *Med Sci Educ*. 2022 Jun;32(3):697-702. <https://doi.org/10.1007/s40670-022-01538-5>
11. Schmid RF, Borokhovski E, Bernard RM, Pickup DI, Abrami PC. A meta-analysis of online learning, blended learning, the flipped classroom and classroom instruction for pre-service and in-service teachers. *Comput Educ Open*. 2023 Dec 15;5:100142. <https://doi.org/10.1016/j.caeo.2023.100142>